BANKA QENDRORE E REPUBLIKËS SË KOSOVËS
CENTRALNA BANKA REPUBLIKE KOSOVA
CENTRAL BANK OF THE REPUBLIC OF KOSOVO

THE IMPACT OF INFLATION ON THE TRADE OF EUROPEAN COUNTRIES AND KOSOVO

Author: Rozafa Hajdari

Prishtina

November, 2022

ABSTRACT

Purpose: *The main purpose of this paper is to analyze the impact of inflation on the trade of European countries and Kosovo. The relationship between trade (TRD), inflation (INF), trade in services (TRS) and current account balance (CAB) is analyzed in more detail.*

Design/Methodology/Approach: *Quantitative research methods have been applied in this paper and secondary data provided by the World Bank database "World Development Indicators" have been used. In order to analyze the impact of inflation on the trade of European countries and Kosovo, linear regression analysis was performed in SPSS (Statistical Package for Social Sciences), as well as linear trend analysis in Microsoft Excel. The analysis includes 40 European countries and a period of 14 years (2008-2021). Two research models have been built, the first one analyzes the impact of INF on the TRD of European countries, while the second one analyzes the same aspects in the case of Kosovo.*

Findings: *The results and findings from this research show that there is a positive relationship between inflation and the trade of European countries, and with the increase in trade in services and the current account balance, the trade of European countries increases. On the other hand, the hypothesis that there is a positive relationship between inflation and Kosovo's trade is rejected.*

Practical implications: *The conducted study clearly explains the relationship between TRD, INF, TRS and CAB for European countries and for Kosovo. The support of the results from the analysis and studies of other authors made this work valuable to be taken as a reference on which other studies of other authors can be based.*

Originality/Value: *Any information and data used for the purpose of the research is correctly cited. All analyzes represent the author's original work and are based on the author's calculations through research models and other research methods.*

Key words: *trade, inflation, trade in services, current account balance, Europe, Kosovo.*

JEL Codes: *F1, F2, F4, F6, F62.*

Paper type: *Research Article*

Contents

List of tables

List of figures

List of abbreviations

CAB - Current Account Balance

CBK - Central Bank of the Republic of Kosovo

EU - European Union

GDP - Gross Domestic Product

IMF - International Monetary Fund

INF - Inflation

KAS - Statistics Agency of Kosovo

Q2 - Second quarter

SPSS - Statistical Package for Social Sciences

TRD - Trade

TRS - Trade in Services

1. INTRODUCTION

International trade and trade policy are quite difficult to understand when price levels remain relatively constant. But when rapid or chronic inflation is added, most of us find that whatever control we have over economic principles begins to slip away. This is because general price inflation reflects changes in the level and distribution of real incomes within countries and across national borders. Inflation also tends to change currency exchange rates and international balance of payments accounts (Houck, 1979). Maintaining macroeconomic stability and external competitiveness during periods of increased capital inflows is essential (Lartey, 2012).

Inflation may be one of the most popular buzzwords in economics, and it is a phenomenon that has plunged countries into long periods of instability. Central bankers often aspire to be known as "inflation hawks". Likewise, politicians have won elections with promises to fight inflation, and have lost power after failing to keep this promise. Inflation was even declared Public Enemy No. 1 in the United States, by President Gerald Ford in 1974 (Oner, 2017). The rate of inflation, or in other words, the percentage change in the overall price level, varies greatly over time and between countries (Mankiw, 2019). How firms form beliefs about future inflation is central to many aspects of policymaking. First, it is important for monetary policy, as it targets aggregates, prices and employment, which depend on the expectations and decisions of firms (Albagli et al., 2022). An increase in the expected price level leads to an increase in nominal wages, which in turn prompts firms to raise their prices, and thus leads to an increase in the overall price level (Blanchard, 2017).

The increase in inflation is created by international trade. Also, international trade usually creates economic growth (Kurihara, 2013). The link between trade openness and inflation is one of the most popular propositions found in any international trade text (Zakaria, 2010). After

World War II, most countries expanded international trade while increasing the rate of inflation. Inflation has been one of the most important concerns for policymakers, especially central banks, as it creates uncertainty in the economy that negatively impacts economic growth. Maintaining sustainable non-inflationary economic growth has been the main economic concern for policymakers around the world (Kurihara, 2013).

Research Questions:

1. What is the impact of inflation on the trade of European countries?
2. How has the increase in inflation affected Kosovo's trade?

2. THEORETICAL BACKGROUND

2.1. Understanding Key Concepts: Inflation and Trade

Inflation represents the rate of increase in prices over a certain period of time. Inflation is usually a broad measure, such as a general increase in prices or an increase in the cost of living in a country. But it can also be calculated in a narrower context, for example for certain goods such as food, or for services such as haircuts. Whatever the context, inflation represents how much more expensive the relevant set of goods and/or services has become over a given period, most commonly over a year (Oner, 2017).

Being sovereign, nations can put up all kinds of barriers between their residents and the outside world. A nation may have its own currency, its own barriers to foreign trade, its own government taxes and expenditures, and its own citizenship and residency laws. As long as countries exist, international economics will be a different set of analyzes from the rest of economics. The unique nature of the international economy makes it fascinating and sometimes

difficult (Pugel, 2016). If there is one point on which most economists agree, it is that trade between nations made the world a better place. However, international trade can be a contentious political issue, both domestically and between governments (McDonald, 2017).

Sovereign nations, as well as individuals and regions of a nation, can benefit by specializing in the goods they can produce with the greatest relative efficiency and by trading for the goods they cannot produce as efficiently. The simple answer to the question "Why do nations trade?" is "They trade because it's useful" (McConnell, Brue & Flynn, 2018). The resulting benefits are related to three basic facts:

→ The distribution of natural, human and capital resources among nations is unequal; nations differ in their economic resources.

→ Efficient production of different goods requires different technologies, and not all nations have the same level of technological expertise.

→ Products are differentiated by quality and other attributes, and some people may prefer certain goods imported from abroad to similar goods produced domestically (McConnell, Brue & Flynn, 2018).

To meet its international objectives, a company must adapt its strategy for trading and transferring its operating assets across borders, that is, from Country A (Home) to Country B (Host). Once each of these processes has occurred, the two countries are considered to be economically linked (see Figure 1) (Daniels et al., 2019).

