**About Datasets and Project**

An international organization called the League of Nations failed to prevent the outbreak of World War 2. Many leaders of countries tried to make peace. One of the results at the end of World War 2 was the creation of the United Nations (UN) as an international peacekeeping organization and a forum for resolving conflicts between nations. We will see whether the frequency of war outbreaks has increased or decreased using datasets produced by the SIPRI and the C.O.W project. First, we introduce each dataset used.

##### Military Expenditure

A military budget (or military expenditure), also known as a defense budget, is the amount of financial resources dedicated by a state to raising and maintaining armed forces or other methods essential for defense purposes. By visualizing the military expenditure of the top 10 spenders, which has a significant effect on international relations, we can see how the arms race is going, which causes serious tension between countries.

##### MIDs and Countries at War

Militarized interstate disputes (MIDs) are conflicts between states that do not involve a full-scale war. A conflict is described as an MID if it causes fewer than 1,000 deaths and some military force is used. The Military Expenditure section elucidated the trend of the military expenditure figures. This MIDs and Countries at War section shows the trends of MIDs and Wars by year. This information is provided with the location information of each conflict and country at war in each year on the map.

##### International Trade

International trade is the exchange of capital, goods, and services across international borders or territories. Many experts have conducted research on the relationship between international trade and wars, because various groups studying international relations have argued that international trade affects war outbreaks. The second section provides information on international trade along with MIDs and wars. The last section examines the relationship between the number of countries participating in wars and the total amount of international trade.

### What we Show

Wars have coexisted with human beings, and many people have died because of them. Many experts have tried to understand international relations to deter wars and remain peaceful. Here, we examine information about military expenditure, wars, MIDs, and international trade. In the end, we determine factors to be considered to deter wars and maintain peace.

These datasets and information are provided by the [International Peace Research Institute](https://urldefense.proofpoint.com/v2/url?u=https-3A__www.sipri.org_databases&d=DwMGaQ&c=clK7kQUTWtAVEOVIgvi0NU5BOUHhpN0H8p7CSfnc_gI&r=qAvnaU63UrdBRB3Yjx_fDQ&m=4jis1O2EhaACCU0gJ8AKNICo9VYjPC-XZX4wqklqHO4&s=UpyZYBtCHL01Cxu6WaBcM9mNfwg8RyRBhFYRvr01DG0&e=) and the [C.O.W Project](https://urldefense.proofpoint.com/v2/url?u=http-3A__www.correlatesofwar.org_&d=DwMGaQ&c=clK7kQUTWtAVEOVIgvi0NU5BOUHhpN0H8p7CSfnc_gI&r=qAvnaU63UrdBRB3Yjx_fDQ&m=4jis1O2EhaACCU0gJ8AKNICo9VYjPC-XZX4wqklqHO4&s=1FzxqIcsQ4Gkm1KmglPfUe9PtVe5oAc5n4xEW2UxPA4&e=). The datasets we used mainly include information on MIDs, wars, and trade. To use the datasets of the C.O.W project, click the link below.

### 1. Military Expenditure and Arms Race

Many interstate disputes and wars have been caused by great powers (a sovereign state that is recognized as having the ability and expertise to exert its influence on a global scale). These countries have a significant influence on world peace. When they compete in the arms race and create significant tension, fears grow as these countries get closer to militarized interstate conflict or full-scale war. First, let us see the share of great powers’ military expenditure and the change of great powers’ military expenditure, which is one of the significant factors affecting world peace.

### Share of World Military Expenditure of Top 10 Spenders in 2017

The total military expenditure of Australia, Canada, China, France, Germany, India, Italy, Japan, Russia, and the US is about 69% of the entire military expenditure of the world. That of others is about 24% of the entire military expenditure. The expenditure of the former group is about three times that of the latter group. These countries have invested greatly in their militaries based on their strong economies. With this strong military capability, these countries have been involved in various militarized conflicts. The main purpose of having military capability is protection. However, in many cases, raising military expenditure can cause misunderstandings, because this military power can be utilized to threaten other countries that are dependent on the international political situation and a leader’s decision. Now, let's see how much each of the top 10 spenders spends on maintaining or strengthening their military capability.

### Military Expenditure of 10 Countries in 2017

#### In 2017 (Billion USD)

The spending in most countries is less than 70 billion USD. Except for China and the US, the figure for Russia is the highest. Compared to China and the US, the expenditure is not a huge amount. Among the top 10 spenders, China and the US spend huge amounts on their military budgets. These days, in international disputes such as territorial disputes in the South China Sea from the 1970s and the trade war from 2018, these two countries are against each other, which has caused an arms race between the two countries and their allies. This raises the question of what they have done in the arms race. The next chart presents their military expenditure on the map, which gives information about regional tension and competition for military power. Then we will see their rankings in the budget and the way in which the military expenditure shares of China and the US have changed.

### Top 10 Military Spenders in 2017

#### In 2017 (Billion USD)

In North America, the countries that are ranked in the top 10 military spenders are Canada and the US. Compared to Canada, the US has a huge military budget. Western Europe, Great Britain, Germany, and France have military budgets of less than 60 billion USD each. In Asia, China spends the most in this area. Compared to its neighboring countries, the figure for China is huge. The second biggest spender in Asia is Russia. Fortunately, in my opinion, China and the US are not geographically close, as if they were, high military tension could be expected.   
Now let's see what percentage of their GDP they spent on the military in 2017 before showing the change in military expenditure as a percentage of GDP.

