Cumhuriyet University
Journal of Economics and Administrative Sciences

E-ISSN: 2687-4032
2021, 22(2), pp.103-122.
Doi:10.37880/cumuiibf.913823

TRADE POLICY UNCERTAINTY AND INFLATION NEXUS IN CHINA AND USA: BOOTSRAPT ROLLING WINDOW APPROACH

Ayşenur ŞAKALAK[1]
Türker ŞİMŞEK[2]

Abstract

Two developed countries, namely China and the USA, which have been leaders in world trade in recent years, are making new trade regulations and increasing trade disputes, the intensity of political discourses, the effort to create new trade routes and thus decreasing the possibility of global trade integration, as a result, accumulating academic studies have focused on the study of trade policy uncertainty. For this purpose, in the study, the probable causality relationship between the trade policy uncertainty index and consumer price index data of China and the USA was tried to be determined by the Bootstrap Rolling Window Causality test developed by Balcılar et al. (2010). As a result of empirical studies, it was determined that there is a relationship between CPI and TPU variables in the long term in China and the United States. A one-way causal relationship has emerged from trade policy uncertainty in China to the Consumer Price Index; it has been concluded that there is a two-way causal relationship between trade policy uncertainty and inflation in the United States at certain dates. Considering the findings of the study in which the direction and dates of the causality relationship are determined, it is thought that the study will contribute to the relevant literature. At this point, the main purpose of future studies should be to clearly reveal the relationship between trade policy uncertainty and consumer price index with different econometric methods and examples from different countries.

Article History:

Date submitted:
12 April 2021
Date accepted:
24 May 2021

Jel Codes:

F10, F13, E31

Keywords:

Trade Policy Uncertainty Index, Consumer Price Index, Bootstrap Roling Window Causality Test, China and the USA

Suggested Citation: Şakalak, A. & Şimşek, T. (2021). Trade Policy Uncertainty and Inflation Nexus in China and Usa: Bootsrapt Rolling Window Approach. *Cumhuriyet University Journal of Economics and Administrative Sciences*, *22*(2), 103-122.

[1] Lect., Selçuk University, Kadınhanı Faik İçil Vocational School, Department of Management and Organization, aysenur.sakalak@selcuk.edu.tr, ORCID ID: 0000-0002-8420-4718
[2] Assoc. Prof., Tokat Gaziosmanpaşa University, Faculty of Economics and Administrative Sciences, Department of Economics, turker.simsek@gop.edu.tr , ORCID ID: 0000-0001-7581-7590

Cumhuriyet Üniversitesi
İktisadi ve İdari Bilimler Dergisi
E-ISSN: 2687-4032
2021, 22(2), pp.103-122.
Doi:10.37880/cumuiibf.913823

ÇİN VE ABD'DE TİCARET POLİTİKA BELİRSİZLİĞİ VE ENFLASYON İLİŞKİSİ: BOOTSTRAP ROLLING WINDOW YAKLAŞIMI

Ayşenur ŞAKALAK[1]
Türker ŞİMŞEK[2]

Öz

Son yıllarda Dünya Ticaretinde lider konumda olan Çin ve ABD gibi iki gelişmiş ülkenin artan ticaret anlaşmazlıkları, yeni ticaret düzenlemeleri, karşılıklı siyasi söylemlerin sıklığı, yeni ticaret yollarının oluşturulma çabası ve küresel ticaret entegrasyonu olasılığının azalması akademik çalışmaları ticaret politikaları belirsizliğinin incelenmesine yönlendirmiştir. Bu amaçla çalışmada Çin ve ABD'ye ait ticaret politika belirsizliği endeksi ve tüketici fiyat endeksi verileri arasındaki olası nedensellik ilişkisi Balcılar vd. (2010) tarafından geliştirilen Bootstrap Rolling Window Nedensellik testi ile belirlenmek istenilmiştir. Amprik incelemeler sonucu Çin ve Amerika Birleşik Devletleri'nde uzun vadede ticaret politika belirsizliği ve tüketici fiyat endeksi arasında bir ilişki olduğu tespit edildi. Çin'de ticaret politika belirsizliğinden tüketici fiyat endeksine doğru tek yönlü bir nedensellik ilişkisi ortaya çıkarken; ABD'de ticaret politikası belirsizliği ve enflasyon arasında belirli tarihlerde çift yönlü bir nedensellik ilişkisinin olduğu sonucuna ulaşılmaktadır. Nedensellik ilişkisinin yönü ve tarihlerinin belirlendiği çalışmanın bulguları dikkate alındığında çalışmanın ilgili literatüre katkı sağlayacağı düşünülmektedir. Bu noktada gelecekteki çalışmaların temel amacı, ticaret politika belirsizliği ile tüketici fiyat endeksi arasındaki ilişkiyi farklı ülkeler, farklı ekonometrik yöntemler ve örneklerle net bir şekilde ortaya çıkarmak olmalıdır.

Makale Geçmişi:
İletilen Tarih:
12 Nisan 2021
Kabul Tarihi:
24 Mayıs 2021

Jel Kodları:
F10, F13, E31

Anahtar Kelimeler:
Ticaret Politikası Belirsizlik Endeksi, Tüketici Fiyat Endeksi, Bootstrap Rolling Window Nedensellik

Önerilen Alıntı: Şakalak, A., & Şimşek, T. (2021). Çin ve ABD'de Ticaret Politika Belirsizliği ve Enflasyon İlişkisi: Bootstrap Rolling Window Yaklaşımı. *Cumhuriyet Üniversitesi İktisadi ve İdari Bilimler Dergisi, 22*(2), 103-122.

[1] Öğr. Gör., Selçuk Üniversitesi, Kadınhanı Faik İçil Meslek Yüksekokulu, Yönetim ve Organizasyon Bölümü aysenur.sakalak@selcuk.edu.tr , ORCID ID: 0000-0002-8420-4718
[2] Doç. Dr., Tokat Gaziosmanpaşa Üniversitesi, İktisadi ve İdari Bilimler Fakültesi, İktisat Bölümü, turker.simsek@gop.edu.tr , ORCID ID: 0000-0001-7581-7590

1. INTRODUCTION

The concept of uncertainty had its roots in the science of economics with Adam Smith, and Keynes and Knight (1921) have brought a turning point to the concept of uncertainty (Akalın et al., 2007: 34). As a result of the economic and political crises that occurred, it became a topic of agenda again, especially in the 20th century. When this concept, which has different definitions in many fields, is examined in the Economics literature, it is revealed that it is explained with four different points of view.

Uncertainty is primarily divided into two subheadings both as a measurable and as an unmeasurable concept in the related literature. The Rational Expectations Approach, based on probabilities, led by Lucas and Muth, became the first of the uncertainty category that can be measured. The approach of Fridman and Savage, who are also advocates of measurable uncertainty, is the expected utility maximization hypothesis and is formed by including expectations and subjective information in the calculations made with probabilities. The third point of view suggesting that uncertainty is not within the scope of probability calculation is defined as Keynesian uncertainty belonging to Keynes (Alkan, 2018: 2; Alada, 2019). Frank Hyneman Knight, who sharply separates the concepts of risk and uncertainty, made a new contribution to the economic literature by putting forward the final approach. While he stated that measurable uncertainty is a risk, he said that uncertainty is incommensurable (Akalın, et al., 2007: 35). However, as a result of the studies carried out, it is seen that there are differences of opinion in their subheadings due to the methodological differences of the economic schools.