Figure 1. International operations and economic relations
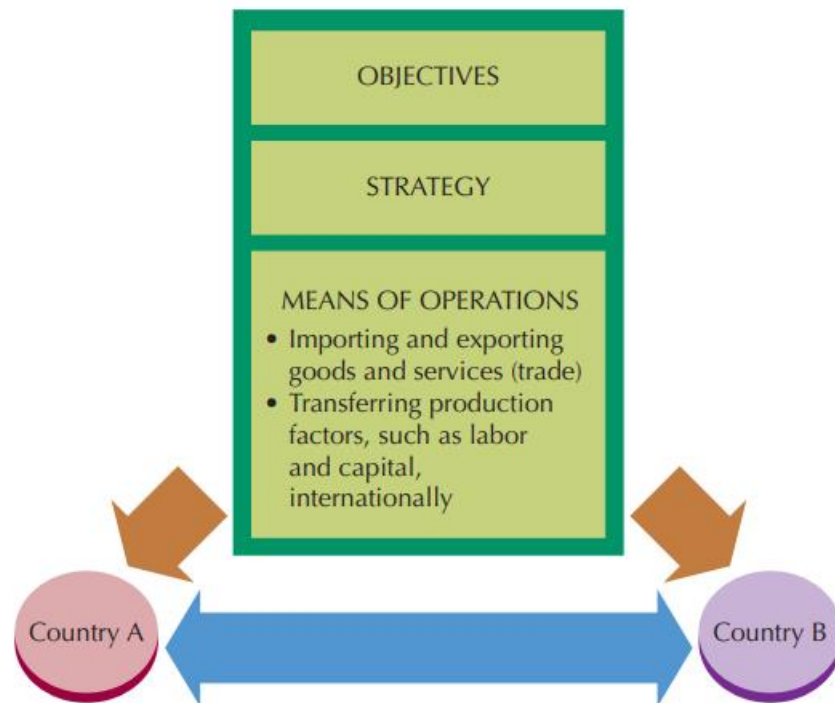
Source: Daniels, J. D., Radebaugh, L. H., & Sullivan, D. P. (2019). International Business: Environments & Operations (16th ed.). Harlow, United Kingdom: Pearson Education Limited, pg. 177.

3. RESEARCH METHODOLOGY

A very important part of a research is the applied methodology. According to Dawson (2002), "*research methodology represents the general philosophy or principle that guides research or inquiry; is the general approach to study the relevant topic and includes various issues, such as: limitations, dilemmas and ethical choices within the developed research*" (p. 14).

To achieve the goal of this paper, quantitative methods were applied in scientific research, respectively secondary data provided by the World Bank database were used. In other words, the information and data used in this paper come from two main sources:

→ Secondary data (from the World Bank database "Wolrd Development Indicators"), and

→ Tertiary sources (books, scientific works, reports of the World Bank, the International Monetary Fund, various foreign and domestic organizations, CBK, KAS, the Internet, etc.).

3.1. Hypothesis

On the basis of the research questions and with the tendency to achieve the goal of the research, the following hypotheses have been raised.

→ **H₁:** There is a positive relationship between inflation and trade of European countries.

→ **H₂:** With the increase in trade in services and the balance of the current account, the trade of European countries increases.

→ **H₃:** There is a positive relationship between inflation and trade of Kosovo.

3.2. Research Models

In order to answer the research questions and to prove the raised hypotheses, two research models were built. The first research model analyzes the impact of inflation (INF), trade in services (TRS) and the current account balance (CAB) on the trade (TRD) of European countries, while the second research model analyzes the same aspects but in this case for Kosovo. The variables of the research models are presented and explained in the following tables (see Table 1 and Table 2).

The form of research models is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(1)$$

Table 1. Variables explanation of the first research model

Symbol	Abbreviation	Variable Name	Variable Type	Variable Explanation	Data Source
Y	TRD	Trade (% of GDP)	Dependent	Trade is the sum of exports and imports of goods and services measured as a share of gross domestic product.[1]	Data from World Bank database: World Development Indicators
X_1	INF	Inflation, consumer prices (annual %)	Independent	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly.[2]	Data from World Bank database: World Development Indicators
X_2	TRS	Trade in Services (% of GDP)	Independent	Trade in services is the sum of service exports and imports divided by the value of GDP.[3]	Data from World Bank database: World Development Indicators
X_3	CAB	Current Account Balance (% of GDP)	Independent	Current account balance is the sum of net exports of goods and services, net primary income, and net secondary income.[4]	Data from World Bank database: World Development Indicators

Source: Author (2022)

---

[1] Source: World Bank national accounts data, and OECD National Accounts data files. Retrieved from: World Bank Database - World Development Indicators.

[2] Source: International Monetary Fund, International Financial Statistics and data files. Retrieved from: World Bank Database - World Development Indicators.

[3] Source: International Monetary Fund, Balance of Payments Statistics Yearbook and data files, and World Bank and OECD GDP estimates. Retrieved from: World Bank Database - World Development Indicators.

[4] Source: International Monetary Fund, Balance of Payments Statistics Yearbook and data files, and World Bank and OECD GDP estimates. Retrieved from: World Bank Database - World Development Indicators.

Table 2. Understanding the research model coefficients

Symbol	Coefficient Meaning
β_0	Constant coefficient which indicates what the value of TRD will be when INF, TRS and CAB = 0.
β_1	Coefficient which shows what the value of TRD will be when INF changes by 1%, keeping TRS and CAB constant.
β_2	Coefficient which shows what the value of TRD will be when TRS changes by 1%, keeping INF and CAB constant.
β_3	Coefficient which shows what the value of TRD will be when CAB changes by 1%, keeping INF and TRS constant.
ε	The error term or stochastic variable sums up all other factors that may have an impact on TRD, but which were not taken into account in the research model.

Source: Author (2022)

After explaining the variables, the first research model takes the form:

$$TRD = \beta_0 + \beta_1 INF + \beta_2 TRS + \beta_3 CAB + \varepsilon ....(2)$$

Whereas, the second research model takes the form:

$$TRD(KS) = \beta_0 + \beta_1 INF(KS) + \beta_2 TRS(KS) + \beta_3 CAB(KS) + \varepsilon ....(3)$$

