

THE IMPACT OF PEACE ON THE ECONOMIC PERFORMANCE – AN EMPIRICAL STUDY

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مستخلص:

تبحث هذه الدراسة في أثر السلم العالمي على الأداء الاقتصادي في مجموعتين من الدول، أولهما الدول التي تتمتع بقدر مرتفع من السلم والأخرى هي الدول التي تعاني من تدهور السلم العالمي، حيث تهدف الدراسة إلى تحديد أثر السلم العالمي على معدل النمو الاقتصادي وتدفقات الاستثمار الأجنبي المباشر ومعدل التضخم في الفترة بين ٢٠٠٨ و٢٠٢١ في مجموعتي الدول محل الدراسة، وذلك من خلال عرض الإسهامات الفكرية والنظرية التي تناولت الحرب والعنف والنزاع على الأداء الاقتصادي من جهة، والإسهامات التي تناولت أثر السلم على الأداء الاقتصادي من جهة أخرى وذلك باستخدام التحليل متعدد المتغيرات Multivariate Analysis والذي يقيس أثر متغير مستقل على مجموعة من المتغيرات التابعة من خلال نموذج (MANOVA)

حيث توصلت الدراسة إلى أن السلم والأمن يؤثران بشكل مباشر وبشكل غير مباشر على الأداء الاقتصادي للدول، حيث أظهرت نتائج الدراسة الأثر المعنوي لمؤشر السلم العالمي

على كل من التضخم وتدفقات الاستثمار الأجنبي المباشر مع عدم تأثيره على معدلات النمو الإسمية، مع التأكيد على أهمية مؤشر السلم العالمي كمتغير أساسي يجب تضمينه في نظريات التنمية الاقتصادية المختلفة مستقبلاً.

Abstract

This study examines the impact of global peace on economic performance in two groups of countries, the first of which are countries that enjoy a high degree of peace, and the other are countries that suffer from a deterioration in global peace.

The study aims to determine the impact of peace on the economic growth rate, foreign direct investment inflows and the inflation rate between 2008-2021 in the two groups of countries, by presenting the intellectual and theoretical contributions that dealt with war, violence and conflicts on economic performance on the one hand, and the contributions that dealt with the impact of peace on economic performance, on the other hand, by using the multivariate analysis (MANOVA model), which measures the impact of an independent variable on a group of dependent variables.

The study concluded that peace affects the economic performance of the countries, as the results showed the significant impact of the global peace index on both inflation and foreign direct investment inflows, with insignificant effect on nominal economic growth rates, with an emphasis on the importance of the global peace index

as an important variable that must be included in the economic development theories and studies in the future.

Keywords: Global peace index, Economic performance, Middle east, Developing countries.

JEL: H12, H56, O11, P11, P47.

1. Introduction

The economy of any country does not operate in isolation from the situation regarding the stability and security of that country, and its position regarding the global and regional political and military events, as matters related to peace and war have been of great importance in the economies of countries throughout history. For example, in the middle east region which always falls in successive cases of political and military instability, especially in the 21st century, as a result of civil wars, revolutions, and direct and indirect military and political confrontations between countries, such as Saudi Arabia, Iran, and the war in Yemen and Syria, in a way that pushes those countries to increase their military spending at a time when they are suffering from the high burdens of government spending, in addition to the impact of these problems on tourism and attracting of FDI in these countries. However, the stability of the political and societal regime and the state's enjoyment of a high degree of peace and security

may turn all the previous negative effects into positive effects in terms of the state's ability to develop medium and long-term development strategies with its ability to smoothly attract FDI depending on the stable and promising investment climate within the state.

In addition, the deteriorating conditions due to the lack of security and peace push the citizens of countries to migrate to other countries, whether legally or illegally, which represents a burden on countries hosting migrants or refugees and pressures on their public finances and societal stability, which highlights the importance of studying the impact of global security and peace. On the economic performance of different countries, whether those that enjoy high rates of peace and security or countries that suffer from low rates of both variables.

