The Effect of Economic Policy Uncertainty (EPU) in the US on the Stock Market Performance in Saudi Arabia

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Abstract

The study aims to assess how the volatility and change in US economic politics affect the performance of Saudi stock markets. Hence, the study examines the interrelationship between the economic policy uncertainty and the return on stock markets; analyze and evaluate the impact of economic policy changes in the United States on stock market returns in Saudi Arabia; and discuss why and how the economic policy shocks are uncertain in the United States. The study concludes that there is an inversely / negatively link between the uncertainty of US economic policy and the monthly returns from Tadawul All Share (TASI) and that there is a statistically meaningful link between both. The uncertainty of US economic policies accounts for only 1.4% of the Saudi-Arab stock exchange's share returns. In other words, around 98 per cent of other factors contribute to the monthly share returns, other than the uncertainty of economic policy. Therefore, it is statistically evident that the underlying variables have an endorsed relationship, which ensures that the economic policy of the United States has a statistical impact on monthly stock market returns for Tadawul All share (TASI).

Keywords: Economic policy uncertainty, Stock market performance, US economic policy, Tadawul All Share (TASI)

Introduction

Financial assets (such as equities) have the tendency to demonstrate a return and price behaviour which has been an area of interest for macroeconomists who have endeavoured to analyse all possible macroeconomic variables to better understand such a relationship (Adjei and Adjei, 2017). One such area of empirical investigation is the volatility in economic policies and the real economy and the influence these may have on the different financial markets. Notable academic efforts in this research area have come from Sum (2012) where it was found that a high US economic policy uncertainty has adversely impacted the stock market returns. The analysis here was aided by the vector auto-regression analysis applied on the historical data available on the economic policy uncertainty and the US stocks. The scope of the study was then further broadened to the European Union where it was found that the Eurozone stock market returns were adversely impacted in Ukraine, Turkey, Switzerland, Russia, Norway, and Croatia when the European economic policy uncertainty was high.

Increased globalisation in recent decades has led to a strong connection between countries and their economies. Resultantly, any adverse economic event in one part of the globe can lead to a ripple effect across neighbouring and non-neighbouring countries (Avcı and Yesuf, 2018). The impacts can prove to be more pervasive where the economic disruptions are originated by world's leading economies such as the US. The phenomenon, in a technical jargon, is commonly known as the spill over effect (Chen, Jiang and Tong, 2016). Researchers suggest that the largest economy in the region carries the potential of triggering a regional unrest. Others however observe that very large players such as the UK, US, and China etc. possess the ability to impact

global financial markets (Chiang, 2019). Debata and Mahakud (2018) found that a tightening of the US monetary policy adversely impacted the stock market returns of 50 international stock markets.

The international financial markets and the linkages between them have been an area of interest for financial economists (Bali, Engle and Murray, 2016). Financial markets carry price innovations, which are observed and rationalised by rational agents thus leading to some correlation between the global stock markets. Researchers also cite interrelationships between Japanese and US stock market returns and some academicians have gone as far as observing that macroeconomic announcements in Japan and the US have affected the stock markets in Thailand and Korea (GGbor and Georgarakos, 2018).

This study has three research objectives (1) Investigate the interrelationships between economic policy uncertainties and stock market returns; (2) Analyse and evaluate the extent to which the economic policy changes influence stock market returns in Saudi Arabia in the United States; and (3) Explore and suggest the reasons why and how the shocks of economic policy uncertainty in the United States have the tendency to influence the financial markets of non-neighboring countries such as Saudi Arabia.

Literature Review

Foreign markets such as the Saudi Arabia may well be influenced by economic policy uncertainties emerging on a global landscape. This is particularly relevant in the case of the United States given the well-established financial markets and the size of the US economy. Therefore, any shocks in the US macroeconomic variables and the economic activities have a greater propensity of affecting the foreign markets (Schwartz, 2013; and Nishimura and Ozaki, 2017). In the Middle East context, there have been various academic efforts that have sought to understand the chemistry between Middle Eastern macroeconomic indicators and the US economic policy uncertainty. Khalifa, Hammoudeh, and Otranto (2014), in particular, have made extensive efforts to this end where the area of focus has been 'spill over effects'. Research contributions have come from the ways in which the Saudi Arabia stock market returns have been influenced by virtue of the US economic policy uncertainty. A non-linear Vector Auto Regression (VAR) model was employed by the researchers for the period 1992 – 2006 in order to assess the impact of derivatives, risk free interest, and a risk based financial system. The findings of the study confirmed the chemistry between policy uncertainty and stock returns as unexpected changes in economic policy made in the US had an adverse impact on the returns offered by securities listed on the stock exchange.