Figure 2. Graphic representation of research models
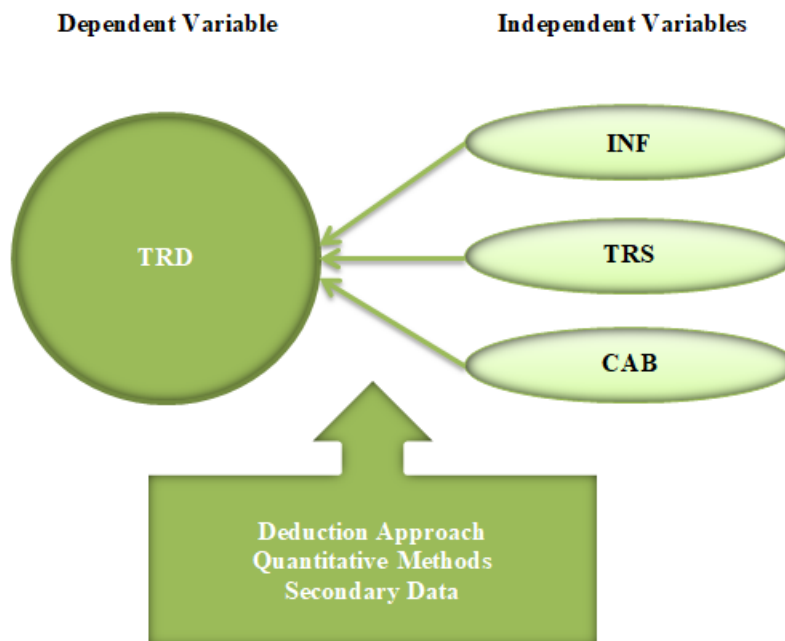
Source: Author (2022)

3.3. Data and Data Analysis

The data for this research is secondary data provided by the World Bank Database "World Development Indicators". The analysis includes forty (40) European countries and a period of 14 years, namely the years 2008-2021. The forty (40) countries included in the analysis are: Albania, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Kosovo, Latvia, Lithuania, Luxembourg, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovenia, Spain, Sweden, Switzerland, Ukraine and United Kingdom.

For countries such as Andorra, Faroe Islands, Gibraltar, Isle of Man, Lichtenstein, Monaco and San Marino, data were missing or only part of it was available. Whereas, others such as Slovakia, Holy See (Vatican City), Aland Islands and Jersey were not part of the World Bank database.

Data analysis was performed through SPSS (Statistical Package for Social Sciences), version 23, where linear regression analysis was performed. In addition, the analysis of linear trends was done in Microsoft Excel, as well as through graphical representations and interpretations, important aspects for the conducted study were analyzed.

4. LINEAR TREND ANALYSIS

In this part, the analysis of linear trends is presented, through which we see the upward or downward trend of the linear trends for the variables included in the research model, namely for TRD, INF, TRS and CAB. Through the analysis of linear trends it is possible to see the correlation of the dependent variable with the three independent variables separately. This

analysis was performed after calculating the average of all European countries included in the analysis for all variables included in the research model.

Figure 3. Linear trend between TRD and INF for European countries (2008-2021)
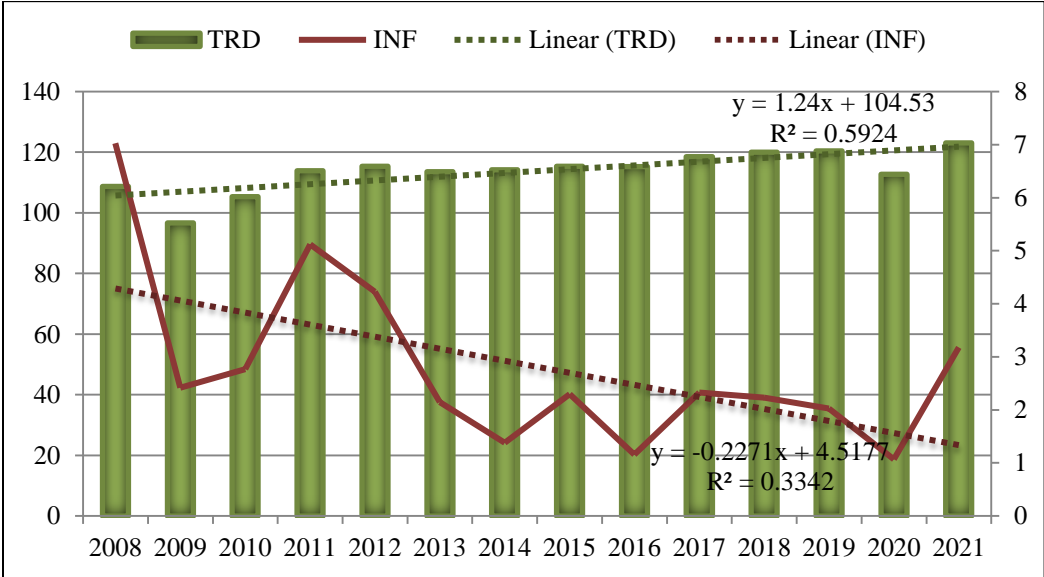
Source: Author's calculation in Microsoft Excel (2022)

From Figure 3 we understand that the linear trend for the TRD variable has a low upward trend, while the linear trend for the INF variable has an obvious downward trend. So, the trade of European countries in the analyzed period (2008-2021) has recorded continuous growth with some small fluctuations throughout these years. The most obvious decline in trade is seen in 2009, at the time of the global crisis, and in 2020, when the world was facing the Covid-19 pandemic. Covid-19 has been a shock to the global economy. While all countries have been affected by the virus, the effects have not been synchronized across borders as during the 2008 - 2009 global crisis. The impact of Covid-19 affected sectors of the economy heterogeneously and countries were repeatedly affected at different points in time (Lane, 2022; di Giovanni et al., 2022). The pandemic cycle has gripped the world economy since the beginning of 2020. In the initial "lockdown" phase of the pandemic, there was a sharp decline in global economic activity