Thus, the aim of the study is to determine the impact of peace on the economic performance of two group of countries. The first one consists of countries (Iraq - Iran - Afghanistan - Mali - Lebanon - Colombia - Pakistan - Sudan), which are characterized by low levels of peace and security. And the second group of countries (Japan - Germany - Sweden - Denmark - France - Portugal - UAE), which are countries characterized by high levels of peace and security, so that the impact of global peace will be measured through the global

peace index on some economic variables within the countries under study, such as inflation and economic growth rate and FDI inflows.

2. Related literature & previous studies

The country's situation regarding war and peace greatly affects its economy, as the weakness of the economies of many countries specially in the Middle East, is due to civil wars and problems with neighboring countries, as some studies have concluded that the economic growth rates of countries that fall prey to For civil wars, decreases by 2.2% compared to the same rates in times of peace, and as a result, the income level of citizens after seven years of war will be lower by 15%, which naturally means an increase in poverty rates by up to 30%. (Collier, 2006)

The study of (Collier & Hoeffler, 2004) concluded that the outbreak of war within a country for a period of five years may lead to a decrease in the growth rate by 2% annually, with an increase in the infant mortality rate by more than 2% annually, and the study of (Stewart, Huang, & Wang, 2001) studies the impact of wars on a group of countries and concluded that in a sample of 14 countries that suffered from wars, the per capita GNP decreased by about 3.3%, and food

production decreased in 13 countries, and the ratio of external debt to GDP increased in all countries.

These results, which may seem logical, especially in countries suffering from wars, may represent the reality experienced by the countries of the Middle East and North Africa and any region that suffers from destabilizing peace and security, as when calculating the costs of the civil war in Syria in the first four years only of its outbreak and the effects of that war on Syria's neighboring countries, such as Egypt, Turkey, Lebanon, Jordan and Iraq, have reached about \$35 billion at 2007 prices, which represents the same value of Syria's GDP in 2007. (Devarajan & Mottaghi. 2016)

All these effects could have been avoided if those wars had been controlled and their outbreak prevented in a way that reflects all the negative effects into positive ones, confirming the great importance of the rule of global peace and security and their economic effects on all countries of the world, not just the countries that suffer from wars and conflicts.

There have been many literature and theoretical contributions that linked the rule of peace and its impact on economic activity or vice versa by analyzing the impact of economic variables on the global peace, where the Capitalist peace theory or commercial peace emerged, which assumed that the openness of markets contributes reaching a peaceful

behavior among countries, and that the developed countries that are more open to global markets are less likely to get involved in a military conflicts with other countries, and this idea is not recent, as it was mentioned by the philosopher Kant in his treatise on achieving permanent peace in 1795, where Kant claimed that Trade peace along with strong international organizations and the existence of democratic regimes are the three sides of the triangle of permanent peace (Russett, Oneal, & Davis. 1998). Several applied studies have tried to test the theory of commercial peace and the ideas inherent in the theory, but most of them concluded that the relationship Between economic interdependence between countries as a result of trade integration on the one hand, and conflicts and wars on the other hand, is an unresolved relationship (Gartzke & Zhang, 2015).

Another theory emerged that concerned with the link between economic relations and the global peace formulated by the British economist and politician Richard Cobden, who claimed that through free trade and the removal of tariffs and trade restrictions, wars would become theoretically impossible, as free trade and specialization prevent any country from achieving self-sufficiency. Which is the basic requirement for the steadfastness of countries during wars, but his ideas were quickly refuted after the outbreak of World

War I, and Britain and Germany were able to achieve self-sufficiency during the war, albeit in a relative way. (Daunton, 2007)

Among the significant contributions also in the field of linking peace with economic performance is the Economic Norms Theory pioneered by Michael Mousseau, which assumed that the availability of a competitive and fair economic environment characterized by equal opportunities could lead to an increase in the volume of public benefits and the prevalence of peace within the country and between countries, and in this regard, the theory called on the developed rich countries to exert more efforts towards creating more economic opportunities in the developing countries, which will eventually lead to the rule of a lasting world peace, as Mousseau assumed that in the free market economy where countries depend on each other, war cannot occur, because war is always associated with harming at least one party or side, and in such economies, optimization is achieved when everyone is in a better position because international trade is not a zero-sum game, in the sense that achieving gains For a country in the international markets, this does not necessarily mean that this matter is at the expense of another country, as everyone can achieve

immediate gains, and therefore it is not in the interest of anyone to have wars. (Mousseau. M, 2009)

