

Sadat Momoh SHUAIBU, PhD Student

Email: 144154@eul.edu.tr

**Department of Business Administration, European University of Lefke
Northern Cyprus, Turkey**

Associate Professor Dervis KIRIKKALELI (Corresponding author)

Email: dkirikkaleli@eul.edu.tr

**Department of Banking and Finance, European University of Lefke
Northern Cyprus, Turkey**

INVESTIGATING THE NEXUS BETWEEN POLITICAL RISK AND ECONOMIC RISK: A WAVELET COHERENCE ANALYSIS FOR GREECE, ALBANIA, BULGARIA AND ROMANIA

***Abstract.** This study is a new attempt at investigating the nexus between political risk and economic risk in Greece, Albania, Bulgaria and Romania from a country-specific perspective using a wavelet approach over the period 1984Q1 to 2015Q2. The Morlet wavelet model is employed with a focus on wavelet power spectrum and wavelet coherence due to its time-frequency varying characteristics. The wavelet power spectrum shows the vulnerability of the individual variables in both high and low frequencies and wavelet coherence unveil that causality among variables is different across frequencies and time. Results indicate in both high and low frequencies that (i) In Bulgaria, Romania and Albania political risk significantly cause economic risk and (ii) in Greece, economic risk is a good predator of political risk at different frequencies and time. The aforementioned results provide outstanding insights for investors and policymakers, which can be beneficial in terms of identifying opportunities for investment and for policy reforms where necessary.*

***Keywords:** Political Risk; Economic Risk; Wavelet Power Spectrum; Wavelet Coherence; Greece; Albania; Romania; Bulgaria*

JEL Classifications: R11, C33, C58, P16

1. Introduction

The sharp decline in economic conditions following the 2007-2008 global financial crisis over a decay now prompted comprehensive investigations into the nexus between political risk and economic risk. Understanding the relationship between these risks is a crucial issue in any economy because a nation's economic performance depends not only on macroeconomic factors but also on institutional and political factors (Telatar et al., 2010). Political issues have been considered one of those factors contributing to macroeconomic instability. It is expected that under the condition of political turmoil, changes in regime, corruption, bad governance, distorted law and order, there could be an economic risk.

Political risk is the risk that reduces cash flow from investments due to political instability (Ramcharran, 1999). Economic risk, on the other hand, assesses a country's economic weaknesses and strength by focusing on macroeconomic conditions (ICRG). Economic and political risks are important foci point of consideration by investors when making appropriate investment decisions. Hence, several kinds of literature are of the notion that political risk has a destructive impact on economy as this hypothesis is supported by (Aisen and Veiga, 2013; Tang and Abosedra, 2014; Uddin et al., 2017). Contrarily, Miljkovic and Rimal (2008) argue that political risk depends on the country's economic stability.

It is worthy of note that the empirical study focuses on four selected Balkan countries -Greece, Albania, Romania and Bulgaria and to the best of our knowledge the exploration of the time-frequency bi-directional causality between political risk and economic risk in these countries employing wavelet coherence has not yet been examined in the literature. Therefore, the wavelet approach is important for analysing risk in these countries as it allows the decomposition of time series data into its time-frequency space. So, it aims to apply newly developed econometrics method borrowed from the field of physics to examine the nexus between political risk and economic risk in these countries. Thus, the paper objective is to proffer answers to the following questions: (i) does political risk lead to economic risk and/or (ii) does economic risk lead to political risk and (iii) if yes, what is the direction of causality and why?

As earlier stated, the level of country risk is the first criterion used in determining an appropriate site for investment. Thus, figures (1) and (2) below show how the historical trend of political risk and economic risk rating for the four countries has changed over the last 30years. The political risk and the economic risk of the countries differ across countries and over time. In terms of political risk, Romania was in a very high-risk environment in the late 1980s and Albania fall in this environment in 1992 after which all countries concentrated on the high political risk environment.

Investigating the Nexus Between Political Risk and Economic Risk: A Wavelet Coherence Analysis for Greece, Albania, Bulgaria and Romania

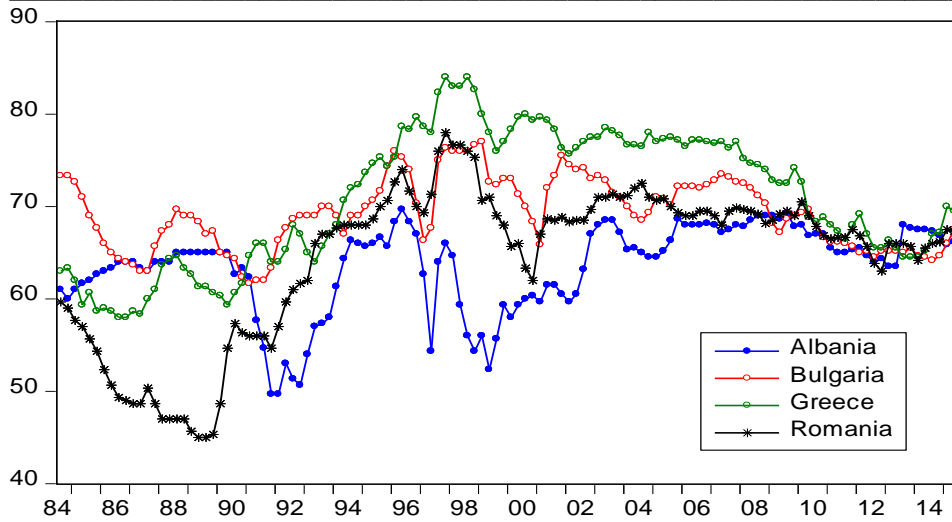


Figure 1: Political Risk Index in the Balkan Countries from PRS Group

Similarly, for the economic risk, all three countries- Albania, Bulgaria and Romania were in very high economic risk environment in 1992 as a resultant effect of a spike in inflation and countries struggling to recover from a severe state of economic collapse as a consequence of the transition from centrally planned economy into a market economy in the 90s when the countries had loose macroeconomic policies (Haerpfer, 2003).

