



The Wealth-Peace Connection: Human Development Index and Global Peace Index in Middle Eastern Nations

Syahla Aurelya Djailani¹, Surwandono²

Abstract

This study investigates the relationship between the Human Development Index (HDI) and the Global Peace Index (GPI) in the Middle East. This quantitative analysis employs the Pearson correlation coefficient formula, with HDI as the independent variable and GPI as the dependent variable. The literature review utilizes numerous sources, including journals, books, news media, and the internet. The research sample included Yemen, Afghanistan, Iraq, the United Arab Emirates (UAE), Palestine, Saudi Arabia, Syria, Qatar, and Israel. HDI and GPI are strongly negatively correlated (-0.854), indicating that an increase in one variable (HDI) diminishes the other variable (GPI). Consequently, countries in the Middle East with higher levels of human development tend to have lower GPI scores, indicating that higher levels of human development are associated with a greater likelihood of peace in this region.

Keywords

Middle East, Human Development Index, Global Peace Index

Abstrak

Penelitian ini mengkaji hubungan antara Human Development Index (HDI) dan Global Peace Index (GPI) di Timur Tengah. Menggunakan pendekatan kuantitatif, penelitian ini menggunakan rumus koefisien korelasi Pearson, dengan HDI sebagai variabel x dan GPI sebagai variabel y . Tinjauan literatur menggunakan berbagai sumber, termasuk jurnal, buku, media berita, dan internet. Sampel penelitian terdiri dari 10 negara Timur Tengah, antara lain Yaman, Afghanistan, Iraq, Uni Emirat Arab (UEA), Palestina, Arab Saudi, Suriah, Qatar, dan Israel. Hasil temuan mengungkapkan korelasi negatif yang kuat (-0,854) antara HDI dan GPI, menunjukkan bahwa peningkatan satu variabel (HDI) menurunkan variabel lain (GPI). Akibatnya, negara-negara di Timur Tengah dengan tingkat pembangunan manusia yang lebih tinggi, cenderung memiliki skor GPI yang lebih rendah yang menunjukkan bahwa kemungkinan perdamaian yang lebih besar di kawasan ini terkait dengan tingkat pembangunan manusia yang lebih tinggi.

Kata Kunci

Timur Tengah, Human Development Index, Global Peace Index

¹ Universitas Muhammadiyah Yogyakarta, Yogyakarta, Indonesia

² Universitas Muhammadiyah Yogyakarta, Yogyakarta, Indonesia

Corresponding Author:

Surwandono, Universitas Muhammadiyah Yogyakarta, ✉ surwandono@umy.ac.id



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Background

“The Middle East feels more stable than Europe right now,” Stephen Heller, founding father of Germany-based AlphaQ Venture Capital, told CNBC (Turak, 2023). These words are of course delivered with a reason. Today, the Middle East is experiencing a trend of prosperity. The war in Ukraine, which is still raging, has not only resulted in damage and disruption in some countries, such as inflation and food shortages. But some countries in the region have prospered amidst the raging fighting in Ukraine, adding hundreds of billions of dollars to their economies. In fact, the war has raised oil prices to the highest level in 14 years (Egan M, 2020). This has resulted in inflation and economic contraction globally. However, for countries in the Middle East which are rich in oil resources, this is good news for them, as they previously experienced an economic downturn due to the COVID-19 pandemic.

In fact, the International Monetary Fund (IMF) predicts that oil-exporting nations in the Middle East will earn an additional \$1.3 trillion in oil revenues in the next four years. Economic growth in the Middle East is also expected to pick up significantly. Saudi Arabia experienced economic growth of 9.9% in the first four months of 2022. In contrast, the United States economy shrank by 1.5%. this economic growth has occurred since European countries weaned themselves from Russian gas. They finally started looking for new, more promising partners. Qatar was among the chosen countries, pledging half of its total gas capacity to Europe within four years. The EU has also signed gas deals with Egypt and Israel, which are among the natural gas hubs. During a visit to Paris this month, United Arab Emirates President guaranteeing UAE diesel exports to France (England, 2022).