As for socialist thought, it did not delve deeply into analyzing the impact of peace on economic performance or the impact of economic performance on achieving world peace. Rather, the dialectical materialism theory of Karl Marx and Frederick Engels was limited to identifying ways to reach this peace, which cannot be reached at all under the rule of a capitalist system, as the capitalist economy consists of two basic classes: the proletariat class, which does not have any means of production other than selling its physical or intellectual effort, and the bourgeoisie class that owns all the factors of production, And as soon as the revolution against this class arises globally, private ownership of the factors of production will be abolished, and thus humanity will not be divided again, and the tension between countries will immediately stop. (Trotsky. L, 1914)

During World War II, some claims emerged that supported the abolition of wars and the call for the world peace, such as the Mutual Assured Destruction theory, which emerged as a military doctrine in the first place stating that the use of nuclear weapons between two warring parties will lead to the annihilation of both parties, and therefore no party can achieve net gains from this war. Which make this war

useless, and although the theory emerged as a military doctrine and discussed in circles of politics and national security, it derived its basic idea from the Nash Equilibrium, so that one party cannot move and achieve gains without the other party changing its strategy, which means that the current situation is based on not using nuclear weapons are the ideal situation for all parties, and accordingly the situation without war is much better than the situation with wars. (Col. Parrington A. J., 1997)

Some applied studies dealt with the impact of peace on economic performance represented in the GDP growth rate, such as the study of (Santhirasegaram, S. 2008) which measured the Impact of peace on the GDP growth rate in 70 developing countries from 2000 to 2004, the study concluded that the variables of peace such as durability of Political regimes and the social capacity to build peace and conflicts with neighboring countries play a greater role in influencing economic growth rates than the traditional variables related to growth such as employment, technology, the free market and capital formation. The study also found that the availability of a peaceful environment positively affects the physical and human capital accumulation more than the other relevant economic indicators, the study also concluded that economic development in developing countries is a result of

social and political stability, not economic stability, so that developing countries must prepare the political and social environment first and then rely on unchanging economic leaders in the medium term, even if countries are forced to suppress democracy in the short term, as did the countries of Singapore, Taiwan, South Korea and China in order to accelerate growth and development, where the researcher claimed here that Plato's restricted democracy is the solution to achieving growth in developing countries, instead of liberal democracy that cannot be applied in developing countries.

As for the contributions that dealt with the measurement of peace rates, the most prominent of them is the contribution of the Institute for Economics and Peace, which issued the Global Peace Index, so that this index is considered one of the most important, reliable and indicators in measuring global peace, as the index covers 99.7% of the global population through the use of 23 quantitative and qualitative indicators under three basic variables: the societal safety and security, the ongoing domestic & international conflict, and the degree of militarization of the country. (Institute for Economics and Peace, 2022)

This index was developed by an international committee of peace experts from international peace institutes, research

centers and think tanks, where the index was issued for the first time in 2009, and the number of countries included in the index was increased to 167 countries in 2022, and in 2022 the countries of Iceland, New Zealand, Ireland, Denmark and Austria came as the most peaceful and secure countries, while the countries of Afghanistan, Yemen, Syria, Russia and South Sudan came as the least peaceful and safe countries (Institute for Economics & Peace, 2022).

To measure the global peace index, 23 variables are collected to determine the degree of peace in each country, where these 23 indicators are subject to an annual review, where the qualitative indicators are divided into five groups, while the degree of the quantitative indicators is recorded between (1) which is the highest peace, to (5) which is the lowest peace. (Institute for Economics and Peace, 2013) These twenty-three variables fall within three main indicators: the extent of the state's involvement in local or international conflicts, security and societal peace within the state, and the extent of the state's armaments. The variables can be seen in the following table:

Table 1: *Indicators measuring the global peace index and the relative weight of each in the overall index.*

