ISSN 2661-2666 (Online) International Scientific Journal Monte (ISJM)
DOI: 10.33807/monte.20243109 | Volume 9, No.1 (2024): April

THE ROLE OF THE FINANCIAL AND MACROECONOMIC INDICATORS IN THE ECONOMY OF REPUBLIC OF NORTH MACEDONIA- PERIOD BEFORE, DURING AND AFTER COVID-19

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ABSTRACT

Realizing the need for real research on the macroeconomic potentials and the need for further development of the international relations of a certain country, namely the Republic of North Macedonia, this paper aims to reflect the financial and macroeconomic situation of the RNM in the period 2013-2023, namely analyzing the movement of some financial and macroeconomic indicators, the period of major changes as a result of the COVID-19 pandemic, and the recovery of the RNM economy, post-COVID-19 period.

In this paper the importance of economic growth, the factors that influence economic growth, government policies and economic growth will become clearer. The subject of the balance of payments, the factors affecting it and its movement will be elaborated in the aforementioned period. Also, the connection between the inflation rate and the exchange rate with the net export will be elaborated, as it is an important factor in the country's international economic relations. As the last but not the least important goal is the interpretation of the results of the empirical and regression analysis on the connection of the exchange rate and the inflation rate with net exports, as well as giving recommendations in the future in terms of protection against large fluctuations in exchange rates, the possibilities for intervention of government policies in reducing inflation in order to improve the economic situation.

Through this analysis, it has been determined that the exchange rate has a positive effect on net exports, while the inflation rate has a negative effect on net exports. Fiscal and macroeconomic policies should be aimed at regulating the stability of the domestic currency, controlling the inflation rate and improving the balance of payments deficit.

Keywords: *Economic growth, Exchange rate, Inflation, Covid-19*

INTRODUCTION

It is known that the power of a state is seen in its economic strength, its financial stability, in the correct management of macroeconomic, fiscal and monetary policy as well as in its economic development.
One of the important factors that develops a country is undoubtedly the economic growth, the measure that expresses the differences in the Gross domestic product of the national economy from one year to the previous year.

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From the theory we know that economic growth is directly related to the Gross domestic product, which is a measure that serves to express the general goods and services in monetary value, produced in the national economy during a period of one year (Mankiew, 2010) .

Naturally, every country and every government policy aims to increase living standards, increase GDP, reduce unemployment and have a significant level of economic growth. Each country achieves these steps through certain policies such as fiscal policies, monetary policies and trade policies.

The government can create and has mechanisms for managing fiscal policies. But what do we mean by fiscal policy? Fiscal policy is a government mechanism through public revenues and expenditures that can affect the economy of a country. In practice, fiscal policies change depending on the business cycle where the economy is.

While the monetary policy represents the protective mechanism that affects the regulation of the general monetary supply in the country. This role is performed by the central bank of the respective country. However, although with the help of these mechanisms the business cycles of an economy is influenced, trade policy, namely international relations with other countries undoubtedly has a significant impact on the development of the national economy. We can express this kind of international trade and connectivity numerically through export and import indicators.

It is theoretically argued that exports and imports can play a decisive role in economic development. Theoretical and empirical studies mainly focus on the relationship between exports and economic growth, between imports and economic growth, or on the relationship between exports, imports and economic growth.

The export of goods and services is considered an engine of economic and social development for a number of reasons, including the objective for companies to offer innovations to the market and maintain their market share. In parallel, exports provide increased sales and profits. Alternatively, exporting has the ability to minimize the impact of market volatility and companies entering global markets have the opportunity to adapt to economic changes by offering products and services to international markets.

And finally, regarding the advantages of exports, it can be summarized that the increase in exports leads to an increase in monetary circulation, which increases the national income and leads to an improvement in the standard of living. Despite these benefits, in some cases exports do not lead to profitable results and lead to results that do not contribute to the highest economic growth of the country and this happens for several reasons:

- The competition is greater than expected
- The products are not known for the foreign market
- Economic, financial and political instability of the country importing from ours
- Bad advertising in the media and some other shortcomings

In relation to imports, imports usually reflect the weakness of that country in meeting its own needs (production of goods and services) and make it dependent on the mercy of foreign countries. Imports, unlike exports, lead to a decrease in the circulation of the local currency and weaken the balance of payments, thereby weakening economic growth. However, in some cases imports are considered a source of economic growth, especially if they include the import of hardware and electronic equipment to aid and contribute to growth and improve investment, or if the production of products in the country will have higher costs than importing that substitute product.