with trade and GDP both collapsing (Gourinchas et al., 2021; Çakmaklı et al., 2021; di Giovanni et al., 2022).
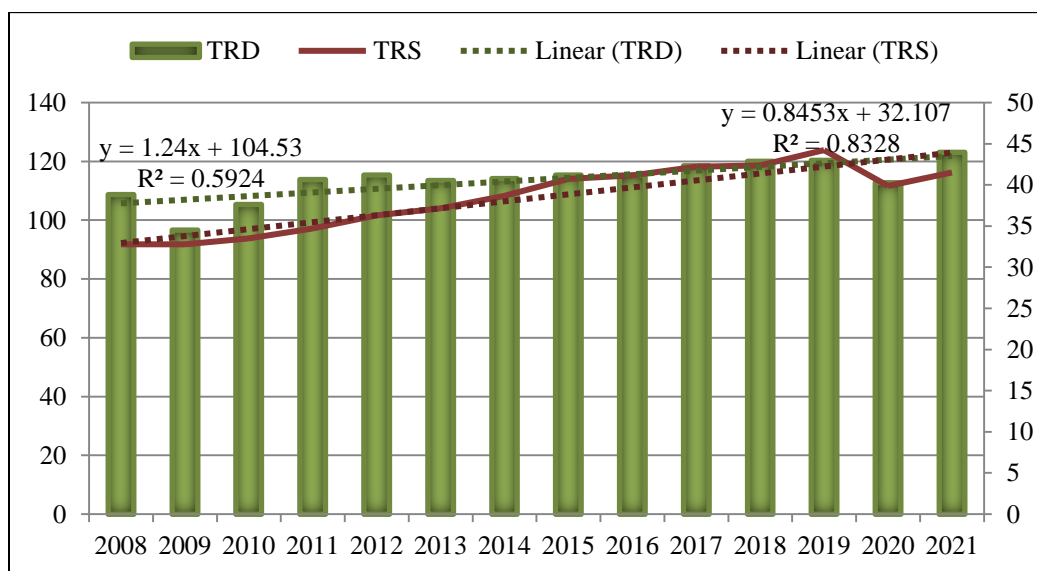
Figure 4 shows the linear trend for the TRD and TRS variables. It can be seen that there is a direct relationship between these two variables as both have an increasing tendency. In other words, during the analyzed period (2008-2021) there was an increase in trade in services of European countries, as well as an increase in trade in general of these countries.

Whereas, the linear trend between TRD and CAB variables shown in Figure 5 shows that there is a direct relationship between these two variables. So, for the analyzed period, the trend of both of these variables has an increasing trend. It can be seen that the CAB variable has a more pronounced growth tendency. As in all the above cases, in this case too, a decrease is observed in 2020.

Figure 5. Linear trend between TRD and CAB for European countries (2008-2021)

$y = 1.24x + 104.53$
$R^2 = 0.5924$

$y = 0.3655x - 3.7055$
$R^2 = 0.5148$
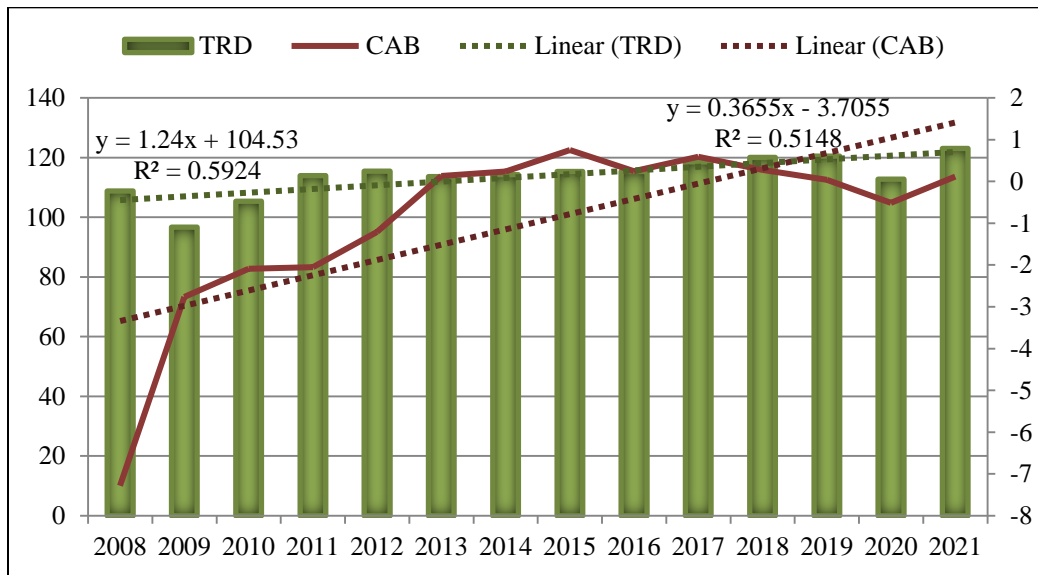
Source: Author's calculation in Microsoft Excel (2022)

5. RESULTS AND DISCUSSION

This part summarizes the results obtained from the linear regression analysis for both research models, namely for European countries and for Kosovo. The obtained results are supported and compared with the findings of other authors, whose analyzes are related to the aspects discussed in this paper.

5.1. First research model results (for European countries)

In the following, first research model results are presented, where the relationship between the variables included in the model is clearly seen through the linear regression analysis. Here are presented results such as: descriptive statistics, bivariate correlation analysis, model summary, model coefficients and their meaning and collinearity statistics.

Table 3. First research model descriptive statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
TRG	560	45.42	388.85	113.8328	58.80958
INF	560	-4.48	59.22	2.8082	4.94254
TRS	560	7.31	298.24	38.4462	47.04212
CAB	560	-49.65	15.77	-.9635	6.64385
Valid N (listwise)	560				

Source: Author's calculation in SPSS, version 23 (2022)

Table 3 presents descriptive statistics results for the variables included in the research model. We see that for the variables included in the model, namely for TRG, INF, TRS and CAB, the number of observations is 560, based on the fact that the analysis includes data for forty (40) European countries, for a period of 14 years (2008 - 2021). According to the obtained results, we say that the TRG variable moves from a minimum value of 45.42% to a maximum value of 388.85%, with an average of 113.8328% and a standard deviation of 58.80958%. For the INF variable, the minimum value turned out to be -448%, the maximum value 59.22%, the average 2.8082% and the standard deviation 4.94254%. Similarly, the minimum value of the TRS variable is 7.31%, the maximum value is 298.24%, the mean is 38.4462% and the standard deviation is 47.04212%. And, as for the CAB variable, the minimum value turned out to be -49.65, the maximum value 15.77, the mean -0.9635 and the standard deviation 6.64385.

Table 4. First research model bivariate correlation analysis

| Correlations[b]		TRG	INF	TRS	CAB
TRG	Pearson Correlation	1	-.032	.888[**]	.174[**]
	Sig. (2-tailed)		.450	.000	.000
INF	Pearson Correlation	-.032	1	-.112[**]	-.207[**]
	Sig. (2-tailed)	.450		.008	.000
TRS	Pearson Correlation	.888[**]	-.112[**]	1	.122[**]
	Sig. (2-tailed)	.000	.008		.004
CAB	Pearson Correlation	.174[**]	-.207[**]	.122[**]	1
	Sig. (2-tailed)	.000	.000	.004	
**. Correlation is significant at the 0.01 level (2-tailed).					
b. Listwise N=560					

Source: Author's calculation in SPSS, version 23 (2022)

Table 4 shows the results obtained from the bivariate correlation analysis, through which we are able to test the strength of the relationship or correlation between the variables that are included in the research model. Based on the results, we say that:

→ There is a very weak negative correlation between TRG and INF at a value of -0.032, and this statement is not correct because the significance value is 0.450 (p value = 0.450 > 0.05).