Ongoing domestic & international conflict	Societal safety and security	Militarization
Number and duration of internal conflicts (3.2%)	Level of perceived criminality in society (3.8%)	Military expenditure as a percentage of GDP (2.8%)
Number of deaths from external organized conflict (7.1%)	Number of refugees and internally displaced people as a percentage of the population (5.7%)	Number of armed services personnel per 100,000 people (2.8%)
Number of deaths from internal organized conflict (6.3%)	Political instability (5%)	Volume of transfers of major conventional weapons as recipient (imports) per 100,000 people (2.5%)
Number, duration, and role in external conflicts (3.2%)	Political Terror Scale (5%)	Volume of transfers of major conventional weapons as supplier

		(exports) per 100,000 people (4.2%)
Intensity of organized internal conflict (6.3%)	Impact of terrorism (2.5%)	Financial contribution to UN peacekeeping missions (2.8%)
Relations with neighboring countries (7.1%)	Number of homicides per 100,000 people (5%)	Nuclear and heavy weapons capabilities (4.2%)
	Level of violent crime (5%)	
	Violent demonstrations (3.8%)	
	Number of jailed populations per 100,000 people (3.8%)	
	Number of internal security officers and police per 100,000 people (3.8%)	

	Ease of access to small arms and light weapons (3.8%)	
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Source: Institute for Economics and Peace. "Global Peace Index 2021".

Note: From the previous table we notice that the Global Peace Index is based on three main pillars. The first is concerned with the extent of the country's involvement in ongoing internal and external conflicts, based on six statistical indicators to verify the extent of the country's involvement and participation in this type of conflicts. The second is concerned with the extent of internal harmony and cohesion in the country through eleven indicators to assess societal peace and security, while the third is concerned with the extent of militarization and arming of the country in a manner that reflects the relationship between the level of military mobilization, the extent of access to weapons and the level of peace in the country, and the variables related to internal peace, which consists of (14) variables, have a weight of 60% in the global peace index, while the weight of the (9) external peace variables is 40%.

In addition to classifying countries according to the global peace index, the Institute of Economics and Peace classifies countries according to each of the three main indicators, so that the country's achievement of a high rate of peace with regard to local and international conflicts does not mean in any way that its achievements in the societal peace and security index or in the militarization of the state will be

similar, as the state may achieve lower results in the other two indicators, for 2022, countries like Mauritius, Bulgaria and Botswana were the most peaceful in the indicator of ongoing domestic and international conflict domain, while countries like Russia, Yemen And Syria were the least peaceful countries in the same indicator.

While in 2022 for the indicator of societal safety and security, countries like Iceland, Norway, and Japan were the most peaceful countries, while countries like Yemen, Venezuela, and Afghanistan were the least peaceful countries.

While in 2022 for the indicator of Militarization, countries like Iceland, Slovenia, and New Zealand were the most peaceful countries, while countries like North Korea, Russia and Israel were the least peaceful countries.

However, the most peaceful countries in terms of the overall Global Peace Index for the year 2022 were Iceland, New Zealand, and Ireland. While the least countries were Syria, Yemen, and Afghanistan.

These peace related variables are reflected in the economic performance of all countries of the world, as the economic performance of any country is affected by the extent to which the country enjoys high levels of peace and security, as the economic costs of violence increase in countries that do not

enjoy high levels of peace and security, as it could be noticed from the next table.

Table 2: *Economic costs of violence (%GDP) in 2021.*

	country	Economic cost of violence (millions US \$ 2021 PPP)	Per capita impact (2021, US\$ PPP)	Economic cost of violence as percentage of GDP	Country's rank in GPI 2022 out of 163
Countries with highest economic cost	Syria	19211	1200.8	80	161
	South Sudan	1467	113.5	41	159
	Central African rep.	1897	451.3	37	155
	Somalia	5049	402.1	33	156
	Afghanistan	24221	878.5	30	163
	Indonesia	82991	574.5	2	47

Countries with lowest economic cost	Ireland	12416	3896.6	2	3
	Switzerland	14652	2748.4	2	11
	Kosovo	167	196.3	2	71
	Iceland	451	1633.1	2	1

Source: Institute for Economics and Peace. "Global Peace Index 2022".