Arguably, a consistent pattern is demonstrated by US economic policy uncertainty and share price changes in Saudi Arabia – any increase in the uncertainty of US economic policy is likely to increase the Saudi stock market sentiment and any decrease will also have a corresponding effect. Focusing on the GCC states, Jouini (2014) explored the impact of changes in the economic policies in the United States. Basing their findings on a 10 year period Jouini (2014) concluded that US uncertainty shocks adversely affect the GCC stock markets despite the fact that such markets are shielded by a risk based financial system. The GCC market does however demonstrate a symmetric behaviour which is arguably a result of risk sharing investment, the absence of derivatives, and large number of local investors.

In the context of GCC countries and the economic policy uncertainties in the US, research contribution is also made by Alotaibi and Mishra (2015). The authors find a strong supporting

relationship between the developing and developed countries and in doing so suggest that Saudi Arabia has good relations and strong ties with the United States and therefore any economic policy changes are likely to significantly affect the local stock market performance. The research findings therefore confirm that US economic policy shocks and overall volatility leads to a spill over effect on Saudi stock market performance. In the domain of portfolio management, such chemistry is considered serious and critical as it has implications for shareholder returns.

Furthermore, dynamic conditional correlation and GARCH model is employed by Alotaibi and Mishra (2015) in order to ascertain the presence of a spill over of US economic policy uncertainty on the Saudi stock market and share prices. Findings reveal a significantly high spill over and a strong interrelationship between the two. Volatility spill over has been studied in detail by Balcilar, Demirer, and Hammoudeh (2015) where it is observed that such economic condition does not affect all GCC states. Thus, there are some GCC states that are affected by the economic policy uncertainty prevalent in the US and some that are indifferent to such volatilities. During the economic turmoil stage, it was observed that there are some GCC states that were preferred by the investors as opposed to those that were vulnerable to volatilities and spill overs.

Kang and Ratti (2013) have also taken the lead in exploring the phenomenon where an exploratory analysis shows that Saudi stock market performance and US economic policy changes are interlinked which further confirms the notion that the economic changes made by the US have a spill over effect to both neighbouring and non-neighbouring countries. The effects, according to Kang and Ratti (2013) extend to the GCC commodity and real estate market. Interestingly, the existing studies on the subject show that any change in US economic policies has a more pronounced effect on the GCC oil market as compared to the stock market. Antonakakis, Chatziantoniou, and Filis (2014) agreed that in the case of GCC the oil market is more dynamic thus leading to a higher volatility in comparison to the equity market.

The study makes an effort to bridge the research gaps and contribute to the present literature by undertaking an exploratory and empirical assessment of the spill over observed in the Saudi Arabia equity market courtesy of the economic policy changes brought about in the US.

Methodology

The philosophy of research for the study is positivism, which is based on the premise that reality should be viewed through an objective lens (Idowu, 2017). It makes use of a deductive research approach where reality is deduced via rigorous observations, experiments and measurements (Idowu, 2017). Given that the principal objectives of the research are to investigate the interrelationships between economic policy uncertainties and stock market returns; analyse and evaluate the extent to which stock market returns in the Saudi Arabia are influenced by the economic policy changes in the United States; and explore and suggest the reasons why and how the shocks of economic policy uncertainty in the United States have the tendency to influence the financial markets of non-neighbouring countries such as the Saudi Arabia, a positivist research paradigm seems most relevant (Rolinson and Hassard, 2015).

This study seeks to find independent results, which the quantitative data permits as the findings are comparatively independent of the researcher. A review of existing literature shows that studies conducted on the topic have vastly relied on quantitative means of data analysis Quick & Warming-Rasmussen (2015) and Wang & Hay (2013). To aid in the better evaluation of the effects of the US economic policy uncertainty on the stock market returns in Saudi Arab the following hypotheses have been developed for the correlation / covariance analysis:

- H0: There is no relationship between the monthly United States economic policy uncertainty and the monthly Tadawul All Share (TASI) stock market returns
- H1: There is a relationship between the monthly United States economic policy uncertainty and the monthly Tadawul All Share (TASI) stock market returns

Moreover, the following set of hypotheses has been developed to facilitate a linear regression analysis:

- H0: There is no supported relationship between X (independent variable) and Y (dependent variable).
- H1: There is a supported relationship between X (independent variable) and Y (dependent variable).

