



AtidMUN VII



# ATIDMUN VII

## G20 Study Guide





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## Chair Letters

### Michal Turgeman

Dear delegates!

Welcome to our AtidMUN Conference! I am a 12<sup>th</sup> grader, and I will be chairing the G-20 committee at ATIDMUN VII

A little bit about me: I've been doing MUN for 2 years now, having been a delegate in a few ones, with my Honorable Mention as Paul Rand in the TIMEMUN 2020 Senate being the peak of my MUN career. I chaired the UNHRC at the virtual AOSMUN 2020 and a double delegation OECD Committee at another online conference of ATIDMUN 2021, This will be the 3<sup>rd</sup> time I have been chairing.

I have also been debating in WSDC (Schools Style) and BP (Universities Style) debates in the past 4 years. I've participated in many MUN conferences and debate competitions, also in Hebrew, but mostly in English. The highlights in my debate, public speaking, and MUN career were winning the 1<sup>st</sup> ESL award with Team Israel at EurOpen in Germany this year and being nominated the 3<sup>rd</sup> ESL Speaker in the same competition. I also mentor/coach junior debaters and MUNers. If you have any questions or need any help, you are welcome to ask.

I really look forward to cooperating and collaborating in the committee. I'm very excited to meet you all!

Sincerely, Michal Turgeman

055-6676775;

Email: [michal.turgeman.sh@gmail.com](mailto:michal.turgeman.sh@gmail.com)





## AtidMUN VII



### Niv Blitz

Dear delegates! Welcome to ATIDMUN VII!

I'm a 12th grader at Atid Lod High School for excellence and Scientific Leadership in the community, and I am honored to be a chair in this conference.

I've been doing MUN for 3 years now, and have plenty of experience in both the "Words Schools" and "British Parliament" debate formats. I have participated in many MUN conferences and debate competitions both in Israel and abroad. The highlight in my debate, public speaking, and MUN career was flying to Germany to represent Israel and my school in the "EurOpen Debate Competition", a worldwide tournament when I was in the ninth grade. This year, I attended the competition again (unfortunately via zoom) and we won first place in the ESL category along with my team and my fellow co-chair Michal.

In my spare time, I enjoy mentoring/coaching junior debaters and MUNers and playing with my pet dog.

If you have any questions or need any help, you are welcome to ask me at: Phone: 0529261069 | Gmail: [nivblitz@gmail.com](mailto:nivblitz@gmail.com)

I really look forward to our exciting work, cooperation, and collaboration in the committee, and I'm very excited to meet you all!

Sincerely,

Niv Blitz.





## Topic A: Maintaining a Constant Supply of Renewable Energy Resources

### Background to the Topic

#### **Green Energies and Fossil Fuels**

Green energy is the fuel that comes from natural sources like sunlight, wind, rain, plants, and heat. These energy resources are renewable, meaning that they are naturally replenished. As of these days, many believe that green energy sources such as wind turbines and solar panels are expensive (since they involve expensive machinery), inefficient (since they can produce low amounts of energy), unreliable (since they are weather dependent), and cannot be efficiently transported.

However, new innovations, such as offshore wind turbines, can challenge this belief. Another common form of producing energy is hydroelectric power plants that harness the water's natural momentum, as they go down a river, to produce energy; though this method has been criticized since it is wasteful of land, harms natural habitats and ecosystems by rivers, and can lead to its contamination.

The prevalence of fossil fuels is caused by the lack of an economically sustainable eco-friendly green energy source and intensified by fossil fuel subsidies. As a result, fossil fuel deposits empty rapidly, and pollution levels rise every day.

Perhaps the greatest problem regarding fossil fuel subsidies is that they keep private investment away from the development of economically viable green energy sources in the most critical time. Private investors have no interest in investing in green energy as they cannot compete with the behemoth that is the fossil fuel industry, and the subsidies behind it.