Note: The previous table contains the total (direct and indirect) economic costs of violence, as the economic cost of violence was about 16.5 trillion US dollars in 2021, which represents about 10.9% of the global GDP, an increase of 12.4%, or 1.8 USD trillion dollars is an additional cost over the year 2020, as most of that increase was concentrated in the increase in military expenditures globally, due to the increase in the economic cost of armed conflicts by 27% to reach 559.3 billion dollars. As the average cost of violence and insecurity reached about 35% of the GDP of the 10 least peaceful countries, compared to only 3.6% for the ten most peaceful and least violent countries for the same year.

The economic cost of violence can be defined as “the expenses, costs, and economic effects related to preventing, containing, and treating the consequences of violence, whether those costs are direct or indirect, so that the economic value of peace becomes the opposite concept of

the economic costs of violence, that is, the increase in the impacts of violence is equivalent to the decrease in the benefits resulting from the prevalence of peace. (Institute for Economics & Peace, 2022)

The direct cost of violence, and the lack of security and peace is represented in the losses incurred by the victims, the criminals, and the government itself because of the violence, which includes medical costs, the costs of the police and security forces, and the costs of prisons and correctional facilities. As for the indirect costs, they are related to the accumulated costs because of violence, represented in the decrease in productivity as a result of psychological and physical trauma, and the decrease in the volume of investments due to the inappropriate investment climate in an environment marred by violence. There is also another type of economic cost represented in the multiplier effect, which calculates the lost economic benefits as a result of spending resources on violence, as every dollar spent on violence, whether to prevent it, contain it, or treat its effects, represents a dollar that would have been spent on economic or social development in this country. Thus, the Institute of Economics and Peace calculates the value of the multiplier equal to (1), which is a somewhat conservative value, but is generally in line with previous applied studies.

The Institute for Economics and Peace estimates the economic costs of violence using 18 sub-indicators branching from three main indicators: violence containment, armed conflicts, and interpersonal and self-inflicted violence. In addition, the economic costs of violence are measured using fixed prices, which means that any increase in the value of the economic costs of violence is a real increase, not inflation. (Ibid, p43)

The economic cost of violence varies between countries and regions in terms of value and in terms of the cost pattern itself. In some countries or regions, the highest share of costs comes from military spending, while in other regions and regions, the highest share of costs comes from crime and armed conflict. As for the year 2021, regions such as the Middle East and North Africa (MENA), showed an increase in the economic cost of violence by about 1796 USD billion dollars, an increase of 31.7% over 2020, while the economic cost of violence in Russia and Eurasia increased by about 29.3% over 2020, reaching 1277 USD billion dollars. Although North America had the highest economic cost of violence of all was the share, with a value of 4337 USD billion dollars, the rate of increase in 2021 compared to 2020 amounted to only 7.6%, as most of that cost is due to the huge military spending of the United States of America. (Ibid, 52)

Those costs, which represent a huge burden on countries' economies, especially developing countries, could have been directed to development instead of being spent directly or indirectly on containing or preventing violence, as a number of studies showed that the improvement of the Positive Peace Index, which is linked to achieving progress in the indicators In terms of raising the average per capita income, improving environmental performance and economic stability through stabilizing the inflation rate and comprehensive transparent governance, it is mainly related to reducing the cost of violence and wars and improving the global peace index, as the countries in which the global peace index improved between 2009 and 2020 recorded an average per capita GDP growth rate 2.7% higher than the countries in where the global peace index deteriorated. And inflation was three times less in those countries than the countries in which the global peace index deteriorated, with household consumption growing twice as fast, in addition to the increase in FDI by 5.2%, compared to 2.6% in countries where the global peace index deteriorated for the same period. (Ibid, 69)

Those indicators that illustrate the large gap between the group of the most peaceful countries and the group of countries that do not enjoy high rates of peace are greatly

reflected in the gap between the economic indicators between those two groups of countries in a way that makes it difficult for the economic development process to move forward in most countries that suffer from issues of violence, security and conflict, So that the determinants of well-known economic indicators such as inflation, growth, and attracting FDI do not work in isolation from the indicators of violence or peace, which have become one of the most important determinants of sustainable and inclusive economic development.