Where,

X: EPU i.e. the US economic policy uncertainty

Y: R_TASI_ i.e. the stock market returns in Saudi Arab's leading stock exchange (TASI)

The study is longitudinal in nature where Baker, Bloom, and Davis (2012) collect the monthly data for the US economic policy uncertainty from the Economic Policy Uncertainty Index developed. The data is collected for a 20 year period ending June 2019 and is available on the website https://www.policyuncertainty.com/us_monthly.html. The methodology deployed to construct the Economic Policy Uncertainty Index is available on Policyuncertainty.com and the readers are strongly advised to review the same so that meaningful conclusions to the research interpretations with respect to the research findings can be made. The data of historical monthly index values of the Tadawul All Share (TASI) i.e. the leading Saudi Arabia stock exchange for the same 20-year period is collected from the website of Investing.com.

As a first step, monthly historical market returns are computed by determining a month on month percentage change in stock market index value. To eliminate the problem of non-stationary in the data series the first difference is computed for the economic policy uncertainty index. The following ordinary least squares linear regression equation is constructed to measure the interrelationship between the Tadawul All Share (TASI) monthly stock market returns and the changes in United States economic policy uncertainty:

$$R_{TASI} = \alpha + \beta \Delta EPU_t + \varepsilon_t$$

Where:

R_{TASI} = the monthly returns offered by the Tadawul All Share

$\beta \Delta EPU_t$= the change in monthly economic policy uncertainty index values for the US

ε_t = standard error over time *t*

The influence of United States economic policy uncertainty on the Tadawul All Share (TASI) monthly stock market returns shall be controlled by two key variables (1) exchange rate parity between Saudi Riyal and the US Dollar, and (2) the historical oil prices (Asgharian, Christiansen and Hou, 2018). The choice of an ordinary least squares linear regression analysis is appropriate as it allows the researcher to effectively measure the extent of influence a variable(s) has on other variables. Simply put, it outlines the predictive ability of the model and helps explain the extent to which the variation in the dependent variable is explained by the independent variables. Hence in this case the linear regression, controlled for exchange rate parity and the oil prices,

helps in explaining the degree to which the Saudi stock market returns are impacted, influenced, explained, and hence predicted by the changes in the US economic policy.

In order to assess the interrelationship between the Saudi equity market performance and the economic policy changes in the US other approaches, especially those coined by Diebold and Yilmas (2009), may be relied on comprise the use of asset spill over index. The multivariate estimate of the forecast error variance is computed by the asset spill over index model where a vector autoregressive model (VAR) is employed to ascertain the market return. The spill over to equity market in Saudi Arabia of economic policy volatilities in the US are gauged via the magnitude and severity of the exogenous shocks originated in the US. The equation laid out below suggests the ways in which each of these are measured:

$$S_{nm} = \frac{\sum_{h=0}^{H} \psi^{h} nm^{2}}{\sum_{h=0}^{H} \sum_{n=1}^{N} \psi^{h} nm^{2}} \; x\; 100 \qquad (1)$$

In time *t* and market *m* the economic policy shocks are measured by the element $\psi^{h}nm$ that fundamentally gauges the volatility and impulse in the market. The following Pesaran and Shin (1998a) framework has been used by Diebold and Yilmaz (2009) to measure the volatilities and the impulsive behaviour:

$$\psi^{h} nm = \sigma_{nm} - \frac{1}{2}\, e_{n}{}'\, A_{h} \sum_{em} \qquad (2)$$

Where:
A_h = stands for the coefficient matrix of h^{th} of the moving average of VAR model.
Σ= represent the error variance matrix where σnm elements are in the row (n^{th}) and column (m^{th}).
e_n= represent the selection vector where n^{th} has been set at 1 and other elements at 0.
The below equation is used for market *n* in order to gauge the total directional spill and therefore calculate the effect of spill over:

$$S = \Sigma^{N} n=1\ {}^{S}n / \Sigma^{N} n=1\ \Sigma^{N} m=1 S_{nm} \qquad (3)$$

In the equation above the number of markets that are the focus of study are denoted by *n*. In the market *m* the spill over generated from the uncertainties of the economic policies in the US are represented by $\Sigma^{N} n=1\ \Sigma^{N} m=1 S_{nm.}$ The total spill over however is that which is received by Saudi Arabia alone and which is solely arising from the changes brought about in the US macroeconomic environment (i.e. no other country). The equation is consistent to what has been put into use by prior studies assessing the impact on the GCC states of the changes in United States economic policy.