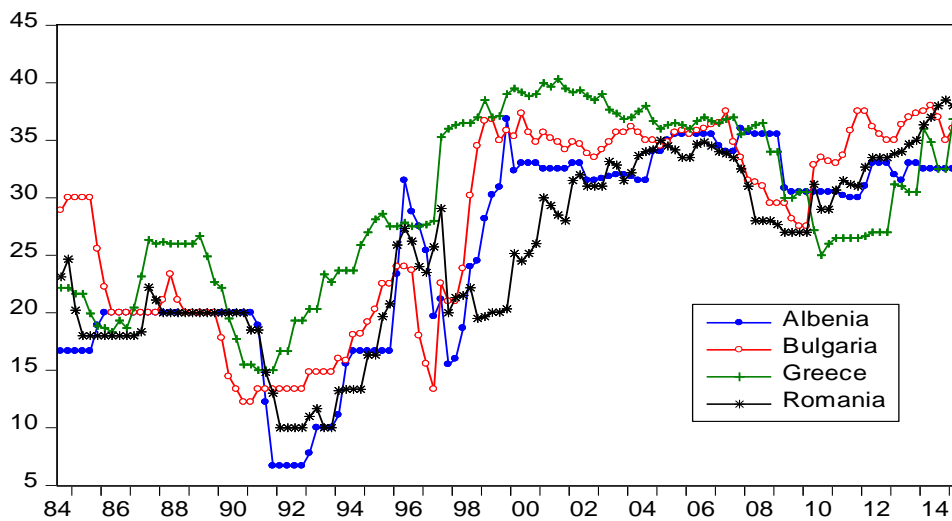


Figure 2: Economic Risk Index in the Balkan Countries from PRS Group

We organize the remaining of the paper as follows- literature review is discussed in section 2 and focus on the relationship between political risk and economic risk plus, political, economic and financial events of all four countries as well as studies on wavelet. Section 3 signifies methodology and data for the study; 4 represents empirical results; 5 has to do with implications of the study and section 6 present the conclusion from the results and recommendation as well as a preposition for future research.

2.0. Review of Related Literature

Besides the global financial crisis, the downfall of the political system also awakened the interest amongst researchers and induced them to take a look at the nexus between political risk and economic risk (Tabassam et al., 2016). This is believed to enhance the growth and development of a nation. For instance, Alesina and Perotti (1996) asserted the negative impact of political instability on investments by emphasizing that it results in a risk that reduces investments. Bailkowski et al. (2008) employ data from 27 OECD countries to measure the impact of politics on financial markets. The results from these studies revealed that economic risk indices could fluctuate significantly during the period around Election Day. Contrarily, Olson (1963) acknowledges that when an economy grows rapidly it tends to spread imbalance and disruption that seemingly encourages political risk. Additionally, Miljkovic and Rimal (2008) also came up with the view that economic stability of a country as perceived by the citizens is a determinant of its political stability, which by implication, economic risk consequently leads to political risk. Hence, changes in economic policies can, therefore, determine the political risk of a nation. The conventional wisdom is that incumbents use economic policy to help their re-election. It becomes economic risk when citizens perceive that incumbent government has failed in enhancing economic growth of the country and this is a determinant to political stability.

However, results from other empirical findings have pointed to the existence of a null relationship between political risk and economic risk. Goldsmith (1987) in an empirical study attested to a lack of relationship between both variables. Similarly, another empirical analysis by Londregan and Poole (1989) stated that although the probability of attaining a high level of political risk could be instigated by a low level of economic stability, it, however, does not agree that causality exists where the low level in economic stability would lead to a higher level in political risk.

Despite the research carried out to determine the relationship between political risk and economic risk, whereby both standard and nonstandard methods were employed for analysis, all these techniques focused on the time domain without consideration for the frequency domain due to the fact those methodologies do not have the properties of the frequencies space. Hence, a wavelet approach is a combination of both time and frequency domain properties and can reveal detailed results of time-series by decomposing the data into its time-frequency space. Besides, unlike those methods, for instance, Granger causality,

Investigating the Nexus Between Political Risk and Economic Risk: A Wavelet Coherence Analysis for Greece, Albania, Bulgaria and Romania

Generalized Methods of Moments (GMM) calls for pre-testing for unit root test but we employ wavelet as it does not account for issues relating to stationary and non-stationary data.

On the other hand, a few studies have employed wavelet to determine the effect of various variables on the health of the economy, for example, Sharif et al., (2017) investigated the connection between electricity generation and economic growth in Singapore and covers period spanning from 1983 to 2016. Results reveal that in the medium run, there is bidirectional causality between both variables and a unidirectional causality running from energy generation to economic growth in the long-run. Khalid and Habimana (2019) investigated the relationship between military spending and economic growth for the case of Turkey between 1961 to 2014. Evidence revealed that in the long-run, an increase in military spending is harmful to the health of the economy.