3. Empirical methodology and data

One-way MANOVA was used to determine whether there was an impact of the Global Peace Index as an independent variable on the dependent variables of inflation, the economic growth rate, and FDI Inflows in two groups of countries from 2008 to 2021, one of them is the high-peace countries (Japan - Germany - Sweden - Denmark - France - Portugal - UAE), and the other is the low-peace countries (Iraq - Iran - Afghanistan - Mali - Lebanon - Colombia - Pakistan - Sudan).

First: Before starting the implementation of the model, a set of parametric tests were conducted on the data to ensure its readiness to apply the model:

A- There are no multivariate outliers.

We can check for multivariate outliers using a test called Cook's test. Where the maximum allowable value is 4.715, whereas the corresponding Critical value of chi-square is 7.815, which is greater than the maximum Cook's distance value. So, we can conduct that there are no outliers in the data.

B- There is multivariate normality.

We can test this assumption by looking for the normality of each of the dependent variables. it can be tested using the Kolmogorov-Smirnov or the Shapiro-Wilk test of normality, as follows.

Table 3: *Tests of Normality*

	Kolmogorov-Smirnova		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
Inflation	.114	.176	.970	.289
Economic Growth Rate	.097	.200	.951	.654
FDI Net Inflows	.075	.200	.980	.623

Note: *the results showed that the P-Value (Sig.) is greater than 0.05 thus we can say that the data of dependent variables follow the normal distribution.*

C- There is homogeneity of variance-covariance matrices.

You can test this assumption using Levene's test of homogeneity of variance to determine where the problem may lie.

Table 4: *Levene's Test of homogeneity of Variances*

dependent variables	Levene Statistic	Sig.
Inflation	2.647	.087
Economic Growth Rate	.344	.712
FDI Net Inflows	.463	.643

Note: *the results showed that the P-Value (Sig.) is greater than 0.05 thus we can say that the data of dependent variables have constant variance.*

Second: descriptive statistics

Table 5: *Descriptive statistics.*

	Global Peace Index	Mean	Std. Deviation	N
Inflation	High (low peace)	14.4043	39.98488	112
	Low (high peace)	1.3237	1.69591	98
Economic Growth Rate	High (low peace)	2.2093	5.63744	112
	Low (high peace)	1.2065	3.10786	98
FDI Net Inflows	High (low peace)	4477727242	9147956644	112

	Low (high peace)	26308134675	33666761230	98
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Note: From the previous table we find that the group of high peace countries achieved an inflation rate of about 1.323% on average, with a standard deviation of 1.7%, while the low peace countries achieved an inflation rate of about 14.4% on average, with a standard deviation of 40%, regarding the economic growth rate. High-peace countries achieved an average of 1.2%, with a standard deviation of 3.1%, while low-peace countries achieved an average of 2.2%, with a standard deviation of 5.6%, although the average growth rate in low-peace countries was higher than the average growth rate in the high-peace countries, but the group of high-peace countries has a nominal value of GDP that exceeds by a large percentage that of the low-peace countries, and this growth in the low-peace countries is eroded by high inflation and has fluctuations much greater than that of the group of high-peace countries. For foreign direct investment inflows, the average for low-peace countries was about \$4.47 billion, with a standard deviation of \$9.147 billion, while in high-peace countries the average came to \$26.3 billion, with a standard deviation of \$33.6 billion, explaining the large gap in attracting foreign investments between the two groups of countries under study.

Tests were also conducted on the independent variable represented by the global peace index on the two groups of countries to ensure that there is a differences between the values of the independent variable in the two groups using the T-test as follows:

Table 6: *Independent samples test.*

		Mean	Std. Deviation	t	Sig. (2-tailed)
Global peace index	High (low peace)	2.7038	0.57108	18.234	0.000
	Low (high peace)	1.5197	0.20365		

Note: We find that $Sig = 0.000 < 0.05$, which is mean that there is statistically significant difference in means of Global Peace Index between high and low peace countries, with a confidence level of 95%.