In our analysis, by analyzing the movement of one of the significant elements of the balance of payments, which is the net export, we will have a clear picture of the movement of economic growth. Starting from the macroeconomic theory, economic growth is a percentage of the increase in the real Gross Domestic Product (GDP) for the last year compared to the previous year, while the balance of payments is a part of the GDP and consequently we can conclude that the increase or decrease in the value of the balance of payments affects economic growth through an increase/decrease in real GDP.

LITERATURE REVIEW

Economic growth

In economic sciences if we look at the aspect of youth employment, in most cases the experience of the labor force depends on the economic conditions in the country where the job is sought. In some years, companies expand their production of goods and services, where employment increases and full-time work is easier to find. In other years, companies cut production, the employment rate falls, and it takes longer to find a job. In general, any unemployed person actively seeking work would enter the labor market in years of economic expansion rather than years of economic contraction.

Through various publications we can see a lot of statistical data about the economy of one or more countries. Statistics can measure the income of everyone in the economy (Mankiew, 2007), ie. GDP, the rate at which general prices of goods are rising (inflation), the percentage of the workforce not working (unemployment), or an imbalance in international trade between a country and a third country (trade deficit). All these statistics are *macroeconomic statistics.*

According to Pollozhani (2015), the main goals of macroeconomics are the following:

1. Sustainable economic growth - means growth of goods and services (Gross Domestic Product) over a longer period of time
2. Opening of new jobs
3. Stabilization of prices of services and goods
4. Work productivity
5. Balancing the balance of payments

Taking into account the above-mentioned goals, the instruments we can use to improve the macroeconomic situation are: fiscal policy, monetary policy, income policy, supply increase policy and international exchange policy.

Government policies and economic growth

Savings and Investments - Considering that capital is significant factor in production, society can change the capital stock at its disposal. So, if the economy today produces more capital goods, then in the future there will be more capital assets and this will create conditions for the production of a greater number of goods and services. Investment policy measures can promote economic growth over long periods of time and improve the standard of living of the population. Countries that invest larger shares of GDP result in higher growth rates and vice versa.

Foreign Investment- Foreign investment can come in many forms. Daimler-Benz can build a car manufacturing plant in Mexico or the United States. Capital investments that are owned and managed by entities from abroad are called *foreign direct investments.* A Swiss citizen can buy shares in a Finnish corporation and invest the proceeds from the sale of the shares in a factory. Consequently, investments that are financed with money from abroad, but which are managed by a local resident (resident), are called *foreign portfolio investments* . When non-residents invest in a country, they do so in order to achieve the highest possible return on their investment. As in the examples above, the Daimler-Benz factory increases Mexico's capital, thereby increasing the productivity of the Mexican population and thereby increasing GDP. But the company repatriates some of its revenue to Germany in the form of profits for that enterprise. Similarly, when a Swiss investor buys shares in Finland, he is entitled to a share of the profits made by the Finnish company.

Education- Education or investment in human capital is as important as investment in physical capital in terms of economic growth and development of a country. In the US, annual statistics show a 10% difference in the wages of educated people compared to those with no/lower levels of education. In less developed countries this difference is even greater. According to the above, government policies can influence education awareness by building schools, funding studies or creating better educational conditions in all learning cycles.

Health - Although the term human capital is most often used in connection with education, the term can also be used to describe another type of investment in people: spending that leads to improvements in people's health. Simply put, a healthy person is more productive at work and thus contributes to an increase in the standard of living.

Economist Robert Fogel (Fogel, 1870) emphasized that the factor of particular importance in economic growth in long-term periods is the improvement of health as a result of quality food. In his study he points out that 1 in 5 people in the UK were malnourished which contributed to their inability to work. Vogel studied these trends by observing people's heights. The short height of people is an indicator of insufficient nutrition, especially during pregnancy and in the first years of life. He discovered that with the economic growth of countries, the population is fed and the average height of the population increases.

Population Growth- For years, economists have debated how population growth affects economic growth. A direct effect is an increase in the labor force - a larger population means a larger number of workers who will produce goods and services. Thomas Malthaus (1798) in his book "Essay on population and its effect on the quality of society" points out that the continuous growth of the population puts constant pressure on the ability of society to take care of itself. As a result, humanity is forever condemned to live in poverty.