It is often assumed that, the more prosperous a country is in the economy, the lower their tendency to conflict within the country or abroad. Conversely, the poorer a country is, the greater their tendency to conflict at home or abroad. The Economic Value of Peace (IEP) report confirms directly the direct link between poverty and violence. It said that in countries such as Syria and Afghanistan, two countries with high levels of conflict, also experience very high levels of poverty line. Between 80% and 50% of the country’s population lives below the poverty line, which reinforces their propensity for violence. Thus, it is generally agreed that poverty and conflict are inextricably linked. With poverty making countries more vulnerable to civil wars and armed conflicts that undermine governance and economic performance, this also increases the likelihood of a recurrence of the conflict (Parker, 2021).

Therefore, it makes sense that the economic growth of the Middle East would lead us to believe that the level of regional peace also improved. However, this not might be

the case. The rising prosperity trend in the Middle East seem like it does not go hand in hand with the rise of peace in these countries. Until now, the Middle East is still known as a region that is not peaceful. Whether it's civil wars, wars between interest groups, or wars involving outsiders, the Middle East is still one of the regions with most strife. Whereas, if we hear prosperity in a country, surely, we also think about how high the country's development and human development, which will play a major role in the high peace in the country. Furthermore, one among the world's most unstable areas for politics is the Middle East. Hillel, in his thorough and learned analysis of the region's water situation, makes some observations that effectively capture the essence of this inherent regional instability. He said that the issues plaguing the Middle Eastern countries are numerous and diverse. Wide wealth gaps between a wealthy few and a destitute majority, dashed national aspirations, disputed boundaries, religious fanaticism, ruthless terrorism, ethnic civil conflicts, and dictators with unbridled power are a few of them. The Middle East is one of the most unstable regions in the world due to these issues and others (Sherman, 1999).

A considerable amount of history has been imprinted in the Middle East, from the history of the golden age of culture that spanned the valleys of the Nile, Euphrates, and Tigris Rivers to the political shock that emerged from Iran with the birth of Islamic power. The Middle East has always been an area that has occasionally drawn the attention of mankind that capable of transforming a kingdom into an Islamic republic, to shed blood in various domestic, regional, and international political interests in several conflict situations, including the Arab-Israeli war, the US-Iraq invasion and the "Arab spring" political uprisings in several nations. Geographically, the Middle East gives rise to an ironic reality; despite the region's strategic location and all the magic it possesses, it is characterized as a "hot region" with numerous conflicts of interest (Ruslin, 2013).

Hence, the purpose of this study is to shed light o the question of whether or not the Middle East is indeed a peaceful place at the present time, taking into consideration the recent increase in that region's wealth. The Human Development Index (HDI) and Global Peace Index (GPI) are two key variables that this study uses to explore the important link between wealth and peace in Middle Eastern nations. We hope to shed light on the complex dynamics that shape the stability of the region by analyzing these measures. This study's importance can be found in its applicability to the modern world. Nowadays, fostering peace in the Middle East becomes a common responsibility given the interconnectedness of the world and how far-reaching the impacts of conflicts are. We can get insights that could inform policies, interventions, and diplomatic initiatives by unravelling the complex web that links wealth and peace. We will evaluate these countries levels of human development using the HDI as a metric. In addition, the GPI will provide us a thorough knowledge of the peace in the area. Additionally, this study recognizes the urgent necessity for current research in a world that is changing very quickly. We seek to reflect the dynamic character of wealth and peace in the Middle East by harnessing the most recent data and making use of the most recent indexes.