Awartani et al. (2013) have made recent efforts to this end where the severity and magnitude of spill over between the Saudi stock market and the volatilities in the US macroeconomic environment has been assessed.

Results and Discussion

The twenty year data on Saudi stock market returns (variable name: R_TASI_) and the US economic policy uncertainty as proxied by the variable 'EPU' suggests that mean market returns have been approximately 1% and the mean monthly uncertainty difference has been 0.305. The maximum monthly returns ever recorded in the twenty year period have been 19.6% whereas the

maximum monthly uncertainty difference has been 103.770. The control variables Oil and USD_SAR have over the 20 year period recorded a mean of 61.48293and 3.750271respectively. Oil has shown to be more volatile as indicated by the range (i.e. the difference between maximum and minimum values) whereas the exchange rate parity between the US Dollar and the Saudi Riyal has proven to be more consistent and stable.

	EPU	**OIL**	**R__TASI_**	**USD_SAR**
Mean	0.305906	61.48293	0.009814	3.750271
Median	-1.392094	59.47	0.012486	3.7503
Maximum	103.7704	140	0.195963	3.7611
Minimum	-94.13134	19.44	-0.257516	3.7101
Std. Dev.	23.41237	26.88027	0.069727	0.002962
Skewness	0.406743	0.341654	-0.457768	-10.4155
Kurtosis	6.689375	2.180723	4.421782	144.6835
Jarque-Bera	142.1378	11.33383	28.47753	204227
Probability	0	0.003459	0.000001	0
Sum	73.11153	14694.42	2.345661	896.3147
Sum Sq. Dev.	130457.1	171966.6	1.157132	0.002087
Observations	239	239	239	239

Descriptive statistics

The Augmented Dickey-Fuller (ADF) test is utilised in this paper to test the unit root. The research variables are subjected to the unit root test. The findings of the test are presented in the below table:

Null Hypothesis: Unit root (individual unit root process)
Series: EPU, OIL, R__TASI_, USD_SAR
Date: 08/18/19 Time: 19:01
Sample: 1999M08 2019M06
Exogenous variables: Individual effects
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0 to 3
Total number of observations: 947
Cross-sections included: 4

Method	t-Statistic	Prob.**
ADF - Fisher Chi-square	251.082	0.0000
ADF - Choi Z-stat	-13.4762	0.0000

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.
Intermediate ADF test results UNTITLED

Series	Prob.	Lag	Max Lag	Obs
EPU	0.0000	3	14	235
OIL	0.1422	1	14	237
R__TASI_	0.0000	0	14	238
USD_SAR	0.0000	1	14	237

Unit Root Test

The p-value suggested by the ADF Unit Root test is 0.000, which is less than the 0.05 alpha value, and therefore the null hypothesis stands approved and that the series is stationary at the 3rd Lag and it does not contain a unit root.

The outcome of the test suggests that at the 5% level of significance under both the Trace test and the Max-eigenvalue test the null hypothesis stands rejected and that the two variables are co-integrated.

Co-integration test

The Johansen Co-integration Test is deployed to ascertain the extent of co-integration between the underlying variables. The test output is as follows:

Date: 08/18/19 Time: 19:45
Sample (adjusted): 2000M01 2019M06
Included observations: 234 after adjustments
Trend assumption: Linear deterministic trend
Series: EPU R__TASI_ USD_SAR OIL
Lags interval (in first differences): 1 to 4

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.310813	171.8149	47.85613	0.0000
At most 1 *	0.183535	84.71005	29.79707	0.0000
At most 2 *	0.122866	37.26147	15.49471	0.0000
At most 3 *	0.027749	6.585001	3.841466	0.0103

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.310813	87.10483	27.58434	0.0000
At most 1 *	0.183535	47.44858	21.13162	0.0000
At most 2 *	0.122866	30.67647	14.26460	0.0001
At most 3 *	0.027749	6.585001	3.841466	0.0103

Max-eigenvalue test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Co-integration Test

Correlation analysis

Covariance Analysis: Ordinary
Sample: 1999M08 2019M06
Included observations: 239

	R_TASI_	EPU
R_TASI_		
Correlation	1	**-0.132406**
t-Statistic	-----	-2.056471
Probability	-----	**0.0408**
Observations	239	239
EPU		
Correlation	**-0.132406**	1
t-Statistic	-2.056471	-----
Probability	**0.0408**	-----
Observations	239	239