On the other hand, fossil fuels are not easy to find: special drilling and searching machines are needed making the process very expensive. Many experts say that cuts in subsidies are the biggest policy item that would help the world move towards reducing CO<sub>2</sub> emissions and helping renewables get more market share.



All scientists agree that fossil fuels will run out in the near future and economies based on this energy such as Russia and the Gulf countries will collapse if they do not act to change their situation.

It is clear that energy subsidies are not arbitrary, and that they are still an integral part that sustains the energy market. Thus, in order to ensure energy security, the process of eliminating such subsidies must be done carefully and gradually, while providing damage relief where necessary.

### **Pollution and the Energy Sector**

Pollution, as we know it today, was kick-started by the Industrial Revolution in the 1800s, with the burning of coal and oil in factories and huge spikes in production. By 1870, America's biggest cities were becoming intolerable, as pollution, then referred to as the "Great Smog of 1954", killed 4000 people in London.

Industrialization, while being essential for development and progress, has always been at a terrible cost for the environment.

Awareness of the topic of pollution began to form in 1962 when Rachel Carson released her most famous book: "Silent Spring". Ever since then, efforts are being made to reduce pollution and greenhouse gas (GHG) emissions. The major focus was put on energy production, and green energies have been successfully developed and were even proven economically viable in a few different countries, mainly OECD and G20 members.

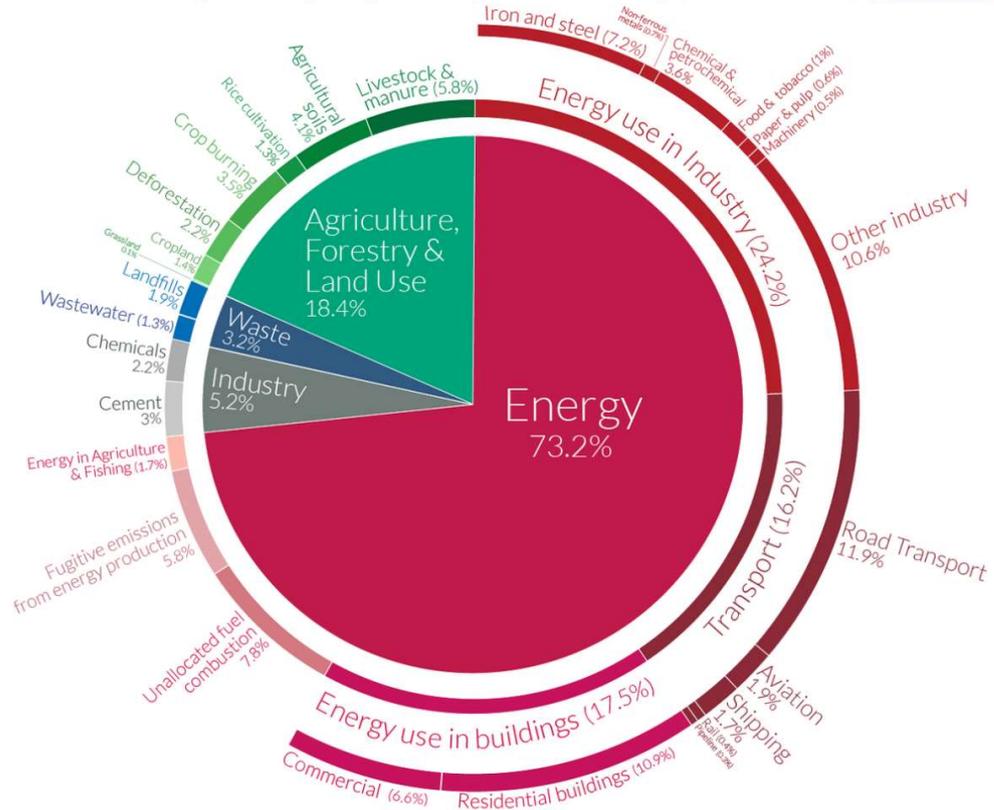
Meanwhile, the situation in developing nations was different: The processes of globalization that took place in the 20th century allowed fast and cheap transportation of goods from one place to another. Said processes enabled the creation of large international corporations, which have always searched for ways to minimize the costs of production, even at the expense of environmental damage. The solution that they found was producing in developing countries, where they can easily bargain for cheap labor and materials, and would not face many government regulations. These factories burn fossil fuels at high rates and



thus emit significant amounts of carbon dioxide; causing air pollution and contributing to global warming.