The relationship between HDI and GPI in countries in the Middle East is closely related to economic development and peace. There wasn't an excessive amount of

research discussing the correlation between HDI and GPI. However, using a comparable study that discussed HDI and GDP could aid in the development of this research, as economics are closely related to peace. According to one of the previous studies, economic development has always been highlighted as one of the important factors that encourage the level of national peace. Countries with lower level of economic development often experience higher levels of poverty and hence they are more vulnerable to conflict. Conversely, countries with higher levels of economic development have better and higher welfare program spending in terms of education, health, and social security. This will lead to an increase in living standards for the poor and vulnerable to join the insurgency movement. Developed countries that have higher income levels also have higher means and capacity to defuse conflicts (Ghazalian & Hammoud, 2021).

A study titled “Human Development and Its Effect on Economic Growth and Development” empirically examined the effect of human development on economic growth in African nations between 2019 and 2015. The main findings and results of the study indicated that human development has a positive and significant effect on economic growth and development in Africa (Appiah, Amoasi, & Frowne, 2019). There is another study that explored the relationship between economic growth and HDI but in Pakistan. Using Two-Stage Least Square (2SLS) method with a title “Renewable Energy Consumption, Economic Growth and Human Development Index in Pakistan: Evidence form Simultaneous Equation Model”. Different from the previous study, this research found that GDP has an inversely proportional relationship with the HDI. This means that the higher the state income, the lower the level of human development. The study’s unique conclusion points to an intriguingly negative correlation between economic growth and the human development index, which pints to the existence of unacknowledged factors including corruption, and unstable politics which calls for additional research (Wang, Danish, Zhang, & Wang, 2018).

Another study that discussed about the relationship between GDP and HDI, titled “The Relationship between Human Development and Economic Growth: An Empirical Study on Turkey”, demonstrate that there is long-term causal relationship between economic growth and human development. When the length of the relationship is considered, it is shown that a 0.01 unit rise in the HDI will result in an increase in economic growth of about 0.05%. these findings for Turkey demonstrate that opportunities brought by economic expansion contribute to human development growth, which in turn supports the growth of the economy. Additionally, implementing measures to advance human development in Turkey will boost economic expansion. The study also indicates that the application of policies intended at enhancing the level of human development by policymakers is crucial for economic development. In this context, it is suggested that policymakers implement health policies aimed at promoting a long and healthy life, education, policies targeted at increasing expected and average schooling rates, and economic policies aimed at increasing per capita income in order to improve the standard of living (Aydin, 2019).

Not significantly different from the prior study, the study titled “The Relationship between Human Development and Growth: An Analysis on OIC Countries”, using the

panel data method, the authors analyzed the relationship between human development and economic growth for the period 2005-2017 using data from OIC countries; they concluded that the relationship between GDP and HDI has a positive and significant, bidirectional causality relationship. A series of quantitative analyses revealed a positive and statistically significant relationship between human development and economic growth in OIC countries. In addition, the Pedroni Cointegration and Granger Causality analyses indicated that the variables have a significant long-term relationship and that they mutually cause each other in a positive direction. In this context, the greater the importance that low-development OIC countries focus on education, health, research, development, and productive output, or human capital, the greater their contribution to growth. It can be said that the higher the level of economic growth achieved, the greater distribution of resources to human capital contributing to an increase in human development (Balci & Özcan, 2019).

An additional study entitled “The Relationship Between Human Development and Economic Growth: An Application on Some African Countries” has been conducted. The author analyzed the relationship between human development and economic growth using the data of 33 African countries from 1995 to 2017 and the panel ARDL technique. The analysis revealed a positive and statistically significant relationship between human development and the national income variable (ERDEM & ÇELİK, 2019). A study titled “The Relationship of Economic Growth and Terrorism with the Human Development Index: A Causality Analysis on MENA Countries”, focuses at the economies of the MENA countries, which is described as a complex and multi-layered area in terms of the relationship between economic growth, human development, and terrorism. The results of the empirical analysis for Bahrain, Jordan, and Iraq, is that the economic growth leads to the HDI. There was found to be bidirectional causality between per capita economic growth and the HDI (Ozcan & Karter, 2020). Different from the previous studies that analyzed about how HDI and economic growth affects each other, a study titled “Economic Growth and Human Development: Evidence from Zambia”, investigated at how economic growth and human development have affected each other in Zambia from 1970 to 2015. They found that economic growth has a long-term effect on human development but there is no proof of reverse causation (Chikalipah & Makina, 2019).