Third: One way (MANOVA) Model.

the MANOVA model is:

$$x_{ij} = \mu + \tau_i + e_{ij} \quad (1)$$

Where:

- e_{ij} independent random errors that follow multivariate normal distribution
- μ is an overall mean.
- τ_i the i^{th} treatment effect.

And the multivariate tests came as follow:

Table 7: *Multivariate tests.*

	Effect	Value	F	Sig.
	Pillai's Trace	0.223	19.697 ^b	.000

Global Peace Index	Wilks' Lambda	0.777	19.697 ^b	.000
	Hotelling's Trace	0.287	19.697 ^b	.000
	Roy's Largest Root	0.287	19.697 ^b	.000

Note: *This table contains the results of four different tests to test the total significance of the degree of Global Peace Index on the differences in the dependent variables, we find that $p\text{-value} = 0.000 < 0.05$, and that's mean that the degree of Global Peace Index has a significant effect on the differences in at least one of the dependent variables (Inflation, Economic Growth Rate and FDI Net Inflows) with a confidence level of 95 %.*

A set of tests were conducted that show the statistically significant differences between the levels of the independent variable (the global peace index) on each of the three dependent variables in the two groups of countries under as follows:

- Inflation rate:

Table 8: *Inflation rate analysis:*

S. o. v	SS	df	MS	F	Sig.
Groups	8623.476	1	8623.476	8.964	0.003
Error	200087.58	208	961.96		
total	208711.06	209			

Note: We find that $Sig = 0.003 < 0.05$, and therefore we can say that is, the degree of the categorical independent variable has a significant effect on the average Inflation, with a confidence level of 95%.

- Economic growth rate:

Table 9: Economic growth rate analysis:

S. o. v	SS	df	MS	F	Sig.
Groups	50.681	1	50.681	2.208	0.139
Error	4774.27	208	22.953		
Total	4824.952	209			

Note: We find that $Sig = 0.139 > 0.05$, and therefore we can say that is the degree of the categorical independent variable has no significant effect on the average Economic Growth Rate, with a confidence level of 95%.

- FDI inflows:

Table 10: Foreign direct investment inflows analysis:

S. o. v	SS	df	MS	F	Sig.
Groups	2.402E+22	1	2.402E+22	47.791	0.000
Error	1.045E+23	208	5.026E+20		
total	1.286E+23	209			

Note: We find that $Sig = 0.000 < 0.05$, and therefore we can say that is, the degree of the categorical independent variable has a significant effect on the average FDI Net Inflows, with a confidence level of 95%.

Accordingly, we find that there is a difference between the two groups of countries with low and high peace rates with regard to inflation and net foreign direct investment flows, while there are no differences between those countries with regard to the economic growth rate, which is somewhat Commensurate with the economic conditions of those countries as the rates of Growth in developing countries (all countries in the group of low peace countries are developing countries) may be high, but it does not represent a significant value in the GDP itself because this GDP is low compared to developed countries that enjoy political, security and economic stability, and in which the economic growth rate represents, albeit low. A greater value for the rise in the value of the GDP, and the economic growth rate in low peace developing countries may be eroded due to high inflation, which means that the real growth rate is much less than the nominal growth rate and may sometimes reach negative values.

4. Conclusion

The study relied on a one-way multivariate analysis of variance (MANOVA) model to determine the impact of global peace as an independent variable on each of the inflation rate, economic growth rate, and foreign direct investment inflows as dependent variables on two groups of

countries, one of which is characterized by high rates of peace and security, and the other is characterized by low rates of peace and security. it indicated that there are significant differences in both inflation and foreign direct investment flows between countries that have high peace rates and countries that have deteriorating peace rates, while those differences between the two groups of countries were not clear with regard to the economic growth rate due to the nature of the economic growth rate itself and its lack of reliability in relying on it as an economic indicator for distinguishing between countries, which must be taken under consideration in future studies where it is possible to rely on the real economic growth rate instead, to reach more accurate results, and therefore it can be said that improving the rates of peace and security and improving the global peace index of the country is considered one of the most important determinants in stabilizing inflation rates and attracting more foreign direct investment inflows to the country, which generally reflects on economic development in the country.