In the literature a few studies have employed wavelet for analysis from risk perspectives, for instance, using the wavelet transform, Aloui and Hamida (2019) aim to explore the relationship between oil- stock and geopolitical risk in Saudi Arabia over the period 1989 to 2019. They find that in the short-run geopolitical risk significantly impact stock returns. They observe a unidirectional causality running from geopolitical risk to stock return and a positive correlation between geopolitical risk and oil prices. Furthermore, Marfatia (2017) also explore risk in the international stock market. Evidence shows that at lower frequencies co-movement of risks between the European markets and the U.S markets is strong while at higher frequencies the integration of risks is less connected to the U.S but more connected to the region the country belongs. Aloui et al (2018) explore the relationship between global risk and other macroeconomic variables in the case of Saudi Arabia, and results reveal that the economy of Saudi Arabia is exposed to global risk which is connected to the pegging of the Saudi Riyal to US dollar, oil market volatility in the analysis of different variables on the economic health of Saudi Arabia between the period 1969 to 2014.

To extensively investigate the nexus between political risk and economic risk, below are details of the chronological events of the four countries as it relates to their political, economic and financial risks (source: BBC). Political risk is seen to be more as to compare to other forms of risks in all countries except Greece. In order words, in tables (1) to (4), aside Greece with the financial crisis in most parts of the years, the other three countries historical events are characterized by political risks.

Table 1: Sequence of Greece Political, Economic and Financial events

Year	Nature	Political, Economic or Financial event
1985	Internal Conflict	Protest as a government plan to reduce the power of president
1991	Internal Conflicts	Rejection of the name and flag of Republic of Macedonia
1993	Presidential Election	Return of Papandreou as president

1996	External Conflict	Tension between Turkey and Greece over the Aegean islet dispute
2000	Tension	Left-wing Guerrilla group killed a British diplomat
2002	Currency Change	Drachma was replaced by Euro
2004	Elections and Debt Crisis	Simitis Kostas steps down from CND and Greece Found to have falsified budget deficits
2005	Internal Conflict	Protest strikes by workers
2006	Conflicts	More protest and strikes by workers and Turkey and Greece fighters crashed
2007	Elections	Prime Minister Karamanlis won elections
2008	Rule of law violation/conflict	Passage of controversial pension reform/ Proprotest over the killing of a teenager
2009	Elections and Debt crisis	George Papandreou became new PM and Low credit rating due to huge debt
2010	Debt Crisis	More austerity measures in return for EU approved debt
2010	Internal conflicts	General strike by trade union due to austerity measures
2011	Debt Crisis	EU to write of 50% debt but in return with more austerity
2011	Debt Crisis	Resignation of George Papandreou due to financial crisis
2012	Debt Crisis	EU issue 130bn bailout funds for more austerity measures
2012	Internal conflicts	Protest against approval for more austerity measures
2012	Debt Swap	Debt swap with private firms- paid off 50% debt from EU
2012	Tension	Strike by trade union against austerity measures
2012	Debt Crisis	Parliament passes 13.5bn euro bailout loan of EU
2013	Corruption	Corruption by Nikolas Michaloliakos and five others
2014	Financial Crisis	Release of 8bn euros as further bailout fund
2014	Elections	Crisis from failure of parliament to elect a new president

Table 2: Sequence of Albania Political, Economic and Financial Events

Year	Nature	Political, Economic or Financial Event
1985	Elections	Ramiz Alia was replaced by Hoxha.
1991	Elections	Alia re-elected.
1993	Corruption	Ramiz Alia and Fatos Nano convicted for corruption
1994	Referendum	Rejection of the constitution to grant more powers to the president
1996	Elections	Alleged fraud in general elections
1997	Financial Crisis	Pyramid investment schemes collapse
1997	Financial Crisis	Sali Berisha resigns due to financial crisis
1998	External Crisis	Crisis in Kosovo sends refugees to Albania
1998	Internal Conflict	Protest against the death of Azem Hajdari
1999	Elections	30-year-old Iier Meta was appointed as prime minister
2001	Elections	Prime Minister Iier Meta re-elected
2002	Internal Conflicts	Lier Meta succeeded by Pandeli Majko

Investigating the Nexus Between Political Risk and Economic Risk: A Wavelet Coherence Analysis for Greece, Albania, Bulgaria and Romania

2002	Elections	Fatos Nano becomes prime minister again
2005	Elections	Sali Berisha emerged prime minister
2009	Elections/ Conflict	Sali Berisha wins parliamentary elections and Protest at alleged vote-rigging.
2010	Internal Conflicts	Protest on civil disobedience
2011	Internal Conflicts	Anti- government protest about election rigging
2011	Corruption	Four died on a protest about corruption
2013	General Elections	Socialist Party member Edi Rama wins elections

Table 3: Sequence of Romanian Political, Economic and Financial events

Years	Nature	Political, Economic or Financial event
1985	Financial Crisis	Measures aimed at reducing debt leads to food shortage
1989	Internal Conflicts	Execution of Nicolae Ceausescu and his wife
1990	Internal Conflicts	Demonstration against ex-communist leadership
1991	Internal Conflicts	Riots by miners lead to the resignation of Petre Roman
1996	Elections	Emil Constantinescu elected president
1999	Internal conflicts	Protest by miners due to soaring prices
2000	Elections	Adrian Nastase becomes prime minister
2008	Corruption	EU warns Romania over high-level corruption
2009	Financial crisis	Lenders agree to lend Romania debt worth 20bn euros
2012	Corruption	Prime Minister Emil resigns due to corruption
2012	Elections	Victor Ponta becomes prime minister.
2014	Presidential Elections	Klaus Iohannis