To more thoroughly analyze this research, understanding the terms that will be used is crucial. Human Development Index (HDI) is a statistical measurement used to measure human development in a country by combining three indicators or dimensions, namely life expectancy, education, and wealth. Created by Pakistani economist Mahbub ul Haq in collaboration with Indian economist Amartya Sen, HDI is used to find a measure of human development in general and synthetic. Since the 1990s the United Nations (UN) began to use it as a measuring tool to measure its research to understand the society in a country holistically. Unlike Gross Domestic Product (GDP) which measures only one dimension of the economy, HDI is multidimensional, compile by sub-indexes that consider life expectancy, literacy rates for adults, children’s school levels, and Gross National Income (GNI) levels per capita. Based on the HDI scale, the number 0 (zero) is

a scale to measure countries with very low human development and 1 (one) for countries with very high human development. These scales are separated into 4 groups:

- Very high human development: 0.800 and above
- High human development: 0.700—0.799
- Moderate human development: 0.550—0.699
- Low human development: below 0.550

According to HDI, life expectancy indicators are measured from human birth. The index is 1 when you are 85 years old and 0 when you are 20 years old. This index shows how the quality of access to health and other aspects that shape the physical well-being of people in the country. This index is also a reflection of the overall state of public health. At the moment, the average life expectancy worldwide is about 67 years. With Hong Kong ranked highest at 85 years, and Central African Republic with the lowest ranking at 54 years.

The education index is measured by how many years of schooling a person is expected to attend and the average number of years of schooling that people actually attend in the country. This index is considered important because education is one of the important aspects that make human able to advance their country's economy through the knowledge they get in educational institutions. In addition, education can help a person secure their financial future. Then, the wealth indicator is measured from Gross National Income (GNI) per capita with Purchasing Power Parity (PPP). Taken together, these three indicators give, roughly speaking, an indication of a person's abilities and well-being in a country.

HDI plays an important role in how governments or organizations around the world understand what aspects are developing and what should be developed. Thus, HDI can be used as a benchmark to determine and improve national policies. For example, by comparing how two countries with the same GNI per capita do not have the same level of development. This difference will trigger policymakers to revamp the country's policies and priorities. Therefore, HDI has the potential to provide a simple summary of development that can show progress related to the 2030 agenda or Sustainable Development Goals (SDGs). This is because many of the SDGs are directly related to HDI such as poverty, health, education, and employment. So, as HDI increases, it is likely that the SDGs will also progress (Lashmar, 2018).

The Global Peace Index (GPI) presents analytical data on peace, its economic value, trends, and ways of developing peaceful societies. The scale adopted by GPI considers 0 (zero) for nonviolent states and 5 (five) for countries with high levels of violence. The index ranks 163 independent states and territories according to their level of peace. Created by the Institute for Economics and Peace (IEP), GPI is the world's leading measure of world peace. The GPI report covers 99.7% of the world's population and uses 23 qualitative and quantitative indicators in compiling the index. This indicator is grouped into three domains, namely Ongoing Conflict, Safety and Security, and Militarization.

The Ongoing Conflict domain uses six statistical indicators to investigate the extent to which countries engage in internal and external conflicts, as well as the role and duration of their involvement in conflicts. The second domain, Safety and Security,

assesses the degree of harmony or discord within nation. It includes eleven indicators such as low crime rates, minimal terrorist activity, minimal demonstrations, harmonious relations with neighboring countries, and stable political posture, can be equated with peace in the country's level of military development and access to weapons and its level of peace at home and abroad. The indicators include military expenditure as a percentage of GDP and the number of armed service officers per head measured as well as financial contributions to peacekeeping missions at the UN.