When the factors that cause uncertainty to occur, about which a consensus in the literature cannot be reached yet, it has been observed that there are multiple factors. Some of those factors are the shocks occuring in the economy that can be listed as seasonal changes, fluctuations in prices, economic crises, socio-cultural changes, and economic problems experienced by countries (Şahin, 2010). On the other hand, when the concept of politics that causes cyclical fluctuations was investigated, it was revealed that the political events that took place in the country caused political instability and led the country to all kinds of chaos such as turmoil and terrorism (Şimşek, 2015: 43-51). As a result of this political instability, some uncertainties occurred in the country. For example, while this situation negatively affected the productivity in terms of economy, it also has negative reflections on investment, gross domestic product, and entrepreneurial activities showing that the environment of uncertainty in the economic policy would be created as a result of political instability (Aisen et al. 2011: 3; Drazen, 2002: 522). All the negativities that occurred resulted in some macroeconomic problems in countries.

In 1921, Knight became one of the economists who conducted research on this issue with his studies describing the effects of uncertainty (Alkan, 2018: 27). Thus, it has once again been revealed that uncertainty is a very important concept as countries take more active roles in decisions about their future. Because ensuring economic stability in the country means that the national income will increase and result in growth. Literature reviews show that the channels of uncertainty influencing countries may differ from each other. When we evaluate the results of these effects in general, we encounter similar findings. Especially, due to the blurry vision of the decision-making units in the economy, it has been revealed that both expenditures and investments to be made will decrease and affect Economic growth negatively. On the other hand, in his study, Çoşar (2018) stated that the increased uncertainty creates downside risks in labor incomes and company sales, both creating distorting effects on income distribution and causing permanent damage to the country's welfare in the long term. In addition, the uncertainty that

increases day by day causes an increase in risk premiums and reflects negatively on the financial markets.

Especially after the 2008 financial crisis, countries could not achieve stability in the long term, and fluctuations occurred in global financial crises (Balta, et al., 2013: 7). Economists have interpreted this situation as the result of politicians' interventions in the economy. In addition, political uncertainty has been shown to lead to deepening of economic uncertainty (Akkuş, 2017, 28-32). While the economic events before 2008 played an active role in the financial markets, the decisions made by the politicians now cause serious fluctuations in the financial markets (Baker et al., 2012: 21). The concept of political instability in our country has also been one of the important factors that increase the uncertainty in politics. This situation negatively affected the decision-making units at the future point and shaped both investment levels and entrepreneurship activities negatively (Şimşek, 2015: 52). The rapid spread of policy uncertainty, which has many reasons, resulting mainly from globalization. Considering the recent developments based on the data obtained from the studies conducted by Barker et al. In 2016, it is seen that the uncertainty has rapidly increased and followed an unstable course since 2017.

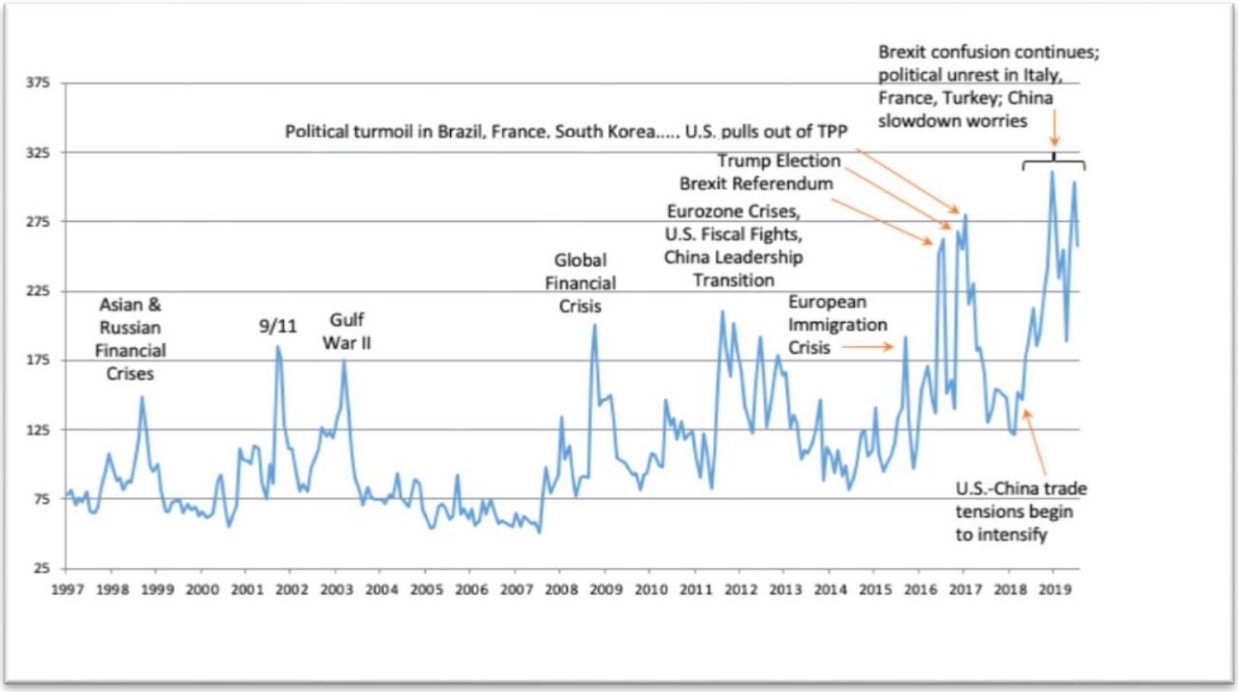


Figure 1: Breaking Points of Policy Uncertainties in the Global Economy, (January 1997 - July 2020)
Notes: Current prices constituting 80% of global GDP, data for 21 countries.
Source: Baker et al. (2016), Davis (2016) and PolicyUncertainty.com.

Looking to the past, the Asian-Russian financial crisis was experienced in 1998, the September 11 attacks in 2001, the second Gulf war in 2003, and finally the 2008 global financial crisis and these crises show their effects with a delay. Therefore, these dates are included in the

literature as periods of great uncertainty in the world. Figure 1 shows the level of uncertainty experienced during these dates.

When it comes to the recent periods of sharp increases, it is stated that especially the USA's withdrawal from the trans-pacific partnership in 2017, the increase in tariffs on certain import products, and the rapid increase in US-CHINA tensions, finally, Trump's harsh rhetoric and practices resulted in an increase in policy uncertainty (Baker, et al, 2019). Considering the effects caused by all these adversities, it becomes evident that it is inevitable for countries to create many distortions in macroeconomic indicators such as investment, employment, balance of payments, growth. Particularly, the uncertainties in policy have created permanent damages in countries, creating a domino effect in channels fuelling each other. This negativity caused a decrease in total expenditures. The decline in expenditures has brought many problems, especially unemployment, to the agenda, and the decrease in the rate of increase in national income has shrunk the country's economy and dragged it into recession. The total lack of demand in the countries triggered the start of the deflationary process. As a result of the policy uncertainty, the lack of spending in the country is again the subject of the agenda with a different scenario of the 29 Crisis, which is also called as the Great Depression in the literature. Thus, the effects of uncertainties in the light of the studied theories contributed to the structuring of our study. However, it has been observed in the literature that there is no consensus on the empirical results on the subject. The researchers could not meet on the common denominator whether macroeconomic distortions cause uncertainty or uncertainties cause economic fluctuations. From this point of view, it is aimed to analyze the relationship between inflation and foreign Trade Policy Uncertainty(TPU) y using Bootstrap Rolling Window causality test method. For this purpose, after explaining the theoretical background in the introduction, a literature review on uncertainty and macroeconomic indicators is included, and the findings of the study will be evaluated in the next section.