Table 4: Sequence of Bulgaria Political, Economic and Financial Events

Years	Nature	Political, Economic or Financial Events
1984	Internal conflict	Zhivkov tries to force Turkish minority to take Slavic names
1990	Internal conflicts	The Collapse of the BSP government in the face of mass Demonstration
1990	Elections	Zhelyu Zhelev became the president
1992	Corruption	Todor was arrested for corruption
1995	Elections	Zhan videnov of the Bulgaria socialist party becomes prime minister
1996	Financial crisis	exchange rate devaluation
1997	Financial crisis	Bulgaria currency pegged to German mark (currency devaluation)
2001	Presidential Elections	Georgi Parvanov wins elections
2005	Elections	Sergei Stanishev wins elections
2008	Corruption	EU freezes infrastructural subsidies due to corruption
2008	Corruption	Suspension of the EU financial aid as a result of corruption
2009	Internal conflict	Demonstration due to shortage of gas

2009	Financial crisis	Protest as a result of hardship
2009	Elections	Sofia Boiko Borisov wins general elections
2010	Corruption	EU calls on control of corruption
2011	Internal conflict	Anti- Roma demonstration regarding the death of a youth
2011	Elections	Rosen Plevneliev, won elections
2013	Internal conflict	Protest against austerity
2014	Financial crisis	Banking crisis

3. Data and Methodology

In this study, we use economic and political risks index data for the Balkan countries, namely Albania, Romania, Greece, and Bulgaria covering the period spanning from 1984Q1 to 2015Q2. Data is obtained from the most widely used International Country Risk Guide (ICRG). The political risk index is measured on a scale ranging from 0 (lowest risk level) to 100 (highest risk level) points whereas the value of the economic risk index ranges between 0 (lowest risk level) and 50 (highest risk level) (Hoti 2005).

In comparison to other rating agencies such as Euromoney, institutional investors, Moody's, Standard & Poor's as well as Economic Intelligence Unit, the political risk and economic risk data produced by PRS Group became imperative for this research because it is the only agency that has consistent and comprehensive ratings.

ICRG political risk is consisting of the following components - corruption, democratic accountability, internal and external conflicts, bureaucracy quality, religious and ethnic tension, as well as investment profile, socio-economic conditions, government stability, law and order; and military in power. Similarly, the economic risk components are - current account balance as a percentage of GDP, budget balance as a percentage of GDP, inflation rate, GDP growth and GDP per capita (Hoti, 2005).

Wavelet transform which is initially developed by Goupillaud et al (1984), is borrowed from the field of Physics and is employed in the current study to investigate the relationship between political risk and economic risk. With the wavelet technique which is a time-frequency analysis, the interactions between time series at different frequencies and how they evolved is determined (Aguilar-Conraria et al., 2008). Unlike the Fourier transform which deals only with the frequency domain, wavelet is a combination of both the time and frequency domain analysis. The technique is efficient in the use of seismic signal analysis (Sifuzzaman et al., 2009), this makes it the best methodology to adopt when analyzing the frequency of interactions between variables at a particular time.

Investigating the Nexus Between Political Risk and Economic Risk: A Wavelet Coherence Analysis for Greece, Albania, Bulgaria and Romania

A wavelet ψ which is a component of the Morlet family is applied in this study-

$\psi(t) = \pi^{-\frac{1}{4}} e^{i\omega_0 t} e^{-\frac{1}{2}t^2}$, $p(t), t = 1, 2, 3, \dots, T$, where, ψ is used on time series observations.

The main parameters are time or location (k) and frequency (f). The main role of the k parameter is to express a wavelet's particular location in time, while f , controls the distended wavelet for localizing different frequencies. $\psi_{k,f}$ can be constructed primarily. The equation of this transformation is shown below:

$$\psi_{k,f}(t) = \frac{1}{\sqrt{h}} \psi\left(\frac{t-k}{f}\right), k, f \in \mathbb{R}, f \neq 0$$

The continuous wavelet can be generated from ψ as a function of k and f given time series data $p(t)$ as follows:

$$w_p(k, f) = \int_{-\infty}^{\infty} p(t) \frac{1}{\sqrt{f}} \psi\left(\frac{t-k}{f}\right) dt$$

The equation below represents the regenerated initial times series $p(t)$ with the ψ coefficient

$$p(t) = \frac{1}{c_\psi} \int_0^\infty \int_{-\infty}^\infty IW_p(a, b) I^2 da \frac{db}{b^2}$$