→ There is a high positive correlation value of 0.888 between TRG and TRS. This statement is correct because it is proven through the resulting value of significance which is 0.000 (p value = 0.000 < 0.05).

→ There is a very weak positive correlation of 0.174 between TRG and CAB. This statement is correct because the significance value was found to be 0.000 (p value = 0.000 < 0.05).

→ There is a very weak positive correlation of -0.112 between INF and TRS. This statement is correct because the significance value was found to be 0.008 (p value = 0.008 < 0.05).

→ There is a very weak negative correlation of -0.207 between INF and CAB. This statement is proven correct through the significance value which is 0.000 (p value = 0.000 < 0.05).

→ There is a very weak positive correlation value of 0.122 between TRS and CAB, and this statement is proven correct through the resulting significance value of 0.004 (p value = 0.004 < 0.05).

All the above statements that were significant at the confidence level α = 5%, are also true for the confidence level α = 0.01, since the p value in all cases is lower than 0.01. So the above statements hold for α = 5% and for α = 1%.

a)   b)
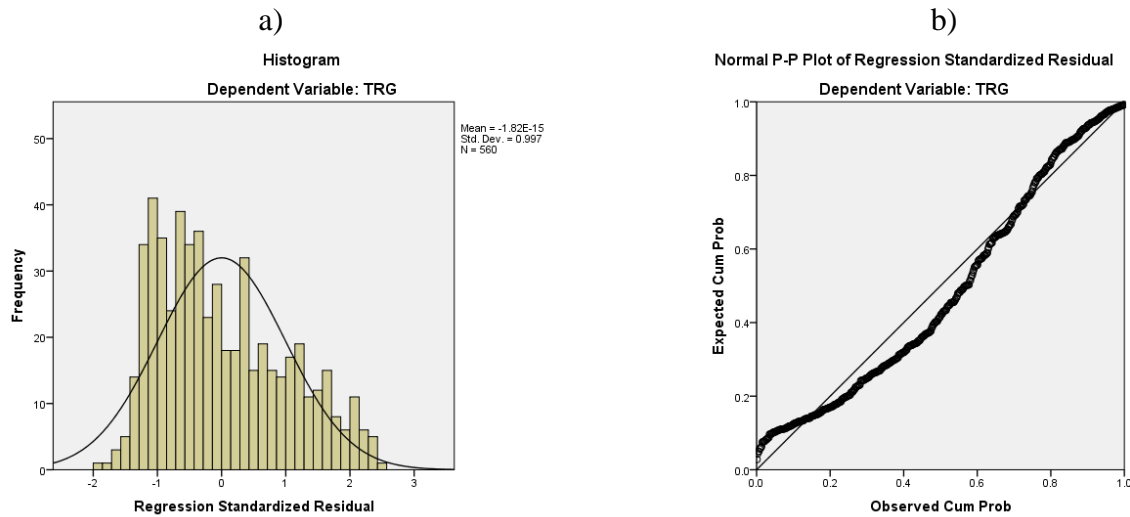
Source: Author's calculation in SPSS, version 23 (2022)

In the figures above, the distribution of data for the variables included in the model is presented graphically. Through a) histogram we see that there is a normal distribution of the data since this distribution has a mesoquartile shape. While, according to b) the probability chart, we see that the data are distributed close to the regression line, i.e. they have a mostly normal distribution with small standard deviations which are summarized in the error term or the stochastic variable (ε).

Table 5. Model summary for first research model

Model Summary[b]										
					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.894[a]	.799	.798	26.42070	.799	737.871	3	556	.000	.224
a. Predictors: (Constant), CAB, TRS, INF										
b. Dependent Variable: TRG										

Source: Author's calculation in SPSS, version 23 (2022)

From Table 5, among others, the value of the correlation coefficient (R), the determination coefficient (R^2), the Durbin-Watson coefficient and the significance value of the model as a whole are shown. From the obtained results it can be observed that R = 0.894, which means that the variables included in the model have a correlation of 89.4%. R^2 = 0.799, which means that

the independent variables (INF, TRS and CAB) explain the dependent variable (TRG) at the level of 79.9%. The remaining percentage (20.1%) belongs to the error term or stochastic variable (ε) which includes all other factors that influence the trade of European countries, but which are not taken into account in the model.

The Durbin-Watson coefficient value is 0.224. It is preferable that this value be within the range of 1.5 - 2.5 in order to show that there is no autocorrelation or interdependence between independent variables in the research model. This resulting value does not present any problem since the non-existence of autocorrelation is proven below through the Tolerance and VIF coefficients (Table 7, Column "Colinearity Statistics") and through the Condition Index values from Table 8.

Based on the significance value (Sig. F Change = 0.000) we prove that the model is statistically reliable and acceptable. The same thing is confirmed by the significance value given in the ANOVA Table (Table 6), where Sig. = 0.000. So, in short, this research model is statistically reliable for significance level α = 5%, as well as for α = 1%.

Table 6. ANOVA for first research model

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1545221.095	3	515073.698	737.871	.000[b]
	Residual	388117.733	556	698.053		
	Total	1933338.828	559			
a. Dependent Variable: TRG						
b. Predictors: (Constant), CAB, TRS, INF						

Source: Author's calculation in SPSS, version 23 (2022)

Table 7. First research model coefficients

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	69.066	1.628		42.433	.000	65.869	72.263		
	INF	1.010	.232	.085	4.352	.000	.554	1.466	.950	1.053
	TRS	1.109	.024	.887	46.151	.000	1.062	1.156	.977	1.023
	CAB	.734	.173	.083	4.249	.000	.395	1.074	.947	1.056
a. Dependent Variable: TRG										

Table header: **Coefficients[a]**

Source: Author's calculation in SPSS, version 23 (2022)

Above we saw the significance of the model as a whole, while here we will see the meaning of the coefficients of the model, as well as their significance separately.

→ β_0 - indicates that if INF, TRS and CAB are constant (do not change) then TRD will have a value of 69.066%. Such a statement is proven correct through the significance value of the coefficient 0.000 (so, p value = 0.003 < 0.05).

→ β_1 - indicates that if INF increases by 1%, TRD will increase by 1.010%, keeping TRS and CAB constant. This statement is correct since the significance value of this coefficient turned out to be 0.000 (p value = 0.000 < 0.05).