## Global greenhouse gas emissions by sector

This is shown for the year 2016 – global greenhouse gas emissions were 49.4 billion tonnes CO<sub>2</sub>eq.

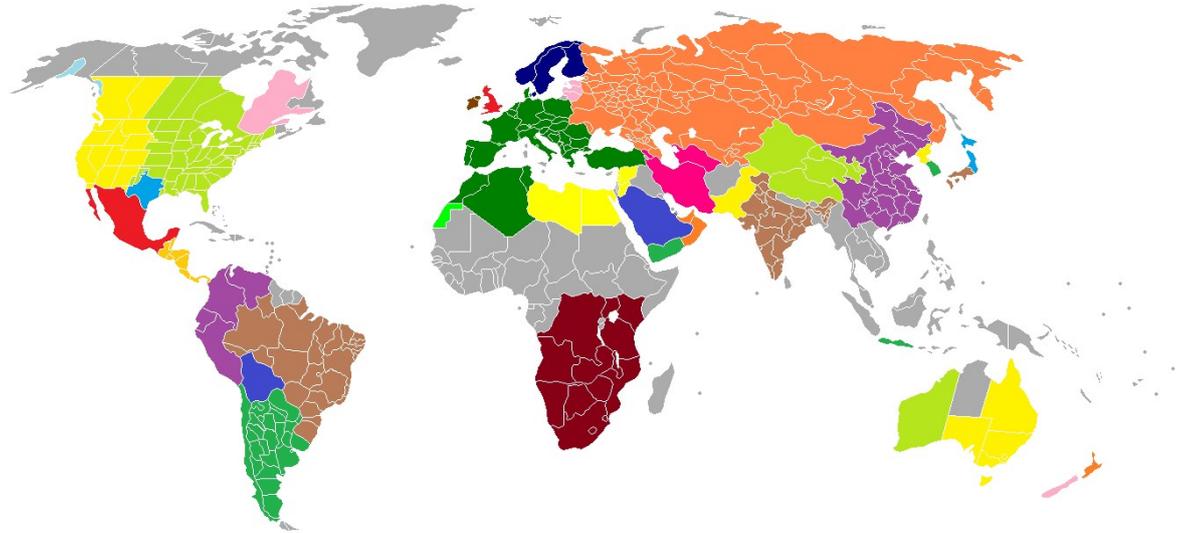


OurWorldinData.org – Research and data to make progress against the world's largest problems. Source: Climate Watch, the World Resources Institute (2020). Licensed under CC-BY by the author Hannah Ritchie (2020).

**Figure 1:** Global GHG emissions by sector in 2020 (taken from Our World in Data)

## Grid Interconnection, Super Grids and Electricity Trading

A wide area synchronous grid (or grid interconnection) is an electric power grid that has a regional or a wider scale and that has a synchronized frequency in which it operates, and under normal system conditions, is connected electrically. The most powerful is the synchronous grid of Continental Europe, which generates 859 gigawatts of electricity. Meanwhile, the widest region served is found in the former Soviet Union. Synchronous grids with significant generation capacity have the potential to enable the trading of electricity.