Fortunately, Malthus' dire prediction was wrong. Although the world's population has increased by about 6 times in the last 2 centuries, the standard of living has increased rapidly. As a result of economic growth, chronic hunger and malnutrition are less prevalent today than in Malthus' time. But why was Malthus wrong? Pesticides, artificial fertilizers, mechanical farm equipment, innovations and new technologies were created that Malthus could never have imagined would allow farms and factories to feed such large numbers of the population.

International Trade- Some of the less developed countries have tried to follow the growing trend of the national economy by following policies oriented within the national borders. These policies are aimed at increasing productivity and living standards, ignoring interaction with the outside world. Today, most economists believe that it is better for less developed countries to establish international ties, through which they will be integrated into the international economy. So, if a country is not integrated in international trade, it is isolated and is forced to produce all the products and services that the population needs.

All these factors, with the help of macroeconomic policies, aim to contribute to the improvement of the overall financial and macroeconomic situation of the country, as well as to increase the standard of citizens and thereby increase the well-being of the population.

The economic growth of RNM, before, during and after Covid-19

The Republic of North Macedonia as a country is characterized by economic growth of about 2-3% on an annual basis, with the exception of the period 1991-1995. The economic growth of the Republic of North Macedonia in the period 2019-2023 varies from 3.4% in 2019 and maintains a steady growth of 2-3% with an upward trend in 2019.

The pandemic has negatively affected the economy of North Macedonia, where the stable trend of continuous economic growth is clearly visible from 2019 with a significant increase of 6% in the second quarter of 2019. At the beginning of 2020, that is, in the first quarter, a period that coincides with the beginning of the global pandemic, the effect of slowing down economic growth is noticeable, in other words, the economy is already starting to enter recession. The biggest recession and the biggest impact of the pandemic due to the increase in the number of infected globally and nationally, the closing of borders, the reduction of aggregate demand and supply, the quarantines proposed by the government happened in the second quarter of 2020 where the recession recorded a negative double-digit number, i.e. -16.4%. This drastic reduction comes as a result of the reduction of the Gross Domestic Product at the beginning of the year, that is, from 159,090 million denars in the first quarter to 141,610 million denars in the second quarter of 2020 (Xhaferi & Mehmedi, 2022) .

In the period after recovery from the pandemic and the consequences of Covid-19, economic growth is on the upswing, that is, we have an increase in GDP by 25.59% in the period from the first quarter of 2020 to the fourth quarter of 2023 (see table 1.) This is based on the increase in all categories that make up the GDP, and mostly as a result of the increase in the export of goods and services by 58.25%, mostly due to the liberating post-Covid-19 measures for the passage of goods and services across borders.

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Table 1: GDP according to the cost method, period 2019-2023[1]

	current prices (million denars)				
	2019	**2020**	**2021**	**2022**	**2023**
Gross domestic product	692683	669280	729445	803141	840611
Final consumption	550683	554036	609909	681749	753662
Final household consumption, including NPISD	453726	442006	494433	558404	612556
Final public consumption	96958	112029	115476	123345	141106
Gross investments	237314	200232	235033	289312	200530
Export of goods and services	432290	386653	477377	593990	611913
Import of goods and services	527604	471640	592875	761912	725494

The balance of payments

According to the Balance of Payments Manual (1996), the balance of payments is a statistical report that systematically summarizes the economic transactions of an economy with the rest of the world for a certain period of time. Transactions, which mainly take place between residents and non-residents, include transactions in goods, services and income; those involving financial assets and liabilities to the rest of the world and gifts classified as transfers. The balance of payments deals with transactions and is more concerned with flows than goods. So, the balance of payments deals with economic events that occur over a period of time and does not deal with the value of economic assets and liabilities that exist at a particular point in time.
The standard components of the balance of payments are grouped into two main accounts: the current account, the capital and financial account. The current account is further divided into three broad categories: trade balance of goods, balance of services and balance of current transfers. The capital and financial account includes: capital transfers, direct investments, portfolio investments and official reserve funds.

The balance of payments of R.N.M

According to the table below, the balance of payments of RNM is in a downward trend, that is, we see that the current account is going downward, that is, we have increased imports over exports. In 2023 we have upward trend, thus the current and the financial account are positive, which means we have more inflow than we have outflow in the current account. Also, within the framework of the financial account, we have an increase of portfolio investments and other investments including foreign exchange reserves.