→ β_2 - indicates that if TRS increases by 1% then TRD will increase by 1.109%, keeping INF and CAB constant. This statement is correct because the significance value is 0.000 (p value = 0.000 < 0.05).

→ β_3 - indicates that if CAB increases by 1% then TRD will increase by 0.734%, keeping INF and TRS constant. This statement holds as long as the significance value is 0.000 (p value = 0.000 < 0.05).

$$TRD = 69.066 + 1.010INF + 1.109TRS + 0.734CAB + \varepsilon ....(4)$$

To prove that there is no multicollinearity in the research model, in the above table we refer to the resulting values of the Tolerance and VIF coefficients (as we mentioned above). Since the values of the Tolerance coefficient are higher than 0.2 (respectively 0.950, 0.977 and 0.947) and the values of the VIF coefficient are lower than 5 (respectively 1.053, 1.023 and 1.056) then it is proven that there is no interdependence in this research model between independent variables, so the results from this model make sense and are valid.

Also, referring to the following table (Table 8), we analyze the Condition Index values. According to the result from this coefficient, multicollinearity exists when any of the "Variance Proportions" has values higher than 0.9, corresponding to any row in which the "Condition Index" has a value higher than 30 (Krasniqi & Hajrizi, 2012). So, even from the results of this table, we conclude that there is no multicollinearity in the research model (the existence of which would make the coefficients of the model meaningless, which would lead to the removal of correlated variables from the model).

Table 8. Collinearity diagnostics for first research model

Collinearity Diagnostics[a]							
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	INF	TRS	CAB
1	1	1.977	1.000	.10	.09	.08	.02
	2	1.067	1.361	.01	.06	.11	.59
	3	.656	1.736	.00	.59	.17	.38
	4	.300	2.569	.89	.25	.64	.01
a. Dependent Variable: TRG							

Source: Author's calculation in SPSS, version 23 (2022)

Based on the above results, Table 9 presents the validity of the hypotheses related to the first research model.

Table 9. Validation of hypotheses related to the first research model

No.	Hypotheses	Hypotheses Validation
H_1	There is a positive relationship between inflation and trade of European countries.	Accepted (✓)
H_2	With the increase in trade in services and the balance of the current account, the trade of European countries increases.	Accepted (✓)

Source: Author (2022)

5.2. Second research model results (for Kosovo)

This part presents the main results of the second research model derived from the linear regression analysis for Kosovo. The focus here is on the results from the Model Summary and Coefficients table. Also, the discussion and analysis is supported by the analysis of the linear trend between the variables TRD and INF for Kosovo.

Table 10. Model summary for second research model

Model Summary[b]										
					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.891[a]	.794	.732	4.00851	.794	12.810	3	10	.001	.861
a. Predictors: (Constant), CAB, TRS, INF										
b. Dependent Variable: TRG										

Source: Author's calculation in SPSS, version 23 (2022)

From Table 10 we see that R = 0.891, which means that the variables included in the model have a correlation of 89.1%. R^2 = 0.794, which means that the independent variables (INF, TRS and CAB) explain the dependent variable (TRG) at the level of 79.4%. The remaining percentage (20.6%) belongs to the error term or stochastic variable (ε) which includes all the other factors that influence Kosovo's trade, but which were not taken into account in the model.

The model has proven to be statistically significant and acceptable since Sig. F Change = 0.001 (0.001 < 0.05).

Table 11. Second research model coefficients

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	32.620	9.262		3.522	.006	11.984	53.256		
	INF	.269	.498	.107	.541	.601	-.841	1.379	.529	1.890
	TRS	1.512	.263	.950	5.756	.000	.927	2.097	.758	1.319
	CAB	-.765	.445	-.373	-1.719	.116	-1.757	.227	.439	2.277
a. Dependent Variable: TRG										

Source: Author's calculation in SPSS, version 23 (2022)

Table 11 gives us the results of the second research model coefficients, namely the Kosovo model. From the obtained results we say that:

→ β_0 - indicates that if INF, TRS and CAB are constant (do not change) then TRD will have a value of 32.620%. Such a statement is proven correct through the significance value of the coefficient 0.006 (so, p value = 0.006 < 0.05).

→ β_1 - indicates that if INF increases by 1%, TRD will increase by 0.269%, keeping TRS and CAB constant. This statement is not correct since the significance value of this coefficient was found to be 0.601 (p value = 0.601 > 0.05).

→ β_2 - indicates that if TRS increases by 1% then TRD will increase by 1.512%, keeping INF and CAB constant. This statement is correct because the significance value is 0.000 (p value = 0.000 < 0.05).

→ β_3 - indicates that if CAB increases by 1% then TRD will decrease by 0.765%, keeping INF and TRS constant. This statement does not hold because the significance value is 0.116 (p value = 0.116 > 0.05).

After interpreting the coefficients, the second research model takes the following form:

TRD(KS) = 32.620 + 0.269INF(KS) + 1.512TRS(KS) - 0.765CAB(KS) + ε...............(5)

Table 12. Validation of the hypothesis related to the second research model

No.	Hypothesis	Hypotheses Validation
H_3	Ekziston një marrëdhënie pozitive ndërmjet inflacionit dhe tregtisë së Kosovës.	Rejected (✓)

Source: Author (2022)

Next, the linear trend between TRD and INF variables for Kosovo is presented. In this case, the linear trend analysis was performed only for the country of Kosovo to see the relationship between trade and inflation.

Figure 7. Linear trend between TRD and INF for Kosovo (2008-2021)
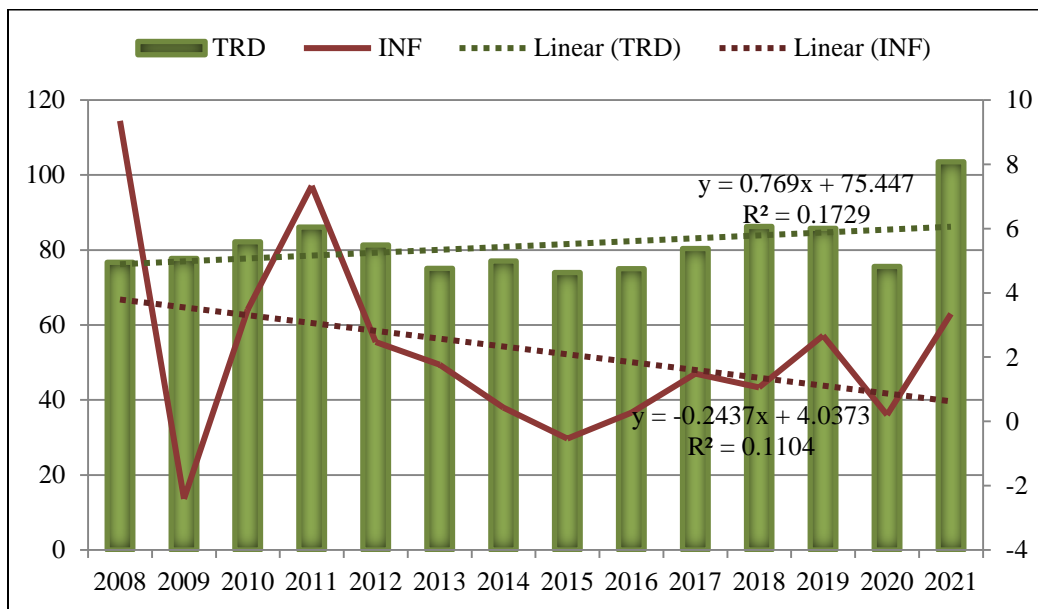
Source: Author's calculation in Microsoft Excel (2022)