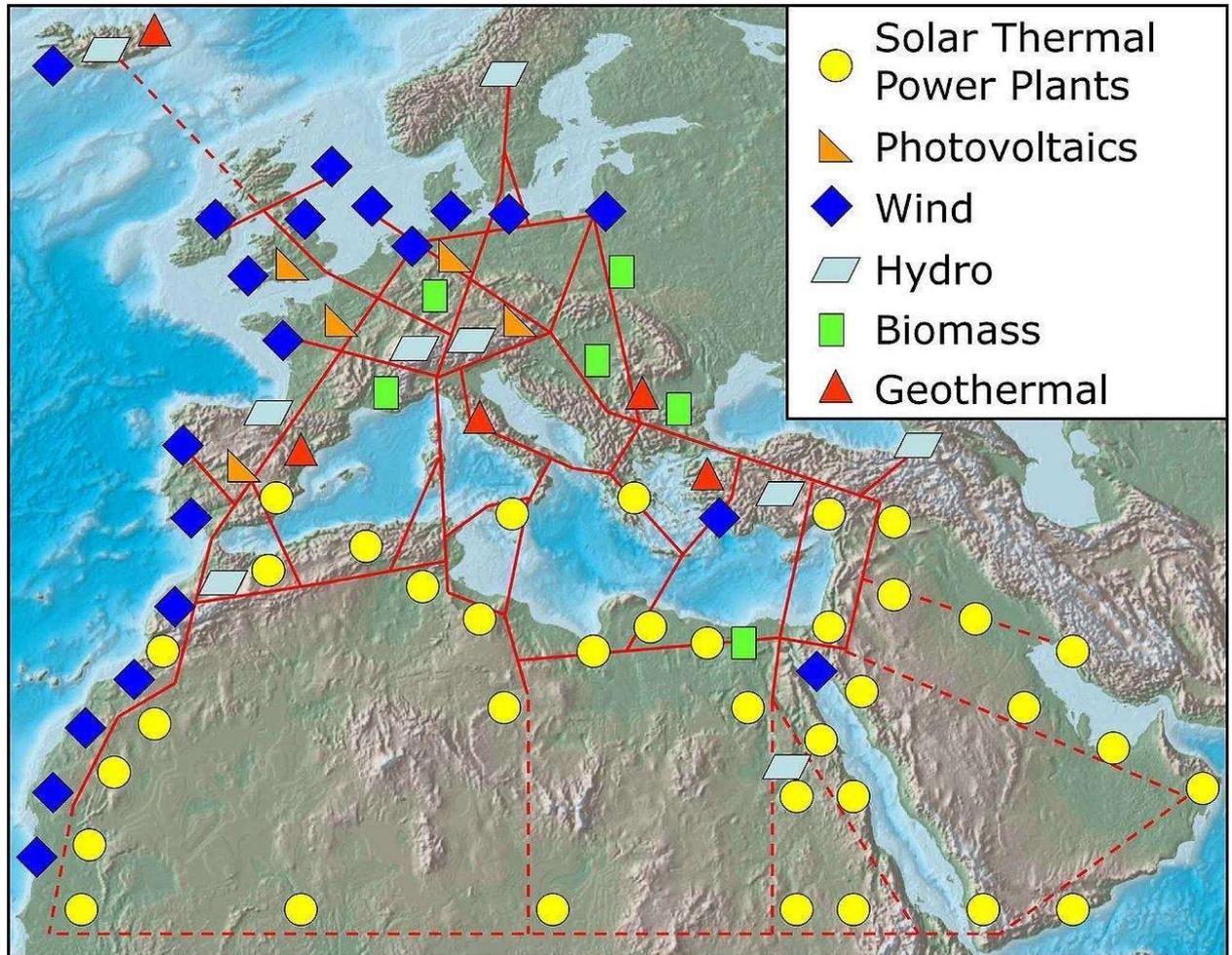


**Figure 2:** Grid Interconnection globally (taken from Wikipedia)

A super grid is an electricity transmission network spread over wide areas, generally across one or a few continents. The intention behind a super grid is to enable trading high volumes of electricity across many nations and large distances. Super grids should mainly use high-voltage direct current (HVDC) to efficiently transmit electricity across long distances. The latest generation of HVDC power lines can transmit energy with losses of only 1.6% per 1,000 km.