Based on that, **the study recommends the following:**

- Improving the state's position regarding internal peace indicators, whose relative weight in the global peace index is about 60%, with a focus on indicators of security and societal peace, so that these indicators affect political,

social, and economic stability, which is greatly reflected in the investment climate within the country.

- Stabilizing the economic institutions and authorities specially in the developing countries and not make them vulnerable to rapid changes, at least in the medium term in a way that negatively affects the development strategies of those countries, with monitoring the results of their actions periodically and not rushing them to achieve quick positive improvements, while developing legislative means that guarantee accountability of these entities and agencies in a fair and impartial manner that prevents the officials of these economic institutions from being turned into shaky hands that don't taking decisions for fear of being held accountable or losing their positions.
- Launching an international financial fund or several regional funds among developing countries, especially among the countries of the Middle East, to address the effects of global economic and political fluctuations and work to restore economic stability in countries that may be affected as a result of internal conflicts such as Syria and Libya, or external or global conditions such as Covid-19 or the Russian-Ukrainian conflict, or the trade war between the USA and China in 2017.

- activate economic integration among the countries of the world through the international production fragmentation and the distribution of global value chains among a larger number of countries in a way that increases the dependence of the international economic system on all countries so that conflicts between the different parties become a loss for all as no country could be self-sufficient in that global Economic regime.

References:

- Collier, P. (2006) “Post-Conflict Economic Recovery”, A paper for the International Peace Academy, Oxford University, Department of Economics, Revised April.
- Collier, P. and Hoeffler, A. (2004) “Greed and Grievance in Civil War”, Oxford Economic Papers, Volume 56, Issue 4, 563-595.
- Stewart, F., Huang, C., and Wang, M. (2001) “Internal Wars in Developing Countries: An Empirical Overview of Economic and Social Consequences.” In F. Stewart and V. Fitzgerald, eds., War and Underdevelopment: Volume 1, The Economic and Social Consequences of Conflict: Oxford University Press, 67-103.
- Devarajan, S., Mottaghi, L. (2016). “The Economic Effects of War and Peace” Middle East and North Africa Quarterly Economic Brief, (January), World Bank, Washington, DC.
- Institute for Economics & peace, (2022), Global Peace Index 2022: measuring peace in a complex world, Sydney, June 2022. Available from: <http://visionofhumanity.org/resources>.
- Russett, B., Oneal, J. R. & David R. Davis. (1998). "The Third Leg of the Kantian Tripod for Peace: International Organizations and Militarized Disputes, 1950-85". *International Organization*. 52 (3): 441–467. doi:10.1162/002081898550626. ISSN 0020-8183. JSTOR 2601398. S2CID 153665709.
- Gartzke, E. & Zhang, J. J., (2015). "Trade and War". *The Oxford Handbook of the Political Economy of International Trade*.

doi:10.1093/oxfordhb/9780199981755.013.27. ISBN 978-0-19-998175-5. Archived from the original on 2016-05-21.

Daunton, M. (2007). "Britain and Globalisation since 1850: II. The Rise of Insular Capitalism, 1914–1939". *Transactions of the Royal Historical Society*, 17, pp. 1–33.

Mousseau, M., (2009). "The Social Market Roots of Democratic Peace", *International Security*, vol. 33, pp. 52–86.

Trotsky, L., (1914). "The war and the international: the Bolsheviks and the world peace". *Marxist writers' Internet Archive*, by David Walters in 1996.

Col. Alan J. Parrington. (1997). "Mutually Assured Destruction Revisited, Strategic Doctrine in Question", *Airpower Journal*, USA: Air Force.

Santhirasegaram, S., (2008). Peace and Economic Growth in Developing Countries: Pooled Data Cross -Country Empirical Study. *International Conference on Applied Economics – ICOAE 2008 – PP(807-814)*.

Institute for Economics and Peace. "Global Peace Index 2017" (PDF). *visionofhumanity.org*. Archived from the original (PDF). Information about indicators and methodology "2013 Global Peace Index"(PDF). Institute for Economics and Peace. Archived from the original (PDF).