From Figure 7 we see that the linear trend of the TRD variable for Kosovo has a low growth tendency with the fluctuations observed over the years. As in the above cases, in this case too trade has marked a more visible decline in 2020 as a result of dealing with the Covid-19 virus. According to the figure, it can be seen that trade has marked a significant increase from 2020 to 2021. This is supported by the latest report of KAS "*Foreign Trade of Goods - October 2022*" published on 22.11.2022, on page 4 of which it is declared that Kosovo's exports have increased

from €474,884,000 in 2020 to €755,726,000 in 2021, and Kosovo's imports have also increased from €3,296,635,000 in 2020 to €4,684,198,000 in 2021.

On the other hand, the linear trend for the INF variable has a downward trend. Also, in the case of inflation, there are fluctuations, declines and rises in the level of inflation throughout the years 2008 - 2021. The recovery of economic activity as well as the increase in prices in foreign markets have been reflected in the increase in prices in Kosovo as well (CBK, 2022a).

According to the report published by CBK on 14.11.2022 "*Quarterly Assessment of the Economy No. 39, Quarter II/2022*", in the second quarter of 2022, inflation in Kosovo reached the highest levels since mid-2008. This increase was mainly driven by the extraordinary increase in energy and food prices. The consumer price index during Q2 2022 reached 12.6%, with the highest inflation rate recorded during the month of June of 14.1%. As a result of the intensification of inflationary pressures during Q2 2022, inflation in Kosovo has begun to spread to other sectors, especially in services, which hints at the transfer of costs raised by producers to consumers (CBK, 2022b).
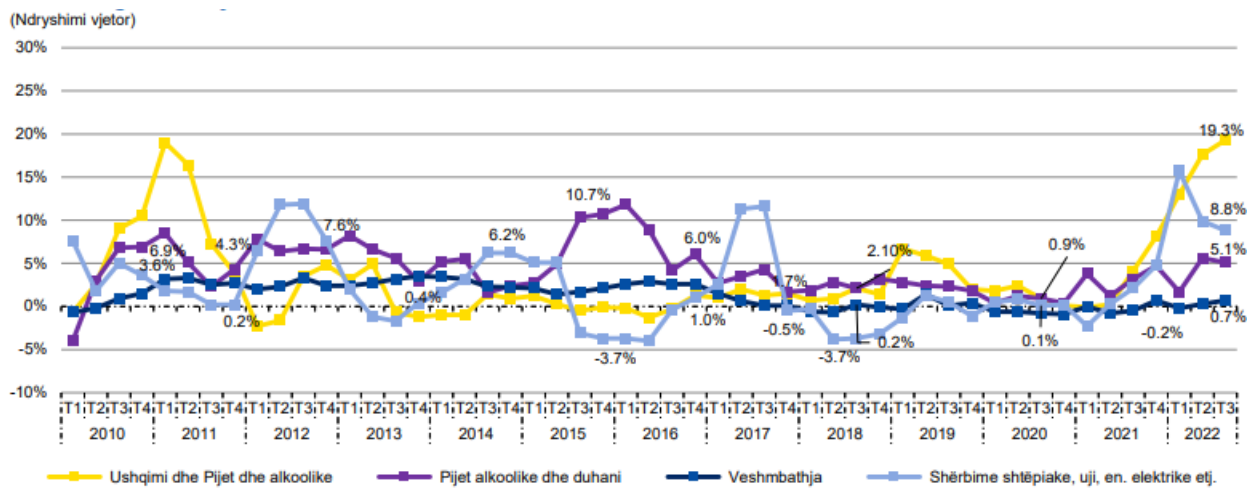
In the "*Monthly Statistical Bulletin, No. 253*" of the CBK presented valuable information about consumer prices and their main categories. The following figures show the graphs obtained from this report, which show the annual change in consumer prices (Figure 8) and the annual change in the main categories of consumer prices (Figure 9) for the period 2010 - 2022.

Figure 8. Annual change in consumer prices
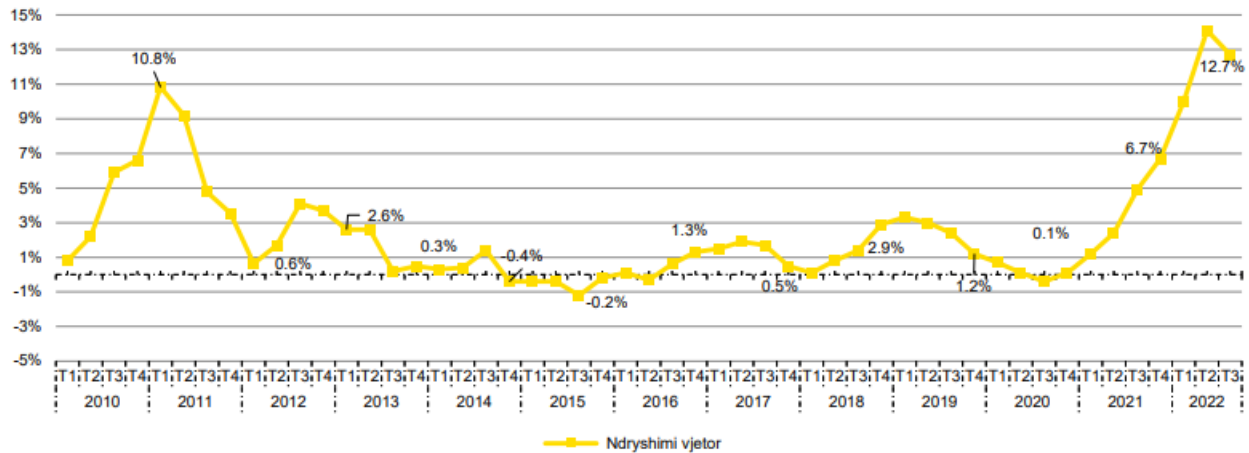
Source: CBK (2022). Monthly Statistical Bulletin, No. 253 - August 2022. Prishtina: CBK. Retrieved from: https://bqk-kos.org/wp-content/uploads/2022/11/BQK_BMS_253_Al.pdf, pg. 16.