2. LITERATURE REVIEW

Hermes et al. (2001) examined the effect of capital flight on policy uncertainty in their studies. As a result of econometric studies, it has been revealed that the policy uncertainty determined by tax payments, real interest rates, government consumption, inflation rates has a statistically significant effect on capital flight. Akkuş (2007) analyzed the effect of political instability in developing countries with the help of the economic policy uncertainty (EPU) index and the dynamic panel system generalized moments method. At the same time, the effect of the uncertainty occurring in the USA on developing countries was investigated. As a result of the study, it has been revealed that EPU has a negative effect on growth. Handley (2011) wanted to demonstrate that TPU will delay exporters' entry into a new market in a dynamic heterogeneous company model, while on the other hand, they will show much less sensitivity to tariff reductions. Discrete and detailed data set of product levels imported in Australia in 2004-2006 periods were used. Test results conclude that reducing TPU is at least as effective as unilateral tariff reductions for Australia. On the other hand, it has been examined whether securing existing preferences by using Portugal's participation in the European Community in 1986 reduces TPU. As a result of the analysis, to what extent uncertainty is effective in investments and entering new markets, the uncertainties have been clarified. In a study conducted by Handley and Limao (2012), the effects of policy uncertainty on the investment and new entry decisions within the scope of international trade were investigated theoretically and empirically. Based on the

dynamic heterogeneous company model, Portugal's participation in the European Community was assessed in 1986 using new firm-level trade data. The result of the study emphasizes the importance of policy reforms, and it is revealed that TPU reduces investments on the one hand and creates downside effects on entry into the export market on the other. Handley (2014) offers new evidence positing that multilateral policy commitments are an important channel in trade agreements when it comes to TPU, and model estimates related to import and policy data in Australia in 1993-2001 are tested. As a result of the analysis, it was revealed that the TPU caused a significant decrease in the entry into the export market. It has been stated that binding tariff commitments are policy tools in reducing uncertainty. Groppo, et al. (2014) aimed to explain whether the WTO binding rates on MFN applied tariffs affected TPU. In the study, a new database was created for the WTO affiliation rates at sectoral level for the member countries of the organization from 1996 to 2011. The database is separated from other studies in that it encompasses the changes in the current limit rate at all times. The results indicated that both the reduction of tariff rates and the signing of trade agreements were important gains. It demonstrated that trade policy is cyclical, and both preferential and multilateral liberalization will benefit stability in this uncertainty. Osnago, et al. (2015) analyzed the possible effects of TPU on the trade of 149 countries and examined whether it had any quantitative effect on the trade intensive margin. The researchers used the HS6 level in their analysis. As a result of the study, it was concluded that TPU created major problems in trade, while it was an important obstacle to exports. In addition, it was observed that this uncertainty was higher in countries with low institutional quality, and it was stated that it was an important obstacle to production in global supply chains. As a result of the investigations, they revealed that uncertainty is more affected by heterogeneous products rather than homogeneities. Finally, the study provided evidence about the importance of commercial agreements in policy implementation and stated that exports would increase by around 12% if the uncertainty was removed. In another study by Feng et al. (2017), TPU was explored in terms of its effect on firms' export decisions. The researchers' predictions were that reductions in TPU would result in much larger firms. In the empirical study conducted for this purpose, the export universe of companies in China was monitored based on the customs data of China at transaction level based on the years 2000-2006 for the targeted USA and European countries. The data set consists of 8-digit codes collected according to internationally comparable 6-digit HS codes. As a result of the study, it was revealed that the decrease in uncertainty would trigger the competitiveness in exports, increase the quality, decrease the prices and cause company entries. On the other hand, it was stated that firms producing low quality products with high prices would increase their exit from the market. Handley et al. (2017) examined the effect of policy uncertainty on three variables, namely trade, prices, and real income, all within the scope of general equilibrium and firm entry investments. In the study, trade and policy data were combined with the help of more than one source. For several years, US import trade data at HS-10 level has been obtained from NBER Harmonized System Imports by Commodity and Country. The coherent data over time were used to calculate ideal price indices. It has been gathered at the HS-6 level for the declines in price and export growth. The researchers argued that the reduction of US TPU and the export boom occurred after China joined the WTO. In order to reveal this situation, models have been created both for measuring TPU and interpreting its effects. As a result of the investigations, the effect of uncertainty within the scope of the general balance traceable to heterogeneous companies was evaluated and it was revealed that the increasing uncertainty reduced export inflows and investments in technological developments. This negative picture caused a decrease in the income of the consumers, and it also negatively affected the commercial flows. Yalçınkaya et al. (2017) examined the effects of

economic and political uncertainties on both G-7 and BRC countries between 1997 and 2015. In the study, the results it had on economic growth were investigated by using the new generation panel data set. As a result of the analysis, it has been revealed that the variables had statistically significant but negative effects on growth. A study conducted by Alkan (2018) aimed to measure the period of uncertainty in Turkey carriying out the analysis for the period 2005-2016. In the study, the uncertainty index was created with the OECD reference, and the GRACH method was used. As a result of the study, it was determined that upside shocks in uncertainty caused a downward reaction at the end of 9 months. Korkmaz et al (2018) investigated the effects only the impacts of the global economic uncertainty with the model of assistance Exchange on stock returns of companies traded in Istanbul on national bases of economic policy uncertainty filling the gaps in the global framework of action with the 1997-2018 years under Turkey sample of GARCH (1,1). When the results of the model created by the BIST Electricity, BIST Chemical, Petroleum, Plastic, BIST Metal Main Return Index series are examined, it is concluded that the continuous increase in global economic policy uncertainty reduces the returns of the stocks of companies traded in the relevant sectors. In addition, the variance equation revealed that this uncertainty creates an increasing effect of instability in companies traded in the relevant sector. The findings obtained from the study supported both the policy uncertainty hypothesis and the ambiguous knowledge hypothesis assumptions. Cebreros et al. (2018) examined whether trade policy uncertainties would have an impact on foreign direct investments and export participation decisions. The study focused on Mexico, which has been developing rapidly since the second half of 2016 and it was based on an empirical application through the uncertainty index data obtained from Google trends through time series and cross-sectional change. The result of the analysis revealed that the uncertainty had a negative impact on foreign direct investments in export-oriented countries. In addition, it was stated that the pressures of more protectionist policies in industrialized economies will cause an increase in uncertainty about future trade policies. In a study by Behravesh (2019), the effect of increasing TPU on capital expenditures has been examined. In addition, economic development and change processes occurring in countries were mentioned. The study is concluded by mentioning the importance of fiscal policy on global growth. Ulusoy (2019), evaluating the negative effects of rapidly increasing trade uncertainties on global growth, emphasized that this issue is an important topic in both the World Economic Outlook and the global economic expectations of the World Bank and OECD reports. The study, which compared trade uncertainty indices on a country basis, was concluded by mentioning the importance of stabilization on growth and prosperity. The study was concluded by mentioning the importance of stabilization on growth and prosperity. Torres (2019) wrote in his article that the biggest obstacle to global economic growth is the TPU as a result of the research carried out by the US central bank by adding that this increase in uncertainty in June 2019 would cause the world economy to aggravate until 2020. Finally, Torres' study was concluded by stating that some tariff threats of Trump are the biggest cause of the tremors in the financial markets. Baker et al. (2019) discussed the main sources of economic policy uncertainty and stock market volatility and evaluated the causes of TPU and recent increase rates. The study was supported by various graphics, and the breaking points of trade policy uncertainties from past to present were analyzed. At the same time, the role of this uncertainty in stock market volatility was interpreted with the help of the figure. Stock Exchange Agenda (2019) interpreted the effects of trade relations between the USA and China on the global economy in a news article with various data. As a result of the statements made by the US central bank about the TPU, it was stated that this uncertainty would cause rapid declines in the economy, and it was stated that both uncertainties and contradictory statements caused some macroeconomic consequences with the volatility in