### Military Expenditure Share of GDP

##### *In 2017 (Alphabetical Order)*

For the top 10 countries, in descending order, Russia’s military expenditure share of GDP is the highest at about 4.5%. Russia is one of the countries that spend the most on the military. The second one is the US. China is ranked fifth even though its military expenditure is second highest. Japan spends the smallest percentage on the military at about 1%. India is third at about 2.5%. The next chart shows how the military expenditure share of GDP has changed for each country from 2008 to 2017 and answers the question about the US and China asked in the previous chart.

### Military Expenditure (% of GDP) of 10 Countries

#### From 2008 to 2017

The percentage of Japan fluctuated slightly from 2008 to 2017. In the case of Canada, the figure increased until 2009, a trend that occurred in many countries. The value of Canada decreased from 2009 to 2014. Similarly, in most of the countries, the values decreased. For example, the percentage in the US decreased from 2010. That of Russia decreased between 2016 and 2017. Russia was the only country that spent more than 4% of its GDP on the military in 2017.

Now let's look at China and the US and whether it can be said that the two countries have been competing for military power based on this chart. Even though they have been against each other on many international political issues, the US has decreased its military budget’s percentage of GDP. In the case of China, the percentage has been maintained during the last 10 years. Russia increased the percentage from 2011 to 2016.

Thus far, various charts such as pie charts, bubble charts, proportional maps, bar charts, and line charts on military expenditure data have been presented in order to look at the problem from multiple angles. The next section examines the MIDs, wars, and trade datasets and offers information about the status of world peace and the relationship between the number of countries at war and the total trade amount.

**2. MIDs, Wars, and International Trade**

MIDs, wars, and international trade have been major problems in international relations. Many researchers have conducted research on how to deter war to maintain peace. This paper questioned whether the number of countries at war has increased or decreased. Liberalists in international relations have insisted that international trade is the key factor to deter wars. Based on datasets on MIDs and wars, we first show how the numbers of MIDs, countries at war, and countries in trade have changed.

In the next map, the purpose of providing location information and countries is not to give readers the history of each conflict, such as who was the attacker, defender, victor, etc. (to read this information, please use this [UCDP](https://urldefense.proofpoint.com/v2/url?u=http-3A__ucdp.uu.se_&d=DwMGaQ&c=clK7kQUTWtAVEOVIgvi0NU5BOUHhpN0H8p7CSfnc_gI&r=qAvnaU63UrdBRB3Yjx_fDQ&m=4jis1O2EhaACCU0gJ8AKNICo9VYjPC-XZX4wqklqHO4&s=yYrKuLOPnLZXXLW7fKroa1wc66DZc53SpWrpwaUBqqI&e=) link). The purpose is to give the user the overall trend of MIDs and the number of countries that take part in wars by year. By using this information, the reader can understand whether the number of MIDs has increased, decreased, or fluctuated in each year and whether the number of countries participating in wars has increased, decreased, or fluctuated in each year. Let's see the map in the next section.

### MIDs

Until the 1940s, Western Europe was the most disputed area. The greatest number of disputes ()broke out in 1940, which was during World War 2. During the post-World War 2 economic expansion period (1945–1973), Western Europe was peaceful compared to other areas. In 1987, many disputes broke out in Africa, the Middle East, and Southeast Asia. As seen from the map and MID locations, the disputed areas shifted from Europe to Africa and the Middle East. Now let's see the war dataset. After the Seven Weeks’ War in 1866, the world was peaceful until World War 1. The number of countries at war increased dramatically during World War 1 and 2. Through the Korean War and the Vietnam War, the bar chart shows that the number has fluctuated, but the entire trend shows that the number has decreased. Why has the number of countries at war decreased? Before talking about international trade, let us see the pie chart on the next page.

### Trade Dependency between Each Dyadic Relationship and War

Among 334 dyadic war cases, most wars (227 cases) broke out when the trade dependency between the two corresponding countries was less than 0.1. In only seven cases, war broke out even though the trade dependency was greater than or equal to 0.1. Is there any relationship between international trade and the number of countries at war? Let's consider the data on international trade amount, which has fluctuated or increased since 1870. As seen in the previous map on trade data, the number of countries participating in trade has increased except during World War 1 and 2. The amount of total trade has increased dramatically. In the next page, we can use a scatterplot to see what the relationship between the number of countries at war and the total amount of trade shows.

### Countries at War and International Trade

First, let's see the Y-axis, which represents the number of countries at war. The period before 1965 was the worst period, which means the maximum number of countries at war was the highest. Let's see the X-axis. During the period before 1965, the average total amount of trade was less than 250 million USD. Between 1965 and 1980, the maximum number of countries at war was 13 (less than that of the former period). On the other hand, the average total amount of trade was greater than that of the period before 1965.

Does international trade prevent countries from participating in wars? This question has been popular in international relations research. Let's answer it in the last section.

### 3. Does International Trade Prevent Countries from Participating in Wars?

These days, international trade has significant effects on leading countries’ economies. Therefore, many countries have developed their economies using international trade. In addition, through international trade, the interdependency of countries’ economies has increased. In many cases, developed countries hesitate to initiate or participate in wars because it causes many negative effects on their countries. For example, they must spend huge amounts of money on winning wars instead of developing their economies. In addition, the degree of social insecurity increases dramatically. Therefore, these days, it is an unreasonable decision for many developed countries. In addition, international organizations like the UN are considered to play important roles in deterring wars.