Method

This study employs a correlational research design and quantitative method to examine a sample of ten Middle Eastern countries, including Yemen, Afghanistan, Iraq, UAE, Palestine, Iran, Saudi Arabia Syria, Qatar, and Israel. These nations were chosen based on the accessibility of data. This study uses a quantitative approach to determine the influence of two indices, namely the HDI index and GPI. The types of data used are secondary data obtained from the Human Development Report 2021/2022 by UNDP and the Global Peace Index Report 2022 by the Institute for Economics & Peace. After the data is obtained and collected, statistical analysis is used to find the calculation of the correlation coefficient. The Pearson correlation coefficient in statistics is a measurement of the strength of the relationship between two variables and their relationship with each other. This coefficient calculates the effect of change in one variable when another variable changes.

The correlation between the two indices was found using the Pearson formula (C4:C13;D4:D13). So, a correlation coefficient of -0,854 was found. The formula can be broken down into several components:

- Subtracting the mean: $(x-mx)$ represents the deviation of each individual data point X from the mean X, and $(y-my)$ represents the deviation of each individual data point Y from the mean Y
- Multiplies the intersection: $(x-mx) * (y-my)$ expresses the product of the deviation of each data point X and Y from their respective averages
- Standardization of intersections: $\sqrt{\sum (x - mx)^2}$ represents the standard deviation of X, and $\sqrt{\sum (y - my)^2}$ represents the standard deviation of Y. by dividing the sum of the products of deviations by the product of the standard deviation.

Then, if the index data that has been collected from 10 countries in the Middle East is processed with the Pearson formula, then:

$$r = \frac{n(\sum xy) - (\sum x) * (\sum y)}{\sqrt{n(\sum x^2) - (\sum x)^2} * \sqrt{n(\sum y^2) - (\sum y)^2}}$$

$$r = -\frac{0.904}{\sqrt{0.272} * \sqrt{4.116}}$$

$$-0.854$$

The Pearson product moment correlation coefficient (r Pearson) is commonly used to assess the linear relationship between two quantitative variables. The correlation coefficient always ranges between -1 and 1 and the correlation result reflects the strength and/or direction of the relationship between two or more variables:

- Positive correlation means that both variables change in the same direction
- Negative correlation means that variables change in opposite directions
- Zero correlation means there is no relationship between variables

A more detailed description of the strength of the relationship based on the value of r is seen in the table below:

Table 1. Pearson Correlation Value and its Interpretation

No.	Correlation Size	Interpretation
1.	1.00 or -1.00	Perfect positive/negative correlation
2.	0.91 to 0.99 or -0.91 to -0.99	Very high positive/negative correlation
3.	0.71 to 0.90 or -0.71 to -0.90	High positive/negative correlation
4.	0.51 to 0.70 or -0.51 to -0.70	Moderate positive/negative correlation
5.	0.31 to 0.50 or -0.31 to -0.50	Low positive/negative correlation
6.	0.01 to 0.30 or -0.01 to -0.30	Negligible correlation
7.	0.00	No correlation

Source: Derived from various sources.

Discussion

The following is the HDI index data from 10 Middle Eastern countries obtained from the Human Development Report 2021/2022:

Table 2. HDI Index of 10 Middle Eastern Countries

No.	Country	HDI Index
1.	Yemen	0,455
2.	Afghanistan	0,478
3.	Iraq	0,686
4.	United Arab Emirates (UAE)	0,911
5.	Palestine	0,706
6.	Iran	0,774
7.	Saudi Arabia	0,875
8.	Syria	0,577
9.	Qatar	0,855
10.	Israel	0,919

Source: Human Development Report, 2021/2022.

Table 1 contains HDI index data of 10 countries in the Middle East, indices that are less than 0,550 for low human development, 0,550—0,699 for medium human development, 0,700—0,799 for high human development, and 0,800 or greater for very high human development, namely Yemen (0,455) and Afghanistan (0,478). Syria (0,577) and Iraq (0.686) experienced moderate human development. Next, there are two countries that experience high human development, namely Palestine (0,706) and Iran (0,774). There are four countries that experience very high human development, namely the United Arab Emirates (0.911), Saudi Arabia (0.875), Qatar (0.855), and Israel (0.919).