exchange rates. Davis (2019), with various comparisons, examined the reasons for the increasing policy uncertainties in both the US and global economies. It was argued that the rapid increase in the US-CHINA tensions has caused stock market volatility since March 2018 and the role of the uncertainties in trade policy has been investigated. In the study, the increase in uncertainty with Trump's coming to power has been supported by many data. The study was concluded with explanations about the negative impact of these uncertainties on economic performance. Caldara et al. (2019) tried to measure the macroeconomic effects of changes in TPU in an economic and theoretical framework. Focusing on studies on this topic, the authors estimated the three-month variance model to determine the effects of uncertainty. Thus, they analyzed the effects of uncertainty in trade policy on the US economy with the help of three variables, which they have used to measure TPU including their work in newspapers, firms' calls for earnings, and finally, tariff rates. As a result of the study based on the var analysis of the 1960-2018 example, it was found that TPU in 2018 caused a decrease between 1% and 2% on investments. In addition, in the study, the transfer of TPU with heterogeneous firms and endogenous export decision has been studied in the equilibrium model across two countries. As a result of this study, they revealed that the potentially high tariffs and the increase in the future tariff uncertainty prevent investments. In a study, Tufts, et al. (2019) predicted the effects of TPU on US firms' stock returns. The study focused on the uncertainties caused by the annual votes of the congress during the 1990-2001 period. By using quasi-experimental variations arising from China's temporary NTR situation, the stock returns of the manufacturing industry in the USA in sectors that are not subject to uncertainty have been revealed. It has been stated that uncertainties lead to the occurrence of large risk premiums, and it has been concluded that policy makers' work on this issue may be a major factor. Akkaya (2019) examined how the transitions between economies occurred rather than the effects of uncertainty in order to fill the gap in the literature. Labor and Herwartz Hafner (2006) investigated the years between 1985-2018, using monthly data by the method of economic uncertainty in the US, which has also spread to the Turkish economy. The result of the study has also revealed that the uncertainty is spread through financial institutions. In another study, Imbruno (2019) experimentally examined import regulations for the decline in trade policy. The analysis was based on a balanced panel of 4,090 6-digit HS production lines between 2000-2006. Import data were from the Chinese Customs Trade Statistics (CCTS) database managed by the General Administration of Customs of China, applied tariff data, connected tariff data from the World Bank's World Integrated Trade Solution (WITS) database, which was obtained from the WTO Consolidated Tariff database (CTS). In addition, data on non-commercial trade barriers (NTBs) from China's WTO Accession Protocol on the WTO website were also included in the study. The analysis result shows that the decrease in TPU allows access to a wide variety of foreign goods, including higher quality ones. At the same time, he concluded that the tariff setting would allow more Chinese manufacturers and commercial vehicles to start importing, enabling the firm and the consumer to gain potential gains from imports.

3. DATA AND METHODOLOGY

In the study, consumer price index and TPU index variables belonging to two developed countries such as China and the United States, which are gradually entering into a blocking trade war in the globalizing world, were used. Consumer Price Index data were sourced from the U.S. Bureau of Labor Statistics and National Bureau of Statistics of China databases. The TPU Index, developed by Baker, Bloom and Davis in 2019, reflecting the frequency of past statements about

uncertainty in newspapers and articles, was also used in the analysis of the study. This data can be downloaded from the website www.policyuncertainty.com. In the study, monthly data between 2000M01 and 2019M12 were included in the analysis. The year 2020 and 2021, when the COVID-19 pandemic process has resulted in dramatic changes in all aspects of life, was not included in the analysis. In this exclusion, the closure of businesses during the pandemic process and the demand that the sharp declines in trade do not affect the reliability of the analysis results play a major role. Balcılar et al. (2010) applied the corrected likelihood ratio (LR) causality test based on the residual-based bootstrap technique in their study. The LR Granger causality test process based on Boostrap process uses the bivariate VAR (p) model as t = 1,2,…, T;

$$y_t = \Phi_0 + \Phi_1 y_{t-1} + \ldots + \Phi_p y_{t-p} + \varepsilon_t \quad (1)$$

In Equation (1), $\varepsilon_t = (\varepsilon_1, \varepsilon_2) \square iid(0, \sigma^2)$ with nonsingular covariance matrix Σ. The optimal lag length is determined by the AIC. VAR (p) model can be represented as Equation 2, with $y_t = \left[y_{1t}, y_{2t} \right]_{2x1}$ being the matrix:

$$\begin{bmatrix} y_{1t} \\ y_{2t} \end{bmatrix} = \begin{bmatrix} \phi_{10} \\ \phi_{20} \end{bmatrix} + \begin{bmatrix} \phi_{11}(L) & \phi_{12}(L) \\ \phi_{21} & \phi_{22}(L) \end{bmatrix} \begin{bmatrix} y_{1t} \\ y_{2t} \end{bmatrix} + \begin{bmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \end{bmatrix} \quad (2)$$

In Equation 2, $\phi_{ij}(L)$ is defined as $\phi_{ij}(L) = \sum_{k=1}^{p} \phi_{ij,k} L^k$, while $L^k x_t = x_{t-k}$ denotes the lag operator. With the null hypothesis of the test being $\phi_{12,i} = 0$, y_{2t} is not the Granger cause of y_{1t} or vice versa, with the null hypothesis of the test being $\phi_{21,i} = 0$, y_{1t} is not the Granger cause of y_{2t}. Balcılar et al. (2010) to overcome possible structural changes in variables and problems arising from the sample size, and Koutris et al. (2008) and Shukur and Mantalos (2000) used rolling-window Granger causality based on the modified bootstrap test process developed by them. According to this;

$$\begin{aligned} Y &:= (y_1, y_2, \ldots, y_T) && 2xT \\ B &:= (\Phi_0, \Phi_1, \ldots, \Phi_T) && (2x(2p+1)) \\ Z_T &:= (1, y_t, y_{t-1}, \ldots, y_{t-p+1}) && ((2p+1)x1) \\ Z &:= (Z_0, Z_1, \ldots, Z_{T-1}) && ((2p+1)xT) \\ \eta &:= (\varepsilon_1, \varepsilon_2, \ldots, \varepsilon_T) && (2xT) \end{aligned} \quad (3)$$

Equation 3 shows the matrices and Φ_0 denotes the constant term. The least squares estimation of B in model $Y = BZ + \eta$, which is the VAR (p) model, is made in the form of $\hat{B} = YZ'(Z'Z)^{-1}$. Using the error terms η_U of the unconstrained model and the error terms η_R of the constrained model, the cross-products $S_U = \eta_U' \eta_U$ and $S_R = \eta_R' \eta_R$ are obtained. The test statistic is shown in Equation (4).

$$LR = (T-k) \ln\left(\frac{\det S_R}{\det S_U}\right) \quad (4)$$

After the calculation of the test statistics, by using the set OLS error terms $(\eta_R - \bar{\eta}_R)$, with i = 1,2,…, T, $Y^* = BZ^* + \eta^*$ regressions are obtained. Under the null hypothesis N_b number of LR^* probability values are calculated ($LR^* \geq LR$). The final stage in use, in addition to applying to full sample we repeat the above steps for rolling subsample to $t = \tau - l + 1, \tau - l, ..., l$ $\tau = l, l+1, ..., T$, where l is the size of the rolling window.