The concept of super grids dates back to the 1960s. The first planned use of this technology was to connect dry Southern California to hydroelectric power sources in the northwest of the USA. In addition, the British have presented the first-ever “Grid Code” – a detailed document that describes the operational standards of the national power grid in the UK, which underwent a unification process.

Major changes and immense technological improvements have significantly increased the relevance, capacity, and efficiency of the super grid. Super grids can be instrumental in promoting the prevalence of green energies by compensating for local fluctuations of wind and solar energies, which can often balance each other out and allow the purchase of green energies in areas that are incompatible with the production of said energies. As a result, they are considered as a key technology in the struggle against global warming.



**Figure 3:** A proposed plan of a super grid that is based on the synchronous grid of Continental Europe (taken from Wikipedia)

Multinational power grids with sufficient energy production can allow the formation of electricity and power exchanging bodies. These bodies essentially facilitate long-term power contracts between suppliers and consumers. The prime example of such a body is the European Energy Exchange (EEX), which connects consumers to over 500 suppliers from 30 countries. In 2008, power contracts for over 350,000 megawatt-hours were sold on a daily basis through the EEX.

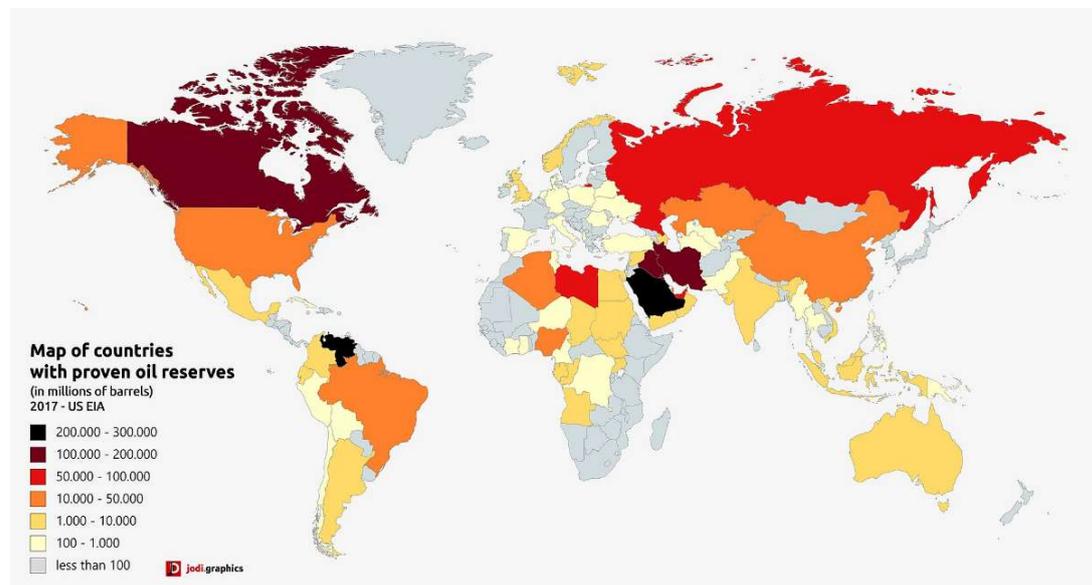
## Current Situation

### Mapping Out Pollution and Green Energies Globally

#### Fossil Fuel Based Economies

Some economies worldwide are based on the extraction of fossil fuels, which they trade internationally. These countries rank high when comparing CO2 emissions and energy subsidies worldwide (see the figure below), due to pollution caused by the extraction of such fuels. Additionally, these countries cause more pollution worldwide as sold fossil fuels are burnt elsewhere, hence causing pollution in other countries as well.