According to the 2021-2022 HDI report, the value of the HDI index has declined two years in a row, erasing the achievement of the previous five years. This is a result of the COVID-19 pandemic and the war in Ukraine. However, an interesting thing happened to the UAE, where the country ranked 26th globally and the first in Arab World in the UNDP report 2021/2022 placing UAE higher than Spain, France, and Italy. The UAE’s HDI score for 2021 stood at 0,911 which places the country in the “Very High” human development category and positions it at 26th out of 191 countries. Between 1990 and 2021, the UAE’s HDI value increased by 25,1 percent, from 0,728 to 0,911. With life expectancy increased by 6,8 years, the average school year was 6,9 years and the expected school year was 5,2 years(Saleh & Ibrahim, 2022).

The following is the GPI index data obtained from the Global Peace Index Report 2022:

Table 3. GPI Index of 10 Middle Eastern Countries

No.	Country	GPI Index
1.	Yemen	3,394
2.	Afghanistan	3,554
3.	Iraq	3,157
4.	United Arab Emirates (UAE)	1,865
5.	Palestine	2,552
6.	Iran	2,687
7.	Saudi Arabia	2,288
8.	Syria	3,356
9.	Qatar	1,533
10.	Israel	2,576

Source: Global Peace Index Report, 2022.

Table 2 contains GPI index data of 10 countries in the Middle East, lower scores are considered better or more peaceful. Therefore, a score of 1 is considered high in terms of peace, while a score of 5 or 5+ is considered very low

or very vulnerable to violence and conflict. In the table above, Qatar with a score of 1,533 is more peaceful than Yemen with a score of 3,394. Then, according to the table above, there are two countries that have a very high GPI index, namely UAE (1,865) and Qatar (1,533). While the two countries that have a very low GPI index are Afghanistan (3,554) and Syria (3,356). The majority of the countries in the table above have a relatively low GPI index.

The Global Peace Index report stated that in 2022, the world became less peaceful for the eleventh time in the last 14 years, with the average level of peace of countries deteriorating by 0,3 percent over the past year. In total, peace increased in 90 countries and deteriorated in 71. According to the 2022 GPI report, the least peaceful region in the world is still the Middle East and North Africa (MENA) region. Three of the five most unpeaceful countries in the world are in the region. In fact, no country in the region ranked higher than 29th in the GPI report. However, it was also mentioned that this region still experienced the largest regional increase compared to the previous year. This is because, despite the ongoing armed conflict and instability in the region, the impact of terrorism and the number of casualties due to internal conflicts continue to decline, at the same time, the intensity of internal conflicts is also increasing (Institute for Economics & Peace, 2022).

One of the countries in the MENA region, Yemen is now one of the least peaceful countries by replacing Syria since 2014. It had been noted that Yemen has experienced a decline in peace every year since 2008. Syria is the third least peaceful country in the world, the second least peaceful country in the region. Although the conflict in Syria has eased in recent years, ISIL and Al-Qaeda continued to attack the country throughout 2020. However, compared to the previous year, the number of fatalities due to internal strife decreased slightly. Meanwhile, Iran has increased in the domain of Safety and Security which is the impact of decreasing the impact of terrorism. Iraq recorded the second-largest increase in peace overall, with its score increasing by 4,3 percent in the 2021 GPI. Although Iraq has experienced an increase in peace over the past three of the four years, it is still one of the least peaceful countries in the world. Instead, an interesting thing happened in Qatar. The country has remained the most peaceful country in the MENA region for 15 consecutive years and is the only MENA country to be among the most peaceful countries in the world (Institute for Economics & Peace, 2022).