The wavelet power spectrum below is employed to capture the fluctuations in political risk and economic risk in the Balkan countries and get deeper information of the time series variables,

$$wps_p(k, f) = |w_p(k, f)|^2$$

The main objective of this study is to employ wavelet coherence to examine the causality or correlation between political risk and economic risk in Greece, Albania, Bulgaria and Romania while taking frequency and time into account simultaneously. The innovation of the wavelet coherence is it allows this present study to picture any correlation between these variables in combined time-frequency based causality. Nonetheless, the cross-wavelet transform is considered first before performing the wavelet coherence. The equation of cross wavelet transform (CWT) of the time series is shown below:

$$W_{pq}(k, f) = IW_p(k, f)W_q(k, f)$$

Where $W_p(k,f)$ and $W_q(k,f)$ denotes the CWT of pair time series variables (Torrence and Compo, 1998). Torrence and Compo (1998) constructed the squared wavelet coherence and is shown with the equation below:

$$R^2(k, f) = \frac{IC(f^{-1}w_{pq}(k, f)I^2)}{C(f^{-1}Iw_p(k, f)I^2)C(f^{-1}Iw_q(k, f)I^2)}$$

where (k,f) ranges between 0 and 1. Whenever $R^2(k,f)$ gets close to 1 it indicates that the time series variables are either correlated or there exist a causal linkage among the time series at a particular scale, bounded by a black line and depicted by a red colour. Also, when the value of $R^2(k, f)$ approaches 0 it indicates that there is no correlation between the time series variables and is pictured by blue color. However, obtaining the value of $R^2(k, f)$ does not provide any way to distinguish positive correlation from negative; hence, “Torrence and Compo (1998) *postulated a means by which to detect the wavelet coherence differences through indications of deferrals in the wavering of two-time series*” (Pal and Mitra 2017, 232-233). The equation of the wavelet coherence phase difference is constructed as follows:

$$\phi_{pq}(k, f) = \tan^{-1} \left(\frac{L\{C(f^{-1}w_{pq}(k, f))\}}{O\{C(f^{-1}w_{pq}(k, f))\}} \right)$$

where L and O denote an imaginary operator and a real part operator, respectively

In the wavelet coherence analysis, variables are said to be in phases or positively (out of phase or negatively) correlated in the thick black shape area when arrows point to the right (left). Also, when arrows point to the down (up), they are lagging (leading) (Cai et al., 2017).

Table 5. Descriptive statistics

Period	1984Q1 - 2015Q2							
Source	Political Risk Group (PRS)							
Code	ERAL	ERBU	ERGR	ERRO	PRAL	PRBU	PRGR	PRRO
Mean	25.70	27.71	29.61	25.22	63.53	69.26	70.81	64.44
Median	30.37	30.08	28.37	25.94	65.00	69.00	72.17	67.58
Maximum	36.83	38.00	40.33	38.50	69.67	77.00	84.00	78.00
Minimum	6.66	12.22	15.00	10.00	49.67	61.67	58.00	45.00
Std. Dev.	8.50	8.48	7.41	7.75	4.63	3.79	7.25	8.20

Investigating the Nexus Between Political Risk and Economic Risk: A Wavelet Coherence Analysis for Greece, Albania, Bulgaria and Romania

Skewness	-1.60	-0.44	-0.26	-0.23	-1.18	0.04	-0.13	-0.99
Kurtosis	2.17	1.65	1.83	1.99	3.83	2.12	1.74	2.95
JB.	11.06	13.47	8.48	6.38	32.32	4.01	8.50	20.15
Prob.	0.00	0.00	0.01	0.04	0.00	0.13	0.01	0.00
Obs.	124	124	124	124	124	124	124	124

Note: PRRO-Political risk of Romania, PRGR-Political risk of Greece, PRBU-Political risk of Bulgaria, PRAL-Political risk of Albania, ERRO-Economic risk of Romania, ERGR-Economic risk of Greece, ERBU-Economic risk of Bulgaria, ERAL- Economic risk of Albania, JB denotes Jarque-Bera, OBS. Denotes observations,

4. EMPIRICAL FINDINGS

To capture the causal linkage between political risk and economic risk in the Balkan countries, wavelet coherence technique is applied in this study. The intensity of the co-movement is represented by the power spectrum on the right side in the figures below. As stated earlier, the red colour signifies high co-movement while the blue colour indicates that there is no co-movement among the variables.

Figures (3) and (4) show the wavelet power spectrum for the variables of political risk and economic risk in these countries, respectively. Empirical findings from the power spectrum show interesting results as the variables of economic risk and political risk in the countries appear highly vulnerable only throughout the 90s at different scales.