4. EMPIRICAL FINDINGS

Descriptive statistics for CPI and TPU variables for the United States and China are given in Table 1.

Table 1: Descriptive Statistics

China								
Variables	**Observ.**	**Mean**	**Maximum**	**Minimum**	**Std.Dev.**	**Skewness**	**Kurtosis**	**Jarque Bera Prob.**
CPI	240	86.954	108.90	68.97	12.69	0.093	1.55	0.000
TPU	240	119.39	1425.16	0.000	180.71	3.632	19.70	0.000
USA								
Variables	**Observ.**	**Mean**	**Maximum**	**Minimum**	**Std.Dev.**	**Skewness**	**Kurtosis**	**Jarque Bera Prob.**
CPI	240	214.46	256.16	169.30	24.980	-0.193	1.782	0.000
TPU	240	99.97	1374.28	10.564	161.59	4.137	24.450	0.000

Looking at the standard error, which is an indicator of volatility, from descriptive statistics, it is seen that the TPU variable for China and the United States is volatile compared to the CPI variable. When the Skewness values are examined by looking at the data of two countries; USA's CPI variable is skewed to the left, while the TPU variable is skewed to the right. In China, it is seen that CPI and TPU variables are right-skewed. Looking at the kurtosis value, it was found that the TPU variable for both countries was not flat, while the CPI variable was found to be flattened in both countries. Finally, when the Jarque-Bera probability value, which shows whether the series is normally distributed or not, is examined, it is seen that the series do not show a normal distribution. Unit root tests are used to determine whether the series belonging to China and USA countries are stationary or not, and the results are shown in Table 2.

Table 2: Unit Root Tests Results

CHINA

	Include in Test Equation	*Variables*	ADF	PP		*Variables*	ADF	PP
Level	*Constant*	**CPI**	0.228 (0.973)	0.813 (0.994)	*First Difference*	**CPI**	-4.691 (0.000)***	-12.197 (0.000)***
		TPU	3.869 (0.998)	-6.918 (0.000)***		**TPU**	-4.247 (0.000)***	-47.427 (0.000)***
	Constant+Trend	**CPI**	-3.994 (0.011)**	-3.229 (0.0813)*		**CPI**	-5.48 (0.000)***	-12.262 (0.000)***
		TPU	3.046 (0.996)	-9.330 (0.000)***		**TPU**	-4.898 (0.000)***	-51.494 (0.000)***

USA

	Include in Test Equation	*Variables*	ADF	PP		*Variables*	ADF	PP
Level	*Constant*	**CPI**	-0.546 (0.878)	-0.767 (0.826)	*First Difference*	**CPI**	-10.221 (0.000)***	-9.167 (0.000)***
		TPU	3.869 (0.998)	-5.290 (0.000)***		**TPU**	-4.247 (0.000)***	-24.328 (0.000)***
	Constant+Trend	**CPI**	-2.120 (0.531)	-2.148 (0.515)		**CPI**	-10.203 (0.000)***	-9.145 (0.000)***
		TPU	3.046 (0.996)	-6.010 (0.000)***		**TPU**	-4.898 (0.000)***	-28.078 (0.000)***

Notes: The values shown in parentheses represent the probability value. *** , ** and * indicate the significance level of 1%,5%, and 10%, respectively.

When the unit root test results in Table 2 are examined, it is seen that the series are stationary at 1% significance level when the first difference of the CPI and TPU variables included in the analysis is taken. To test whether there is a long-term relationship between CPI and TPU variables, Phillips-Ouliaris Cointegration test is used. Cointegration test results are shown in Table 3.

Table 3: Phillips-Ouliaris Cointegration Test Results

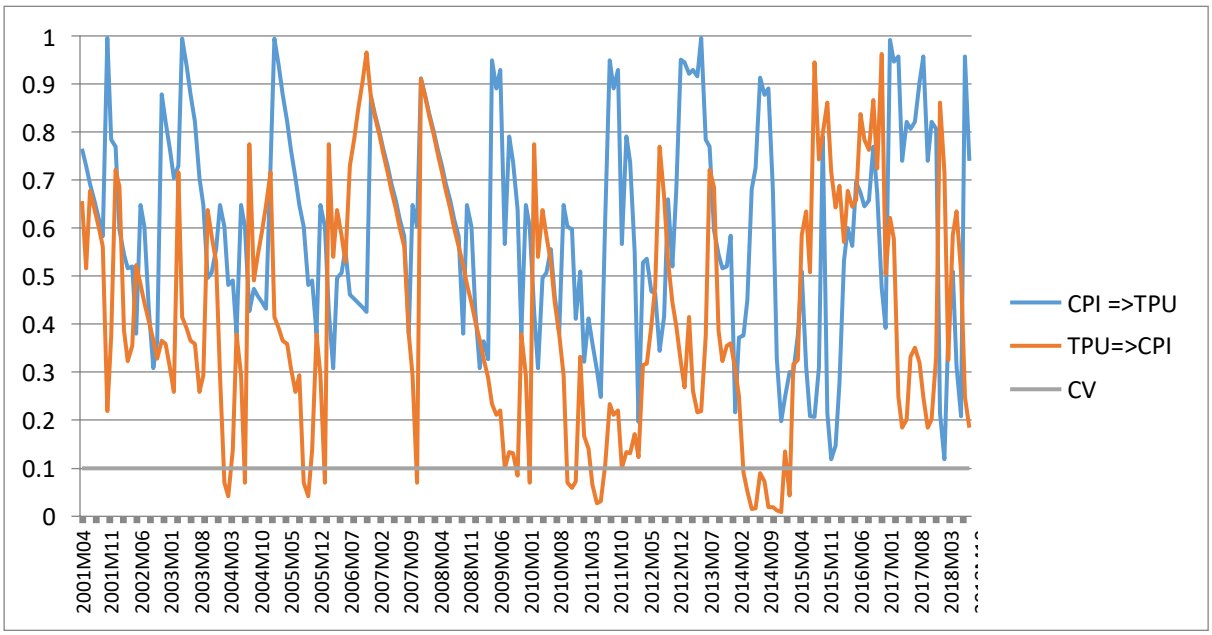
CHINA				
Variables	tau-statistic	Prob.*	z-statistic	Prob.*
CPI	-5.845	0.0000	-63.662	0.0000
TPU	-7.723	0.0000	-99.881	0.0000
USA				

Variables	tau-statistic	Prob.*	z-statistic	Prob.*
CPI	-12.16054	0.0000	-171.3647	0.0000
TPU	-34.30671	0.0000	-303.0404	0.0000

*MacKinnon (1996) p-values.