Table 2: The balance of payments of R.N.M

	million US dollars				
	2019	**2020**	**2021**	**2022**	**2023**
1. Current account	-376.49	-360.44	-374.85	-864.78	99.23
1.a. Inflow	10136.11	9188.66	11929.08	13048.79	14063.09
1.b. Outflow	10512.60	9549.10	12303.93	13913.57	13963.86
2. Capital account	9.11	13.07	8.40	0.04	-1.68

[1] State Statistical Office, Mak stat baza, Gross Domestic Product, Annual data

2. a. Inflow	11.80	13.16	9.50	3.87	1.23
2.b. Outflow	2.69	0.09	1.10	3.83	2.91
3. Financial account	-282.43	-352.07	-297.97	-817.99	170.90
3.1. Direct investments	-403.97	-172.91	-453.23	-683.83	-565.53
3.1.a. Net assets	145.53	-165.22	243.03	170.33	136.96
3.1.b. Net liabilities	549.50	7.69	696.26	854.15	702.49
3.2. Portfolio investments	168.92	-296.55	-143.99	-31.07	58.23
3.4. Other investments	-462.49	1.06	-67.29	-307.99	37.71
3.5. Foreign exchange reserves	415.10	116.34	366.54	204.89	640.49

The relationship between the balance of payments, inflation and the exchange rate

According to Ahmad et al., (2014) who used different methods to assess the relationship between two variables, i.e. the exchange rate and the balance of payments, the results show a significant and positive relationship. It came to the conclusion that the exchange rate is statistically significant and has a positive effect on the balance of payments, and with the corresponding result they accepted the hypothesis that there is a significant correlation between the exchange rate and the balance of payments.

In his study, Sinaga (2022) concluded through the research results that inflation, interest rates and trade balance affect economic growth by increasing the balance of payments, where these three macroeconomic indicators can stimulate economic growth. In this section, it can be stated that these variables indirectly influenced economic growth and directly influenced the balance of payments, which is the subject of our research.

Kabirdoss et al. (2014) conducted an analysis of the correlation between inflation and the trade balance, as a key element of the balance of payments. The analysis was started by taking the inflation rate for the last 10 years, starting from 2004 to 2014 with monthly data, and then the export and import data and trade balances were also taken to find the correlation. The empirical study found that when domestic prices rise faster than prices in foreign countries, exports tend to lag behind imports. The exchange rate also tends to depreciate due to both the decline in the purchasing power of the country's currency and the unfavorable balance of payments.

METHODOLOGY

The data from this research were taken from the official website of the National Bank of the Republic of North Macedonia and the State Statistical Office. Secondary data and time series data have been used in this research. Time series and data for the period 2013 - 2023, annual data are presented. The processed data and the results were made using the Microsoft Excel computer program. Exchange rate, inflation rate and net exports are the variables that will be used in this study where exchange rate and inflation rate are presented as independent variable and net export is used as dependent variable. In this research, the econometric model of linear regression was used, which aims to study the relationship between the dependent and independent variables, as well as the effect of the independent variables on the dependent variable.

The model can be expressed as a function:

NX= f(EXC,INF)

By means of regression analysis we can explain the connection and influence of the independent variables on the dependent variable .

$$NX = \beta 0 + \beta 1 EXC + \beta 2 INF + \varepsilon$$

Data analysis and results

Table 3. Descriptive statistics

	Net export		***Inflation rate***		***Exchange rate***
Mean	-1893.01	Mean	3.045455	Mean	53.41182
Standard Error	116.0678	Standard Error	1.648876	Standard Error	1.185005
Median	-1805.08	Median	1.4	Median	54.65
Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	384.9533	Standard Deviation	5.468704	Standard Deviation	3.930218
Sample Variance	148189.1	Sample Variance	29.90673	Sample Variance	15.44662
Kurtosis	4.141914	Kurtosis	8.245988	Kurtosis	0.227791
Skewness	-1.86462	Skewness	2.757359	Skewness	-0.96147
Range	1299.5	Range	19.2	Range	12.2
Minimum	-2882.03	Minimum	-0.5	Minimum	46.4
Maximum	-1582.53	Maximum	18.7	Maximum	58.6
Sum	-20823.1	Sum	33.5	Sum	587.53
Count	11	Count	11	Count	11

Analyzing the data for the Skewness statistic, the result of the description of the variable implies that Net Export and Exchange Rates is symmetrical, therefore s is negatively skewed and the remaining variable - the inflation rate is not symmetrical because the value is greater than zero, it is positively skewed because the majority of the corresponding observations are higher than their average values.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.927125
R Square	0.859561
Adjusted R Square	0.824451
Standard Error	161.2897
Observations	11