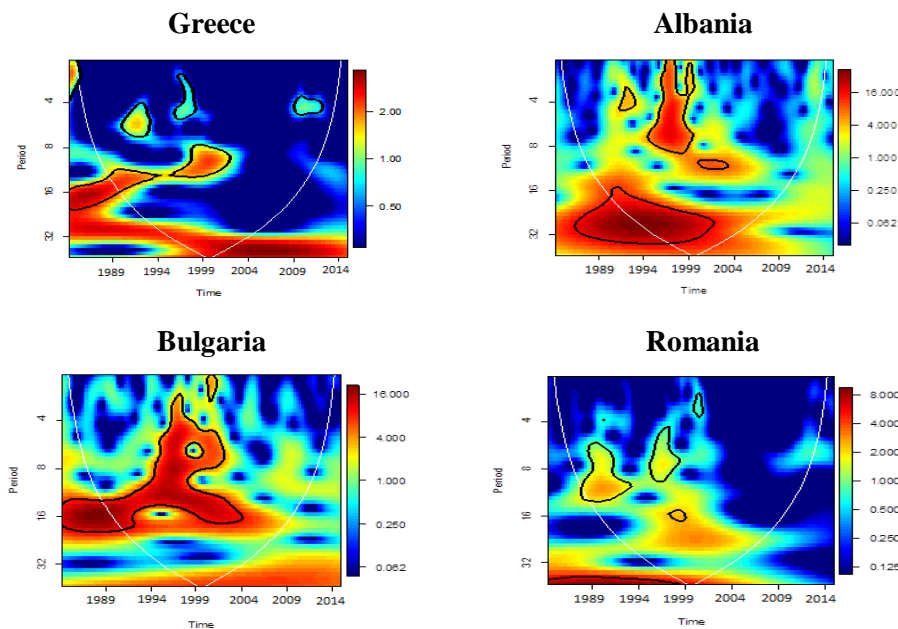


Figure 3. Wavelet power spectrum for political risk

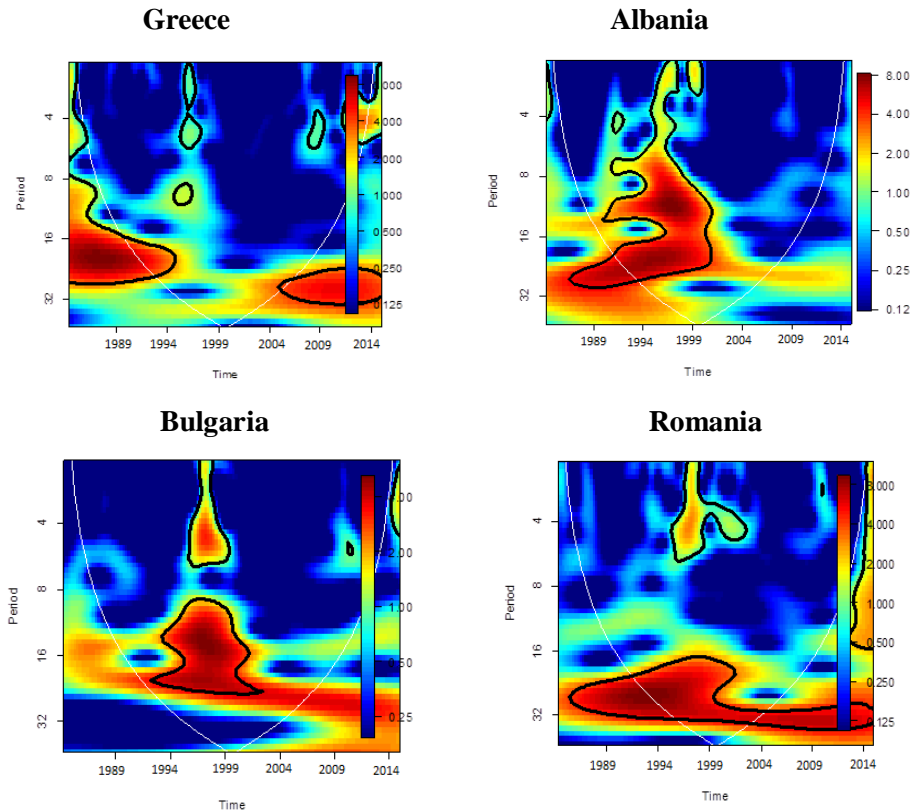


Figure 4. Wavelet power spectrum for economic risk

As evident in Figure 5, it is seen that in Greece there is a short-run causality running from political risk to economic risk between the periods 1989-1993; 1994-2000 and 2008 – 2011, indicating how economic risk is an important predictor of political risk in Greece. Similarly, to obtain right down arrows indicates that political risk was significantly vulnerable in Bulgaria between the periods 1989 and 1994, this was when Bulgaria engaged in political transformation, from communism to a democratic nation. The Bulgarian Socialist Party (also known as BSP, formerly the Bulgarian Communist Party) won the first post-communist parliamentary elections in 1990 with a small majority. The BSP government formed at that time was brought down by a general strike in late 1990 and replaced by a transitional coalition government. The political risk led economic risk extended to 1990 as a result of shock from Kosovo crisis which affected the country’s foreign trade especially between the 4 to 8 scales (quarters) as well as 8 to 16 scales (quarters). Since the transition occurred, the nation embarked on the

Investigating the Nexus Between Political Risk and Economic Risk: A Wavelet Coherence Analysis for Greece, Albania, Bulgaria and Romania

economic transition from the traditionally strong agricultural system to industrialization with the incumbent prime minister at that time. The nation suffered a sharp decline in economic activities until 1997 when the government introduced a reformed economic program that involved restructuring trade policies.