Considering the cointegration results in Table 3, it has been determined that there is a long-term relationship between CPI and TPU variables for USA and China countries. These two variables have at least one cointegrated vector in the long run. To determine the direction of the relationship between these two variables, Bootstrap Rolling Window Causality Test developed by Balcılar et al. (2010) is applied. Table 4 and Table 5 below contain the graphs showing the Bootstrap Rolling Window causality test results for China and the USA, respectively.

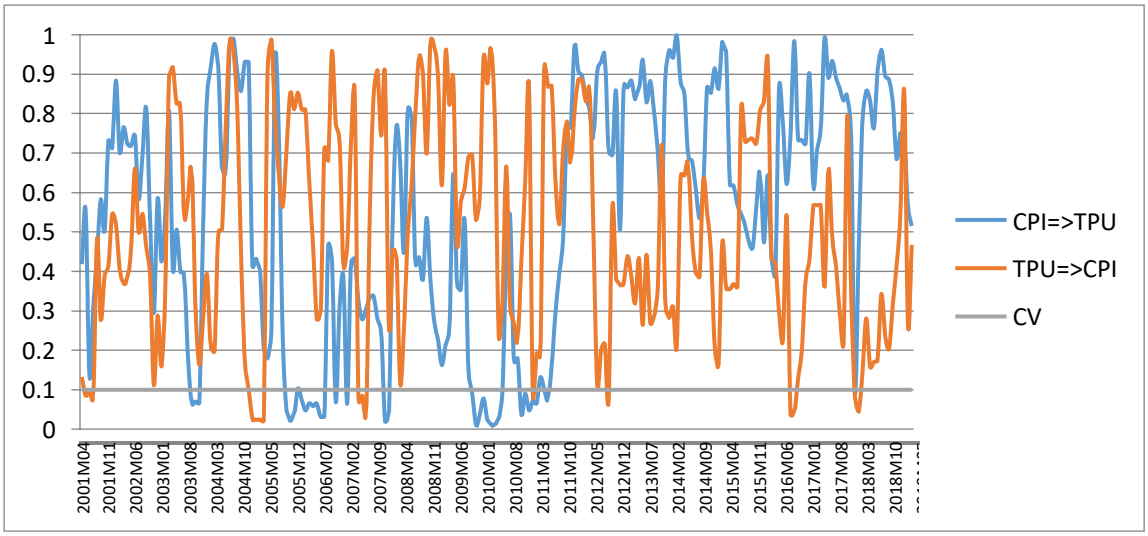
Table 4: Bootstrap Rolling Window Causality Relationship Between CPI and TPU for China



Due to the Bootstrap Rolling Window method used in the analysis, some of the first and last observations of the period (2000M01-2019M12) are automatically excluded from the analysis due to the computational content of the method and the structure of the series. Which or how many of these observations will be excluded from the analysis is determined entirely by the econometric program. In the light of this information, when the causality results of China in the Table 4 are examined, it is seen that there is a one-way causality relationship from TPU variable to CPI variable. Balcılar et al. (2010) determined the critical value of 0.10 as a critical value in their study and drew attention to the existence of a causality relationship on dates below this value. In Table 4, it is seen that TPU in China causes a causality on the consumer price index or inflation, which is an important macroeconomic indicator in 2004M02-03; 2004M07; 2005M09-10; 2006M02; 2007M12; 2009M12; 2010M03;2010M12; 2011M01-02; 2011M06-08; 2014M06-12; 2015M01-03 and 2015M05. Looking at these dates, it can be said that, for example, in early

2004, a regulation on the banking system was needed in China and the uncertainty experienced in this regard led to inflation. Although China made a record level of exports in 2005, the unrest in the economy as a result of not making any adjustments in the wages of workers caused an uncertainty in China's trade policies and triggered the inflation in the country. The depreciation of China's currency in 2010 affected the good developments in foreign trade at first, negatively over time and led to the questioning of the applied trade policies. These considerations brought policy decision makers into conducting a reevaluation about TPU in late 2010 and early 2011. It is seen that these negativities have also triggered inflation. It is stated that the investment-based growth model maintained by China in 2014 has achieved the lowest growth rate since the 2000s due to the investment in inefficient areas, the deterioration of the banking system and the spread of credit institutions other than banks called shadow banking. In this case, uncertainties about trade, which constitute an important element of the economy, are thought to play an important role. In 2015, the increasing economic competition with the USA and the record lowering of the value of the Yuan as a result of these discourses were interpreted in the markets as the country could not produce effective policies on trade and constantly devalued. These events increased the uncertainty in the first place, the increase in uncertainty led to a decrease in investments and a relatively decrease in production, causing demand inflation to occur within the country.

Table 5: Bootstrap Rolling Window Causality Relationship Between CPI and TPU for USA



When Table 5 is examined, it is seen that unlike China, there was causality from CPI to TPU variable on some dates. The dates of this causality have been determined as 2003M09-11; 2005M10-12; 2006M02-08; 2006M11; 2007M02; 2007M12; 2008M01; 2009M11-12; 2010M01-07; 2010M12; 2011M01-04 and 2011M07. The inflation caused by the expenditures of the Iraq operation initiated and the uncertainty in the trade policies of the country due to the war environment manifested itself in 2003. The failure of George W. Bush in the wars in Afghanistan and Iraq and his incompetence in Hurricane Katrina in 2005 was strongly criticized by the US public, and domestic political anxiety had a negative impact on inflation rates. TPU also increased in the period that was not found to be successful both politically and economically. When housing prices began to decline in 2006, the value of securities backed by mortgages

dropped significantly, causing it to become the equivalent of a bank in the essentially unregulated non-deposit banking system that surpassed the traditional, regulated deposit banking system. This situation led to an increase in the demand for money and consequently an increase in the money supply, resulting in inflation. The unrest of the public due to the inflation and mortgage crises experienced put the government in an impasse, and this deadlock was also seen in trade policies. The reason for the causality in 2007, 2008 and 2009 can be evaluated as the formation process and outcome of the global crisis. In 2009 and 2010, the emerging problem of jobless recoveries suppressed inflation and the high unemployment rate focused on domestic economic policies rather than foreign trade. This led to an uncertainty in foreign trade policies. The demand for goods and services increased with the effect of the increasing dollar supply in the markets as a result of the purchase of 600 billion dollars of bonds under the leadership of FED President Bernanke in 2011 and the inflation rate started to rise, albeit a little. While buying bonds had positive consequences on the chronic problem of unemployment, the government's attention was on domestic economic structure rather than trade, due to the nationalist policies it followed. Thus, the increasing uncertainty about trade policy and the concern that China will take over the dominance in the world economy started to show itself in the markets and newspapers. Looking at Table 4 again, there are dates from TPU to inflation. These are 2001M05-07; 2005M01-04; 2007M05-07; 2011M03; 2012M11; The dates are 2016M11-12 and 2018M04-05. In 2001, the US economy faced an unusual recession. Therefore, the negative developments in trade and the ongoing search for solutions as a result of these negativities increased the uncertainty in trade policies. These increasing uncertainties had a negative effect on inflation due to the decrease in production and the insufficient foreign trade. In 2005 and 2007, the trade volume decreased as income inequality increased gradually and housing prices started to decrease gradually, directing investments in the markets to real estate. While this situation increased the TPU, the general level of prices was also affected as a result of the gradually deepening economic recession. The tornadoes in March 2011 and the political polemics before the elections in November 2012 caused policy uncertainty in trade and the effects of basic indicators in the economy. In 2016, the International Monetary Fund warned the USA that the high poverty rate should be addressed urgently, and emphasized the importance given to the domestic economy as well as the trade policies. In 2018, the UN Special Rapporteur's report on extreme poverty and human rights states that more than five million people in the United States live in "third world" conditions. These situations left the US government, which is struggling economically with China, in a difficult situation, causing uncertainties in trade policies and turning to the national economy as a focus. Inflation, an economic indicator, was affected by these increases in uncertainties.