The following is the HDI index data from 10 Middle Eastern countries obtained from the Human Development Report 2021/2022 and the GPI index data obtained from the Global Peace Index Report 2022:

Table 4. HDI and GPI Index from 10 Middle Eastern Countries

No	Country	x (HDI)	y (GPI)	x-mx	(x-mx) ²	y-my	(y-my) ²	(x-mx)(y-my)
1.	Yemen	0,455	3,394	-0,269	0,072	0,698	0,487	-0,187
2.	Afghanistan	0,478	3,554	-0,246	0,060	0,858	0,736	-0,211
3.	Iraq	0,686	3,157	-0,038	0,001	0,461	0,212	-0,017
4.	Uni Emirate Arab	0,911	1,865	0,187	0,035	-0,831	0,691	-0,156
5.	Palestine	0,706	2,552	-0,018	0,000	-0,144	0,021	0,003
6.	Iran	0,774	2,687	0,050	0,003	-0,009	0,000	0,000
7.	Saudi Arabia	0,875	2,288	0,151	0,023	-0,408	0,167	-0,062
8.	Syria	0,577	3,356	-0,147	0,021	0,660	0,435	-0,097
9.	Qatar	0,855	1,533	0,131	0,017	-1,163	1,353	-0,153
10.	Israel	0,919	2,576	0,195	0,038	-0,120	0,014	-0,023

Source: Processed data from HDI Report 2021/2022 and GPI report, 2022.

The Relationship between Wealth and Peace in Society

In fact, there is a close correlation between wealth and peace. By having more financial resources, it provides us with a sense of security and stability. However, this does not always mean that the rich are more likely to be more peaceful than those who are poor. In fact, there have been many examples throughout history and in the contemporary world of wealthy individuals or groups engaging in violent or aggressive behavior, whether through war, conflict, or other forms of aggression. At the same time, however, it is also important to remember that poverty and economic insecurity can lead to social unrest and violence in some cases. Thus, although wealth is not a guarantee of peace, economic factors certainly have a role in shaping social dynamics and conflicts.

One study analyzing the relationship between economic wealth and peace is titled “Economic and Social Impacts of Conflict: A cross-country analysis”. The authors studied at how conflict affects economic growth, life expectancy, and education levels. With panel data from 109 countries from 1996 to 2019, they used an autoregressive distributed lag model and a dynamic fixed effects estimate. By reducing the effects that the variables had on each other, they figured out the different short-term and long-term effects of conflict on development. When countries’ income levels were evaluated at separately, interesting results came out: the higher a country’s income level, the less of an effect conflict had on its growth (Le, Bui, & Uddin, 2022).

Previous study titled “Peace and Economic Growth in Developing Countries: Pooled Data Cross-Country Empirical Study”, also has a similar result. Using OLS econometric methods to examine at data from 70 developing countries from 2000 to 2004, it was found that peace, as measured by scores for peace building ability, has both direct and indirect effects that contribute for economic growth. Peaceful countries grow faster than that are in strife (Santhirasegaram, 2008). Peace decreases uncertainty and

danger, which is good for economic growth in our globalized world. When there is peace in an economy, more physical and human wealth is built up, which leads to faster economic growth. Peace helps the economy grow by making wealth and labor more productive.

Examining the Relationship between Wealth, HDI, Peace, and GPI in the Middle East

There are several factors that contribute to the complexity of the relationship between wealth and peace in the Middle East. First, although many countries in the Middle East have significant oil reserves and other natural resources that contribute to their wealth, the distribution of wealth in these countries is often uneven. This can lead to socioeconomic inequality and political instability, as some groups may feel marginalized or excluded from the benefits of economic growth. In fact, according to a World Inequality Lab study in 2018, it was stated that the Middle East is the most unequal region. The study collected and combined income and wealth data from 15 countries in the region to produce estimates of inequality from 1990 to 2016. It found that during the period, 64 percent of total regional revenue went to the top 10 percent of income earners in the Middle East. This shows the high-income inequality between countries in the region (Assouad, 2020).