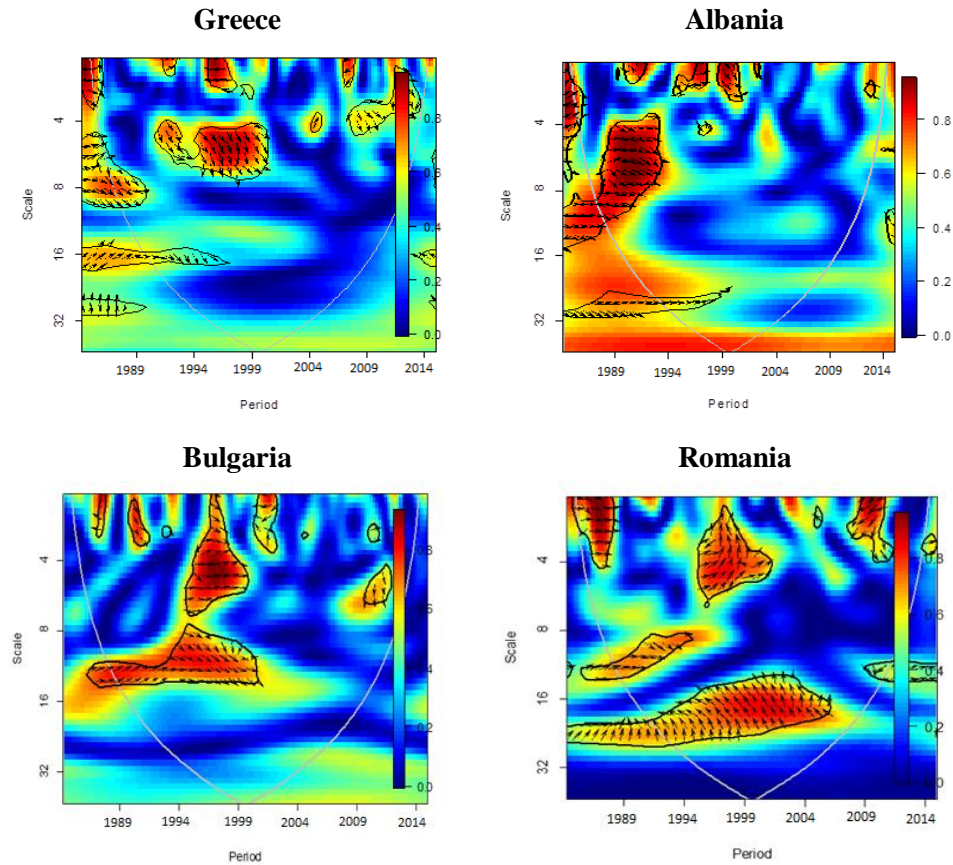


Figure 5. Wavelet coherence of political risk and economic risk

Furthermore, despite the macroeconomic stabilization, the impact of corruption is still hitting on Bulgaria (which is ranked 71 by the corruption perceptions Index) economy as there are weaknesses in the fight against corruption and the rule of law. This also contributed to a large extent to the unidirectional causality of political risk to economic risk.

In Albania, our finding reveals that there is no co-movement in both low and high frequencies; however, there is a positive correlation between political risk and economic risk at 4 and 8 scales (quarters) in the period 1989 to 1995 also the same effect is observed in the period 1999 to 2000 between a scale of 2 to 4. This

resulted from the economic crisis in the region which led to its first democratic election but later relinquished due to strikes and revolts by the opposition which resulted in declaring a state of emergency. A new government was formed in 1992 to make some macroeconomic interventions and spearhead the economy from communism to a market economy.

It is evidence from wavelet coherence of Romania that there is a long run causality from political risk to economic risk in the period 1994 and 2004 on the 16 to 32 scale (quarters) and 8 to 16 scale (quarters), this can be seen as resulted from the conflicts between the prime ministers and presidents, as the constant disagreement between policies and reforms separate both parties. The conflict between Iliescu and Roman, or between Emil Constantinescu and Radu Vasile, which did not involve Parliament because the opponents were members of the same party is an example of political risk leading economic uncertainties in Romania (Gherghina and Spáč, 2016). The ethnic division also plays a role in fuelling political uncertainties in Romania, the Romanian-Hungarian conflict was the xenophobic attacks and maltreatment by the Romanians on the Hungarian.

Additionally, Romania economy was not left out of the negative impact of the global economic crisis as this is reflected between 2008 to 2009 on a 2 to 4 scale (quarter). There was a sharp drop in Romania's exports coupled with the current account crisis. Aside from this impact, Romania's economic weakness triggered the situation.

5. The implication of the study

By using the wavelet as a method of analysis we have already established the benefits and aims to achieve among them being to determine the causality between variables in the process obtain detailed information in the time-frequency domain simultaneously.

Furthermore, it is observed from the use of wavelet approach that except for Greece, that there is a long-run running from political risk to economic risk in other three countries which is contrary to Kirikkaleli, (2016) study which states that economic risk leads political risk in all four countries. Also, not in line with Longdregan and Poole (1990), which shows that it provides a country-specific implication. This, in turn, will enable long term investors to reassess the economy and make appropriate investment decisions. Regulators should note that policy dimensions in response to political risk and economic risk are expected to vary depending on the kind of risks in the country. We recommend that policymakers should reduce political risk in their countries based on our empirical findings. Most

notably, should formulate policies that will reduce bureaucratic red tape, laws and policies to deal with conflicts and ethical issues, every new regime is recommended to formulate policies that will stimulate economic stability, increase government revenue by reducing corruption especially in Greece, Bulgaria and Romania, support investment with better governance such as the non-discriminatory application of the laws and the preservation of all forms of investors rights. Hence, choose a combination of policies that will not only maintain political stability but will mitigate the negative effects of possible political disturbances. As investors' confidence depends heavily on host country's stability which to a large extent is based on its implementation of institutional and economic reforms.

6. CONCLUSION

This empirical study contributes to the already existing literature by analysing the nexus between political risk and economic risk. The paper critically discussed the conditions of the Balkan counties and using the Wavelet analysis as a medium to present detailed results of the analysis it aimed to attest to if a nexus exists between political risk and economic risk and detailed the direction of causality: if the causality is from political risk to economic risk or vice versa.

The Empirical findings of this study correspond with the study done by Aisen and Veiga (2013) and Tang and Abosedra, (2014) and posit that there indeed exists a nexus between political risk and economic risk. Results from the analysis reveal that causality is from political risk to economic risk in all four countries except Greece. Seeing as political risk plays an active role in an economy it is recommended that a country should establish a strong political framework which would not only facilitate efficient performance in the economy but would also stimulate growth and development. However, the paper does not fully answer all the various factors that expose the economy to risks as it only zeros in to identify the causal relationship between economic risk and political risk. Proposition for further research should bring in other risk factors such as financial risk.