5. CONCLUSION

Developed countries such as China and the USA, which play an important role in world trade, have recently reorganized trade, and the increasing number of trade disputes, the change in the understanding of competition in trade as a result of the change in power, following globalist policies rather than nationalist policies, and as a result of all these, decreasing the possibility of global trade integration caused this study to focus especially on TPU. In the study, the relationship between TPU and inflation, which is an important macroeconomic indicator, is aimed to be evaluated empirically. For this purpose, we use the Trade Policy Index developed by Baker et al. (2019). As a result of the cointegration test, it was determined that there is a relationship between CPI and TPU variables in the long term in China and the United States. As a result of the Bootsrap Rolling Window causality test conducted to determine the direction of this relationship and at what dates there was a causality relationship, a one-way causality relationship from TPU to consumer price index was determined in China; it has been concluded that TPU and consumer price index are the causes of each other at certain dates in the USA. When the dates obtained from the analysis are examined in detail, we can say that an increase in uncertainty in trade policies in China, which adopts an investment and trade-based growth approach, affects the consumer price index, which is one of the main macroeconomic indicators in the economy. Although there is a similar situation in the United States, it has been determined as a result of the causality analysis that the political and economic crises experienced in the relevant dates affected the uncertainty in trade policies. Analyses carried out using different econometric techniques in future studies will contribute to revealing the relationship between TPU and macroeconomic indicators more clearly. Knowing the reasons of this relationship well will help increase the efficiency in these economies that shape the world.

REFERENCES

Aisen, A., & Veiga, F. J. (2011). How Does Political Instability Effect Economic Growth. *IMF Working Paper, 12*.

Akalın, G., & Dilek, S. (2007). Belirsizlik Altında Tüketicilerin Kararları. *Uluslararası Yönetim İktisat ve İşletme Dergisi, 3(*6), 33-48.

Akkaya Ordu, M. B. (2019). US Economic Policy Uncertainty and Loan Growth: Evidence from Turkey. *Üçüncü Sektör Sosyal Ekonomi Dergisi, Third Sector Social Economic Review*, *54*(3), 1049-1063.

Akkuş, Ö. (2017). Ekonomik Politika Belirsizliği ve Politik İstikrarsızlığın Büyüme Üzerindeki Etkisi. *Anadolu Üniversitesi Sosyal Bilimler Dergisi, 17*(3), 27-42.

Alada, D. (2019, 28 Kasım). *İktisatta Belirsizlik*. https://www.ekodialog.com/Makaleler/iktisatta-belirsizlik-makale.html.

Alkan, B. (2018). *Ekonomide Belirsizlik ve Türkiye İçin Bir Belirsizlik Endeksi Önerisi* (Doktora Tezi). Marmara Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.

Balcilar, M., Ozdemir, Z. A., & Arslanturk, Y. (2010). Economic Growth and Energy Consumption Causal Nexus Viewed Through A Bootstrap Rolling Window. *Energy Economics, 32*(6), 1398-1410.

Baker, S., Bloom, N., & Davis, S. (2012). Policy Uncertainty: A New Indicator. *CentrePiece Paper No.CEPCP362, 16*(3), 21-23.

Baker, S., Bloom, N., & Davis, S. (2019, 8 Aralık). *The Extraordinary Rise in Trade Policy Uncertainty.* voxeu.org/article/extraordinary-rise-trade-policy-uncertainty.

Baker, S. R., Bloom, N., & Davis, S. (2015). Measuring Economic Policy Uncertainty. *NBER Working Paper Series, 21633*.

Balta, N., Fernandez, V. I., & Ruscher, E. (2013). Assessing the Impact of Uncertainty On Consumption and Investment. *Q*uarterly Report *on the Euro Area (QREA), Directorate General Economic and Financial Affairs, European Commission, 12*(2), 7-16.

Behravesh, N., & Johnson, L. S. (2019, 15 Aralık). *The Global Economy: Rising Trade Policy Uncertainty is Weighing Heavily On Capital Spending.* https://ihsmarkit.com/research-analysis/the-global-economy-rising-trade-policy-uncertainty.html.

Borsa Gündem (2019, 6 Aralık). *Küresel Borsalar Ticaret*. https://www.borsagundem.com/haber/kuresel-piyasalar-ticaret-muzakerelerine-odaklandi/1442389.

Caldara, D., Iacoviello, M., Molligo, P., Prestipino, A., & Raffo, A. (2019). The Economic Effects of Trade Policy Uncertainty. *International Finance Discussion Papers, Board of Governors of the Federal Reserve System (U.S.), 1256.*

Cebreros, A., Chiquiar, D., Heffner, A., & Salcedo, A.(2018). Trade Policy Uncertainty and İts Effect on Foreign Direct Investment and Export Participation: Evidence from Mexico. Mimeo, *Banco de M´exico*.

Çoşar, E. E., & Şahinöz, S. (2018). Quantifying Uncertainty and Identifying its Impacts on the Turkish Economy. *Central Bank of the Republic of Turkey, 18*(06).

Davis, S. J. (2019). Rising Policy Uncertainty. *NBER Working Paper Nr. 26243.*

Drazen, A. (2002). *Political Economy in Macroeconomics*. Princeton University Press.

Feng, L., Li, Z., & Sewenson, L. D. (2017). Trade Policy Uncertainty and Exports: Evidence from China's Wto Accessıon. *Journal of International Economics, 106,* 20-36.

Groppo, V., & Piermartini, R. (2014). Trade Policy Uncertainty and the WTO. *DIW Berlin Discussion Paper No. 1437.*

Handley, K. (2011). *Exporting Under Trade Policy Uncertaınty: Theory and Evidence*. Theory of Philosophy [Doctoral Dissertation]. University of Maryland.

Handley, K. (2014). Exporting Under Trade Policy Uncertainty: Theory and Evidence. *Journal of International Economics*, *94*(1), 50-66.

Handley, K., & Limao, N. (2012). Trade and Investment Under Policy Uncertainty: Theory and Firm Evidence. *NBER Working Paper No. 17790.*

Handley, K., & Limao, N. (2017). Policy Uncertainty, Trade, and Welfare: Theory and Evidence For China and The United States. *American Economic Review*, *107*(9), 2731-2783.

Hermes, N., & Lensink, R. (2001). Capital Flight and The Uncertainty of Government Policies. *Economics Letters*, *71*(3), 337-381.

Imbruno, M. (2019). Importing Under Trade Policy Uncertainty: Evidence from China. *Journay of Comparative Economics*, *47*(4), 806-826.