Correlation Analysis

The correlation analysis shows interesting results. Two variables were used in the correlation analysis. These were (1) R_{TASI}, and (2) EPU. The analysis shows that there is an inverse / negative correlation between the two underlying variables. Theoretically, the boundary of the strength of correlation determines the strength of correlation. In principle, value lower than 0.3 means that the relationship between the variables is weak. Therefore, the strength of relationship between the two variables mentioned above is weak standing at -0.13. The probability value stands at 0.048. As the value derived is less than $p < 0.05$, it can be concluded that the value of 0.048 is lower than the alpha level (0.05) and thus we reject the H0. Therefore the Null stands rejected and the Ha is approved. Hence, we have enough evidence to say that there is a statistically significant correlation between the Saudi stock market returns and the US economic policy uncertainty, however, the strength of such correlation is not quite strong.

Ordinary Least Squares Linear Regression

Time-Varying Ordinary Least Squares regression equation used is $R_{TASI} = \alpha + \beta \Delta EPU_t + \varepsilon_t$. The outcomes of the linear regression analysis have been tabulated below:

	Mean	Std. Deviation	N
RTASI	.009814	.0697273	239
USD_SAR	3.750271	.0029615	239
Oil	61.482929	26.8802661	239
EPU	.305906	23.4123731	239

OLS Descriptive Statistics

		RTASI	USD_SAR	Oil	EPU
Pearson Correlation	RTASI	1.000	-.170	-.067	-.132
	USD_SAR	-.170	1.000	-.097	.077
	Oil	-.067	-.097	1.000	.004
	EPU	-.132	.077	.004	1.000
Sig. (1-tailed)	RTASI	.	.004	.150	.020
	USD_SAR	.004	.	.067	.119
	Oil	.150	.067	.	.474
	EPU	.020	.119	.474	.
N	RTASI	239	239	239	239
	USD_SAR	239	239	239	239
	Oil	239	239	239	239
	EPU	239	239	239	239

OLS Correlation Output

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.189[a]	.036	.028	.0687561	.036	4.386	2	236	.013
2	.223[b]	.050	.038	.0683961	.014	3.491	1	235	.063
a. Predictors: (Constant), Oil, USD_SAR									
b. Predictors: (Constant), Oil, USD_SAR, EPU									
c. Dependent Variable: RTASI									

OLS Regression Model Summary

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations			Collinearity Statistics	
		B	SE	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	15.725	5.672		2.772	.006					
	USD_SAR	-4.187	1.512	-.178	-2.769	.006	-.170	-.177	-.177	.991	1.010
	Oil	.000	.000	-.084	-1.316	.190	-.067	-.085	-.084	.991	1.010
2	(Constant)	14.907	5.659		2.634	.009					
	USD_SAR	-3.969	1.509	-.169	-2.631	.009	-.170	-.169	-.167	.985	1.016
	Oil	.000	.000	-.083	-1.300	.195	-.067	-.085	-.083	.990	1.010
	EPU	.000	.000	-.119	-2.868	.000	-.132	-.121	-.119	.994	1.006
a. Dependent Variable: RTASI											

OLS Coefficients

The regression analysis confirms that the correlation (R) stands at -0.132. However, the more important variable here is R square that stands at 0.036 (or 3.6%) for the first block indicating that the control variables USD_SAR and Oil collectively account for 3.6% variation in the stock market returns for the premier Saudi Arab stock exchange. In other words, approximately 96% of other factors (other than the two underlying control variables) contribute to the monthly stock returns. The second block takes into account all three variables i.e. the US economic policy uncertainty (EPU), exchange rate volatility (USD_SAR), and Oil. In this case the R square value improves to 0.050 (i.e. 5%) thereby suggesting that the three variables collectively explain 5% variation in R_TASI_ (i.e. Saudi stock market returns). Simply put, the predictor variable EPU solely accounts for a 1.4% variation, which unarguably is on the lower side.

Significance value (Sig.) / probability value which stands at 0.000, and is the same as given by ANOVA, is lower than 0.05 ($p < 0.05$) our alpha level. This means that we accept the null hypotheses and that there is a statistical evidence of a supported relationship between X and Y, meaning the United States economic policy does statistically affect the Tadawul All Share (TASI) monthly stock market returns. Overall, it can be concluded that we reject the Null hypothesis that there is no supported relationship between X and Y and that *a* relationship does exist between the two underlying variables.