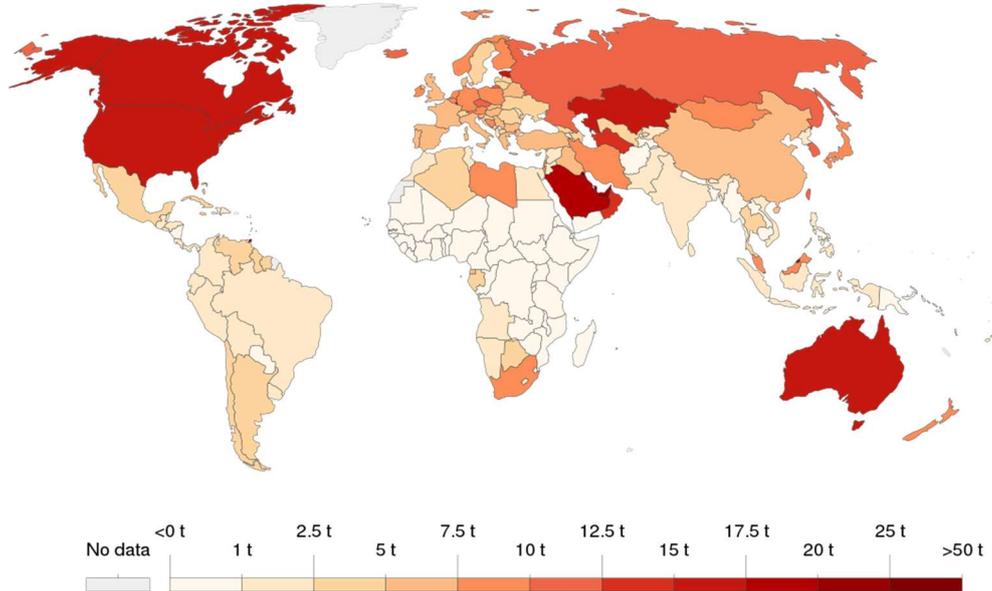
These countries are, obviously, less inclined to support environmental protection, even given that the number of fossil fuels that they obtain is finite, because of short-term adverse economic effects, such as loss of jobs and GDP reduction.



**Figure 4:** Oil reserves globally (taken from Wikipedia)

### CO<sub>2</sub> emissions per capita, 2017

Average carbon dioxide (CO<sub>2</sub>) emissions per capita measured in tonnes per year.