Figure 9. Annual change in the main categories of consumer prices

Source: CBK (2022). Monthly Statistical Bulletin, No. 253 - August 2022. Prishtina: CBK. Retrieved from: https://bqk-kos.org/wp-content/uploads/2022/11/BQK_BMS_253_Al.pdf, pg. 16.

6. CONCLUSIONS

Based on the above elaboration of the analyzed aspects, we can conclude that for the 40 European countries included in the analysis, there is a positive relationship between inflation and trade, as well as with the increase in trade in services and the current account balance, trade in these countries increases. As mentioned during the analysis of the literature, there is a positive relationship between trade and inflation, that is, with the increase of one, the other also increases. In the case of European countries, the increase in inflation has caused an increase in trade between European countries and the outside world.

On the other hand, as far as Kosovo is concerned, the regression analysis showed that there is no positive relationship between inflation and trade. Likewise, the analysis of the linear trend for Kosovo has shown an increasing trend for the trade variable and a decreasing trend for the inflation variable.

REFERENCES

[1]   Albagli, E., Grigoli, F., & Luttini, E. (2022). *Inflation Expectations and the Supply Chain*. IMF Working Paper: International Monetary Fund.

[2]   KAS (2022). *Foreign Trade of Goods - October 2022*. Prishtina: KAS. Retrieved from: https://ask.rks-gov.net/media/7165/statistikat-e-tregtis%C3%AB-s%C3%AB-jashtme-stj-tetor-2022.pdf

[3]   Blanchard, O. (2017). *Macroeconomics* (7th ed.). Harlow, England: Pearson Education Limited.

[4]   CBK (2022). *Monthly Statistical Bulletin, No. 253 - August 2022*. Prishtina: CBK. Retrieved from: https://bqk-kos.org/wp-content/uploads/2022/11/BQK_BMS_253_Al.pdf

[5]   CBK (2022a). *Quarterly Assessment of the Economy No. 36, Quarter III/2021*. Prishtina: CBK. Retrieved from: https://bqk-kos.org/wp-content/uploads/2021/12/BQK_VT_TM3-2021.pdf

[6]   CBK (2022b). *Quarterly Assessment of the Economy No. 39, Quarter II/2022*. Prishtina: CBK. Retrieved from: https://bqk-kos.org/wp-content/uploads/2022/11/BQK_VTE-TM2_2022.pdf

[7]   Çakmaklı, C., Demiralp, S., Kalemli-Özcan, Ş., Yeşiltaş, S., & Yıldırım, M. A. (2021). The Economic Case for Global Vaccinations: An Epidemiological Model with International Production Networks. *NBER Working Paper, No. 28395*. http://www.nber.org/papers/w28395

[8]   Daniels, J. D., Radebaugh, L. H., & Sullivan, D. P. (2019). *International Business:*

Environments & Operations (16th ed.). Harlow, United Kingdom: Pearson Education Limited.

[9] Dawson, C. (2002). *Practical Research Methods: A User-Friendly Guide to Mastering Research Techniques and Projects*. Oxford, United Kingdom: How To Books Ltd.

[10] Dexter, A. S., Levi, M. D., & Nault, B. R. (2005). International Trade and the Connection between Excess Demand and Inflation. *Review of International Economics, 13*(4), 699-708. https://doi.org/10.1111/j.1467-9396.2005.00532.x

[11] di Giovanni, Julian., Kalemli-Özcan, Ş., Silva, A., & Yildirim, M. A. (2022). Global Supply Chain Pressures, International Trade, and Inflation. *NBER Working Paper, No. 30240*. http://www.nber.org/papers/w30240

[12] Gerber, J. (2018). *International Economics* (7th ed.). Harlow, England: Pearson Education Limited.

[13] Gourinchas, P-O., Kalemli-Ozcan, Ş., Penciakova, V., & Sander, N. (2021). Fiscal Policy in the Age of COVID: Does it "Get in all of the Cracks?". *NBER Working Paper, No. 29293*. http://www.nber.org/papers/w29293

[14] Houck, J. P. (1979). *Inflation and International Trade*. Conference Paper/ Presentation, pp. 57 - 63. http://dx.doi.org/10.22004/ag.econ.17294

[15] Krasniqi, B. A., & Hajrizi, B. L. (2012). *Research Methods in the Social Sciences: A Guide to Statistical Analysis in SPSS*. Prishtina: Institute for Entrepreneurship and Small Business.

[16] Kurihara, Y. (2013). *International Trade Openness and Inflation in Asia*. Research in World Economy, 4(1), 70-75. https://doi.org/10.5430/rwe.v4n1p70

[17] Lane, P. (2022, February 10). *Bottlenecks and monetary policy*. The ECB Blog.

Retrieved   from:

https://www.ecb.europa.eu/press/blog/date/2022/html/ecb.blog220210~1590dd90d6.en.html, accessed on: 21.11.2022.

[18] Lartey, E. (2012). Financial Openness, Nontradable Inflation and Optimal Monetary Policy. *Economics Letters, 117*(3), 782-785. https://doi.org/10.1016/j.econlet.2012.08.043

[19] Mankiw, N. G. (2019). *Macroeconomics* (10th ed.). New York: Worth Publishers.

[20] McConnell, C. R., Brue, S. L., & Flynn, S. M. (2018). *Macroeconomics: Principles, Problems, and Policies*. New York: McGraw-Hill Education.

[21] McDonald, B. (2017). International Trade: Commerce among Nations. In Finance & Development, *Back to Basics: Economic concepts explained* (pp. 40-41). International Monetary Fund.

[22] Oner, C. (2017). Inflation: Prices on the Rise. In Finance & Development, *Back to Basics: Economic concepts explained* (pp. 30-31). International Monetary Fund.

[23] Pugel, T. (2016). *International Economics* (16th ed.). New York: McGraw-Hill Education.

[24] Zakaria, M. (2010). Openness and Inflation: Evidence from the Time Series Data. *Doğuş Üniversitesi Dergisi, 11*(2), 313-322. https://hdl.handle.net/11376/296