Vector Auto Regression (VAR Estimate)

The outcomes of the VAR estimate are tabulated under Appendix 1. From the results, output it can be observed that for the 7 period lag structure the economic price uncertainty is able to significantly estimate and predict the TASI stock market returns. The outcomes are however somewhat close to being significant for the EPU 5 and 6 order lag where the t statistic is greater than 2 and hence it could be interpreted that economic price uncertainties in period 5 and period 6 could somewhat explain the variation in current monthly Saudi stock market returns. The lag selection criteria are ascertained with the help of the following table:

VAR Lag Order Selection Criteria
Endogenous variables: D(EPU) D(R__TASI_) D(USD_SAR) D(OIL)
Exogenous variables: C
Date: 08/19/19 Time: 01:49
Sample: 1999M08 2019M06
Included observations: 230

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-709.3155	NA	0.005807	6.202744	6.262536	6.226863
1	-590.9730	231.5397	0.002385	5.312809	5.611772	5.433405
2	-543.9782	90.31179	0.001822	5.043289	5.581423*	5.260361
3	-503.6338	76.12805	0.001475	4.831599	5.608903	5.145148
4	-462.7542	75.71626	0.001188	4.615254	5.631729	5.025279
5	-433.5067	53.15410	0.001060	4.500058	5.755705	5.006561*
6	-424.0709	16.82034	0.001124	4.557138	6.051955	5.160117
7	-394.9287	50.93544*	0.001005*	4.442859*	6.176846	5.142314
8	-383.3533	19.82920	0.001047	4.481333	6.454492	5.277266

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

Lag Selection Criteria

The Akaike information criterion suggests a lag order of 7and the Schwarz information criterion suggests a lag order of 2. The lag order of 2 is to be rejected as it has resulted in residual autocorrelation and hence lag order of 7 is to be used for VAR (p) estimation.

Conclusion

The study undertaken aimed to empirically determine the effect of US economic policy uncertainty on the performance of Saudi Arabia's stock market. To this end, the study's specific objectives were to investigate the interrelationships between economic policy uncertainties and stock-market returns; to analyze and assess the extent to which changes influence stock-market returns in Saudi Arabia in economic policy in the United States, and to explore and suggest the reasons why and how the economic policy uncertainty shocks.

With respect to the first and second research objective it is found that there is an inverse / negative correlation between United States economic policy uncertainty and the monthly Tadawul All Share (TASI) stock market returns and that a statistically significant relationship between the two exists. The regression analysis further confirms this finding indicating that US

economic policy uncertainty only accounts for 1.4% for the stock market returns for the premier Saudi Arab stock exchange. In other words, approximately 98% of other factors (other than economic policy uncertainty) contribute to the monthly stock returns.

Thus, there is a statistical evidence of a supported relationship between the underlying variables, meaning the United States economic policy does statistically affect the Tadawul All Share (TASI) monthly stock market returns. Lastly the Vector Auto Regression (VAR Estimate) confirms that economic price uncertainties in period 5 and period 6 could somewhat explain the variation in current monthly Saudi stock market returns. The findings are consistent to the existing literature on this topic as Khalifa et al. (2014) who investigated the impact of US economic uncertainty on Saudi Arabia and its corresponding spill over in the stock market found that unexpected economic policy uncertainty in the US decreases the Saudi stock market index. Jouini (2014) who investigated the impact of US economic uncertainty on GCC states over a period of 10 years reached a similar conclusion.

With respect to the third research objective it can noted that Saudi Arabia has strong ties to the US economy, which means that US policies will have a direct impact on the Saudi stock market. It has pegged its currency to the US dollar that pressures Saudi decision-makers to be in line with the US central bank's policy despite their divergent economic interests and cycles.

The study has contributed to the existing literature by carrying out a comprehensive empirical study on the spill over observed in the Saudi Arabia equity market courtesy of the economic policy changes brought about in the US that is likely to be of significant value to the policy makers and regulators especially in the Saudi think tanks. Nevertheless, the following areas can be further explored to add to this area of study: (1) perform a cross-regional analysis that empirically assesses the effect of US economic policy uncertainty on other GCC countries, including Saudi Arabia; (2) conduct empirical research to examine how / if economic policy instability in other developed countries (such as the United Kingdom).

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