Korkmaz, Ö., & Güngör, S. (2018). Küresel Ekonomi Politika Belirsizliğinin Borsa İstanbul'da İşlem Gören Seçilmiş Endeks Getirileri Üzerindeki Etkisi. *Anemon Muş Alparslan Üniversitesi Sosyal Bilimler Dergisi*, *6*(18), 211-219.

Koutris, A., Heracleous, M.S. & Spanos, A., (2008). Testing for Nonstationarity Using Maximum Entropy Resampling: A Misspecification Testing Perspective. *Econometric Reviews, 27,* 363–384.

Osnago, A., Piermartini, R. & Rocha, N. (2015). Trade Policy Uncertainty as Barrier to Trade. *WTO Working Paper*.

Shukur, G., & Mantalos, P. (2000). A Simple Investigation of the Granger-Causality Test in Integrated-Cointegrated Var Systems. *Journal of Applied Statistics, 27,* 1021–1031.

Şahin, A. (2019, 5 Aralık). *Belirsizlik ve Ekonomi*. https://www.dunya.com/gundem/belirsizlik-ve-ekonomi-haberi-121845.

Şimşek, T. (2015). Politik İstikrarsızlık Çerçevesinde Politika ve İktisat Etkileşimi. *Journal of International Management, Educational and Economics Perspectives*, *3*(2), 39-54.

Torres, C. (2019, 28 Aralık). *Fed Researchers Find Trade Policy Uncertainty a Drag on Growth.* https://www.bloomberg.com/news/articles/2019-09-05/fed-researchers-find-trade-policy-uncertainty-a-drag-on-growth.

Tufts, B. M., Tufts, E. F., & Kellog, S., M. (2019, 15 Aralık). *Trade Policy Uncertainty and Stock Returns.* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3340700.

Ulusoy, A. (2019, 25 Aralık). *Yükselen Ticari Belirsizlik Dünya Refahını Tehdit Ediyor.* https://www.yenisafak.com/yazarlar/ahmetulusoy/yukselen-ticari-belirsizlik-dunya-refahini-tehdit-ediyor-2052696.

Yalçınkaya, Ö., & Aydın, İ. H. (2017). Ekonomik ve Politik Belirsizliğin Ekonomik Büyüme Üzerindeki Etkileri: G-7+BRC Ülkeleri Üzerine Bir Panel Veri Analizi (1997-2015) . *Ege Bakış, 17*(3), 419-429.

Yalçınkaya, Ö., & Kaya V. (2017). Politika İstikrarın/İstikrarsızlığın Ekonomik Büyüme Üzerindeki Etkileri: Dünyanın En Büyük İlk Yirmi Ekonomisi Üzerinde Bir Uygulama (1996-2015). *Uluslararası Yönetim İktisat ve İşletme Dergisi, 13*(2), 277-298.

EXTENDED ABSTRACT

The concept of uncertainty entered the science of economics with Adam Smith, and Keynes and Knight (1921) has brought a turning point to the concept of uncertainty (Akalın et al., 2007: 34). As a result of the economic and political crises that occurred, it became a topic of agenda again, especially in the 20th century. When this concept, which has different definitions in many fields, is examined in the Economics literature, it is revealed that it is explained with four different points of view. The Rational Expectations Approach, based on probabilities, led by Lucas and Muth, became the first of the uncertainty category that can be measured. The approach of Fridman and Savage, who are also measurable uncertainty advocates, is the expected utility maximization hypothesis and is formed by including expectations and subjective information in the calculations made with probabilities. The third point of view that uncertainty is not within the scope of probability calculation is defined as Keynesian uncertainty belonging to Keynes (Alkan, 2018: 2; Alada, 2019). Frank Hyneman Knight, who sharply separates the concepts of risk and uncertainty, made a new contribution to the economic literature by signing the final approach. While he stated that measurable uncertainty is a risk, he also said that uncertainty is incommensurable (Akalın, et al., 2007: 35). However, as a result of the studies carried out, it is seen that there are differences of opinion in their subtitles due to the methodological differences of the economic schools.

When the factors that cause uncertainty to occur, about which a consensus cannot be reached in the literature, it has been observed that there are many factors. Some of those factors can be listed as the shocks that occur in the economy, seasonal changes, fluctuations in prices, economic crises, socio-cultural changes and economic problems experienced by countries (Şahin, 2010). On the other hand, when the concept of politics that causes cyclical fluctuations was investigated, it was revealed that the political events that took place in the country caused political instability and led the country to all kinds of chaos such as turmoil and terrorism (Şimşek, 2015: 43-51). As a result of this political instability, some uncertainties occurred in the country. For example, while this situation negatively affected the productivity in terms of economy, it also reflected negatively on investment, gross domestic product and entrepreneurial activities and showed that the environment of uncertainty in the economic policy would be created as a result of political instability (Aisen et al. 2011: 3; Drazen, 2002: 522). All the negativities that occurred resulted in some macroeconomic problems in countries.

The rapid spread of policy uncertainty, which has many reasons, is a result of globalization. Considering the recent developments based on the data obtained from the studies conducted by Barker et al. in 2016, it is seen that the uncertainty rapidly increased and was followed an unstable course since 2017.

Two developed countries such as China and the USA, which have been leaders in world trade in recent years, are making new trade regulations and increasing trade disputes, the intensity of political discourses, the effort to create new trade routes and the decrease of the possibility of global trade integration, academic studies have led to the study of TPU. For this purpose, in the study, the relationship between TPU and inflation, which is an important macroeconomic indicator, is aimed to be evaluated empirically.

In the study, the probable causality relationship between the TPU index and consumer price index data of China and the USA was tried to be determined by the Bootstrap Rolling Window Causality test developed by Balcılar et al. (2010).

In the analysis, consumer price index and TPU index variables belonging to two developed countries, namely China and the United States, which are gradually entering into blocking and trade war in the globalizing world, were used. Consumer Price Index data was sourced from the U.S. Bureau of Labor Statistics and National Bureau of Statistics of China databases. The TPU Index, developed by Baker, Bloom and Davis in 2019, reflecting the frequency of past statements about uncertainty in newspapers and articles, was also used in the analysis of the study. This data can be downloaded from the website www.policyuncertainty.com. In the study, monthly data between 2000M01 and 2019M12 were included in the analysis. The year 2020 and beyond, when the Covid 19 pandemic process began, was not included in the analysis. This exclusion conducted in order that the closure of businesses during the pandemic process and sharp decline in trade demand do not affect the reliability of the analysis results.

As a result of empirical studies, it was determined that there is a relationship between CPI and TPU variables in the long term in China and the United States. A one-way causal relationship with the Consumer Price Index has emerged from TPU in China; it has been concluded that there is a two-way causal relationship between TPU and inflation in the United States at certain dates. When the dates obtained from the analysis are examined carefully, we can say that an increase in uncertainty in trade policies in China, which adopts an investment and trade-based growth approach, affects the consumer price index, which is one of the main macroeconomic indicators of the economy. Although there is a similar situation in the United States, from the causality analysis, it has been determined that the political and economic crises experienced in the relevant dates affected the uncertainty in trade policies.

Considering the findings of the study in which the direction and dates of the causality relationship are determined, it is thought that the study will contribute to the relevant literature. Conducting analyses using different econometric techniques in future studies will contribute to revealing the relationship between TPU and macroeconomic indicators more clearly. Knowing the reasons of this relationship comprehensibly will help to increase the efficiency in these economies that shape the world.