Second, the history of colonialism, foreign intervention, and regional conflicts in the Middle East has created complex geopolitical dynamics that continue to impact the region today. These conflicts can be triggered by factors such as political and ideological differences, religious tensions, and ethnic rivalries. Third, the Middle East is home to diverse cultures and political systems, which can make it difficult for us to generalize the region as a whole. Some countries in the Middle East have made significant progress towards peace and stability, while others continue to grapple with ongoing conflict and instability. Overall, while there is no one-size-fits-all explanation for the relationship between wealth and peace in the Middle East, it is clear that a complex set of factors contribute to the geopolitical dynamics of the region.

Based on the results of data calculations using the Pearson formula, a correlation coefficient of -0,854 was found, which number shows a high negative correlation. The Pearson correlation coefficient of -0,854 between the HDI and GPI indicates a strong negative linear relationship between the two variables. That is, with the increase in HDI, the GPI tends to decrease, and vice versa. HDI measures a country's level of human development, based on factors such as life expectancy, education, and income. GPI, on the other hand, measures a country's level of peace, based on indicators such as the level of violence, political instability, and militarization.

The negative correlation between HDI and GPI shows that countries with higher levels of human development tend to be more peaceful, while countries with lower levels of human development tend to be more vulnerable to conflict and instability. For example, if we take one example from countries in the Middle East from the data above, we can see that the HDI variable is low in Yemen (0,455) followed by the variable GPI is high (3,394). In contrast, variable HDI was high in the UEA (0,911), followed by variable GPI was low (1,865). This correlation is consistent with the idea that economic and social development can contribute to greater political stability and reduce conflict. It is also

important to note that correlation does not necessarily imply causation, and other factors can influence the relationship between HDI and GPI. However, a strong negative correlation observed in this case indicates that there is a meaningful relationship between the two variables.

Conclusion

Due to the prolonged conflict in Ukraine and the consequent increase in oil prices, some Middle Eastern nations are prospering. Economic expansion and increased revenue from oil sales have resulted as an outcome for oil-shipping nations. However, the Middle East continues to be regarded as unstable and war-torn despite the economy's growth. To determine whether there is a correlation between wealth and peace in the Middle East, this study examined the HDI and GPI. The HDI measures human development in terms of life expectancy, education, and wealth. The GPI, on the other hand, uses a number of indicators to measure the amount of peace in a country.

This study discovered a $-0,854$ correlation between the HDI and the GPI. This indicates how negatively related wealth and peace are in the Middle East. This implies that as wealth increases, peace generally decreases. This result appears to show that despite the region's expanding economy, the state of the region's peace and security has not significantly improved. Studies from the past have likewise demonstrated how crucial prosperity is for fostering peace. More economically developed nations typically have less conflict and better welfare systems. However, some studies have produced contradictory findings, demonstrating that factors such as political instability and corruption can alter the relationship between economic growth and human development.

This study highlights the significance of learning more about the complex interplay between wealth and stability in the Middle East. It emphasizes how crucial the HDI and GPI are as tools for policymakers to monitor growth and develop effective strategies. The findings of this study may be useful for strategies and initiatives aimed at promoting peace in the region.

Authors Contribution

Syahla Aurelya Djailani: *Formal analysis, Investigation, Writing – Original Draft.*
Surwandono: *Conceptualization, Supervision.*

Authenticity Statement

This article is the original work of the author, the article is free from plagiarism, all references are listed in the article, and the article has not been published and is not being submitted to other journals.

Biography

Syahla Aurelya Djailani is a student in the International Relations department at Universitas Muhammadiyah Yogyakarta. She actively engages in academic conferences and seminars to enhance her knowledge and skills in international affairs, aspiring to contribute to the field through ongoing research and future publications.

Surwandono is a senior lecturer in the Master of International Relation department at Universitas Muhammadiyah Yogyakarta. His expertise is in conflict resolution in Islamic World.

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