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	1273776	636887.9	24.48215	0.000389
Residual	8	208115	26014.38		
Total	10	1481891			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*
Intercept	-3283.52	769.8001	-4.26542	0.002741	-5058.69
Inflation rate	-72.4396	10.53053	-6.87901	0.000127	-96.7231
Exchange rate	30.16427	14.65271	2.058614	0.073518	-3.62494

ISSN 2661-2666 (Online) International Scientific Journal Monte (ISJM)
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RESIDUAL OUTPUT

Observation	*Predicted Net export*	*Residuals*
1	-1985.32	8.887522
2	-1846.48	-116.584
3	-1580.43	-50.7987
4	-1589.19	-41.772
5	-1808.9	220.5319
6	-1776.56	164.2981
7	-1654.97	-150.107
8	-1817.34	234.8134
9	-2066.62	-87.2317
10	-2870.52	-11.5107
11	-1826.75	-170.527

Taking into account the above written results, the linear regression model is as follows:

$$NX = -3283.52 + 30.16427EXC - 72{,}4396INF + 161.2897$$

DISCUSIONS

Statistically, if p-value < 0.05 then the independent variable is of significant importance, if p-value > 0.05 then the variable is not of significant importance. Consequently:
The independent variable exchange rate hasn't statistical significance on the value of net exports because the p-value is greater than 0.05 (0.073> 0.05).
The independent variable inflation rate has statistical significance on the value of net exports because the p-value is less than 0.05 (0.000 < 0.05).
The independent variable Exchange rate shows the positive relationship (positive effect) on the dependent variable Net export. The value of the regression coefficient 30.16427 shows us that with the increase of the exchange rate by 1 denar, the Net export will increase by 30.16427 million dollars on average, if the other factors remain unchanged.
The independent variable Inflation Rate shows the negative relationship (negative effect) on the dependent variable Net Export. The value of the regression coefficient -72.4396 shows us that with an increase in the inflation rate by 1 percent, Net exports will decrease by 72.4396 million dollars on average, if other factors remain unchanged.
Noting that the coefficient of determination r^2 is 0.859561, this explains to us that about 85.95 % of the variation of the dependent variable (Net export) is explained by the independent variables included in the model, while only 14.05% of the variation is explained by other variables that are not included in a model.
In observations 1,5,6 and 8 the residual is positive, which means that the estimated regression line overestimates the true values of γ, while in observations 2,3,4,7,9 and 10 the residual is negative, which means that the estimated regression line underestimates the true values of γ.
The F-statistic test is used to determine the relationship between independent variables that jointly affect the dependent variable. The results obtained from our research have a significant value of 0.0003 < 0.05 which shows the significant

importance that the variables Exchange rate and Inflation rate convincingly and proven influence on the Net export of RNM. In this case the model is significant in explaining the variation of the dependent variable Net export.

CONCLUSIONS

Through this study we came to the following conclusions:

- Economic growth as an important indicator for the entire national economy, although it was at a stable level, during the Covid-19 pandemic, the situation took a turn, where the economy as a whole went into recession. In the post-Covid-19 period, we have an improvement and recovery of the national economy.
- The balance of payments, that is, the subject of our analysis, exports, was always in deficit, that is, imports exceeded exports. During the pandemic this deficit deepened, but in a short time after the pandemic we have the increase in the export of goods and services mainly due to the liberating post-Covid-19 measures for the passage of goods and services across the borders.
- With an increase in the USD/MKD exchange rate (decrease in the value of the domestic currency), we have an increase in net exports, because our products are cheaper to export abroad, and thus exports are stimulated, reducing imports.
- With an increase in the inflation rate, mostly due to global economic factors, we have a decrease in net exports, mainly due to an increase in imports and a decrease in exports with an upward trend in 2023.

Analyzing the paper, we see that the national economy is on a safe path to development only if there is continuous economic growth, GDP growth and the best possible state of the balance of payments. Foreign trade policies should be a function of growth in export before growth in import. With this, the net export should be as high as possible, so the gross domestic product will be high, and the rate of economic growth will be on the rise. Monetary policies should serve to regulate the value of the national currency, in order to increase the competitive power of the country on international markets through foreign trade. Fiscal policies should also aim to stabilize the inflation rate, by intervening in the level of interest rates or withdrawing money from circulation.

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Xhaferi, S. & Mehmedi, V. (2022). Impact of the COVID-19 Pandemic on the Economy of North Macedonia. *International Scientific Journal Monte, 6(2),* 159-169 https://doi.org/10.33807/monte.20222580