REFERENCES

- [1] Aguiar-Conraria, L., N. Azevedo, M.J.Soares (2008), *Using Wavelets to Decompose the Time-Frequency Effects of Monetary Policy*. *Physica A: Statistical mechanics and its Applications*, 387 No.12, pp.2863-2878;
- [2] Aisen, A., F.J. Veiga (2013), *How does Political Instability Affect Economic Growth?* *European Journal of Political Economy*, 29, pp.151-167;
- [3] Alesina, A. & Perotti, R. (1996), *Income Distribution, Political Instability, and Investment*. *European economic review*, 40(6), 1203-1228;

- [4] Aloui, C., Hkiri, B., Hammoudeh, S., Shahbaz, M. (2018), *A Multiple and Partial Wavelet Analysis of the Oil Price, Inflation, Exchange Rate, and Economic Growth Nexus in Saudi Arabia*. *Emerging Markets Finance and Trade*, 54(4), 935-956;
- [5] Aloui, C., Hamida, H. B. (2019), *Oil-stock Nexus in an Oil-rich Country: Does Geopolitical Risk Matter in Terms of Investment Horizons? Defence and Peace Economics*, 1-21;
- [6] Białkowski, J., Gottschalk, K., Wisniewski, T. P. (2008), *Stock Market Volatility around National Elections*. *Journal of Banking & Finance*, 32(9), 1941-1953.
- [7] Cai, X. J., Tian, S., Yuan, N., Hamori, S. (2017). *Interdependence between oil and East Asian stock markets: Evidence from wavelet coherence analysis*. *Journal of International Financial Markets, Institutions and Money*, 48, 206-223.
- [8] Goupillaud, P., Grossmann, A., Morlet, J. (1984). *Cycle-octave and related transforms in seismic signal analysis*. *Geoexploration*, 23(1), 85-102.
- [9] Goldsmith, A.A., (1987), *Does political stability hinder economic development? Mancur Olson's theory and the Third World*. *Comparative Politics*, 19 No4, pp.471-480;
- [10] Haerpfer, C. W. (2003), *Democracy and Enlargement in Post-Communist Europe: The Democratization of the General Public in 15 Central and Eastern European Countries*, 1991-1998. *Routledge*;
- [11] Hoti, S. (2005), *Modelling Country Spillover Effects in Country Risk Ratings*. *Emerging Markets Review*, 6(4), pp.324-345;
- [12] Khalid, U., Habimana, O. (2019), *Military Spending and Economic Growth in Turkey: A Wavelet Approach*. *Defence and Peace Economics*, 1-15;
- [13] Kirikkaleli, D. (2016), *Interlinkage between Economic, Financial, and Political Risks in the Balkan Countries: Evidence from a Panel Cointegration*. *Eastern European Economics*, 54 No3, pp.208-227;
- [14] Londregan, J. B., K. T. Poole (1990), *Poverty, the Coup Trap, and the Seizure of Executive Power*. *World politics*, 42(2), 151-183;
- [15] Marfatia, H. A. (2017), *A Fresh Look at Integration of Risks in the International Stock Markets: A Wavelet Approach*. *Review of Financial Economics*, 34, 33-49;
- [16] Miljkovic, D., A. Rimal (2008), *The Impact of Socio-Economic Factors on Political Instability: A Cross-Country Analysis*. *The Journal of Socio-Economics*, 37 No.6, pp.2454-2463;
- [17] Olson, M. (1963), *Rapid Growth as a Destabilizing Force*. *The Journal of Economic History*, 23 No.4, pp.529-552;

-
- [18] Pal, D., Mitra, S. K. (2017), *Time-frequency contained Co-Movement of Crude Oil and World Food Prices: A Wavelet-based Analysis*. *Energy Economics*, 62, 230-239;
- [19] Ramcharran, Harri (1999), *Foreign Direct Investment and Country Risk: Further Empirical Evidence*. *Global Economic Review* 28, no. 3, 49-59;
- [20] Sharif, A., Jammazi, R., Raza, S. A., Shahzad, S. J. H. (2017), *Electricity and Growth Nexus Dynamics in Singapore: Fresh insights Based on Wavelet Approach*. *Energy Policy*, 110, 686-692;
- [21] Sifuzzaman, M., Islam, M. R., Ali, M. Z. (2009), *Application of Wavelet Transform and Its Advantages Compared to Fourier Transform*;
- [22] Tang, C.F., S. Abosedra (2014); *The Impacts of Tourism, Energy Consumption and Political Instability on Economic Growth in the MENA Countries*. *Energy Policy*, 68, pp.458-464;
- [23] Telatar, E., F.Telatar, T. Cavusoglu, U.Tosun (2010), *Political Instability, Political Freedom and Inflation*. *Applied Economics*, 42 No. 30, pp.3839-3847;
- [24] Torrence, C. and G.P.Compo (1998), *A Practical Guide to Wavelet Analysis*. *Bulletin of the American Meteorological Society*, 79 No.1, pp.61-78;
- [25] Uddin, M. A., Ali, M. H., Masih, M. (2017), *Political Stability and Growth: An Application of Dynamic GMM and Quantile Regression*. *Economic Modelling*, 64, 610-625.