Source: OWID based on CDIAC; Global Carbon Project; Gapminder & UN

**Figure 5:** CO<sub>2</sub> emissions globally (taken from “Our World in Data”)

### Case Study: The USA

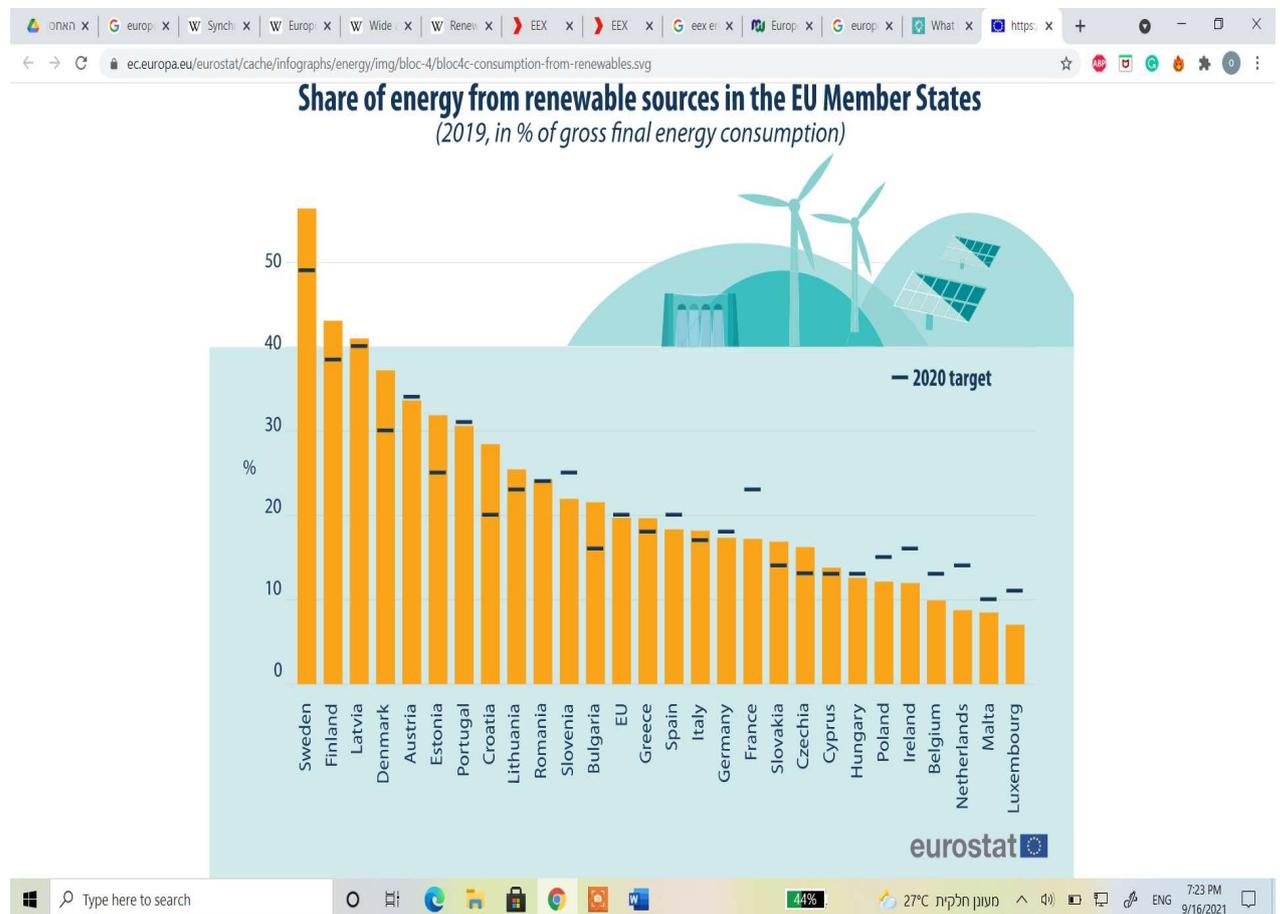
The biggest clash between economy and environment occurred in the USA over the use of coal (“The War on Coal”). President Barack Obama made new carbon rules that caused many coal mines to shut down leaving thousands unemployed. Obama said that his carbon rules will prevent 100,000 asthma attacks in one year. This reform has significantly harmed coal-based states, such as West Virginia, in which coal is the primary source of income, leaving whole towns fighting for survival. Coal production in Kentucky dropped from 17 million tons of coal in 2008 to approximately 4.1 million tons of coal in 2017. Considering that the average price per ton of coal in 2017 was USD 89, this reform reduced the GDP of Kentucky by over one billion US dollars in 2017 alone, and as a result the GDP per capita by more than USD 250.



The answer of the miners to Obama was the election of Donald Trump as president. Trump canceled most environmental acts and laws put forward by the Obama administration, granted subsidies to American energy firms, and reopened the coal mines. Another step that Trump has taken was withdrawing from the Paris agreement which he viewed as unfair to the US.

### Western Europe and other Western Liberal Democracies

These countries usually have a high GDP per capita as well as a high awareness of environmental protection. In addition, many of these countries are at the forefront of the innovation of new green energy technologies that can transform the energy market and help produce cheaper and more reliable green energy solutions. These days, many of those countries are relying less on fossil fuels, and more on green energies even at the expense of paying more for electricity (at least in the short term).



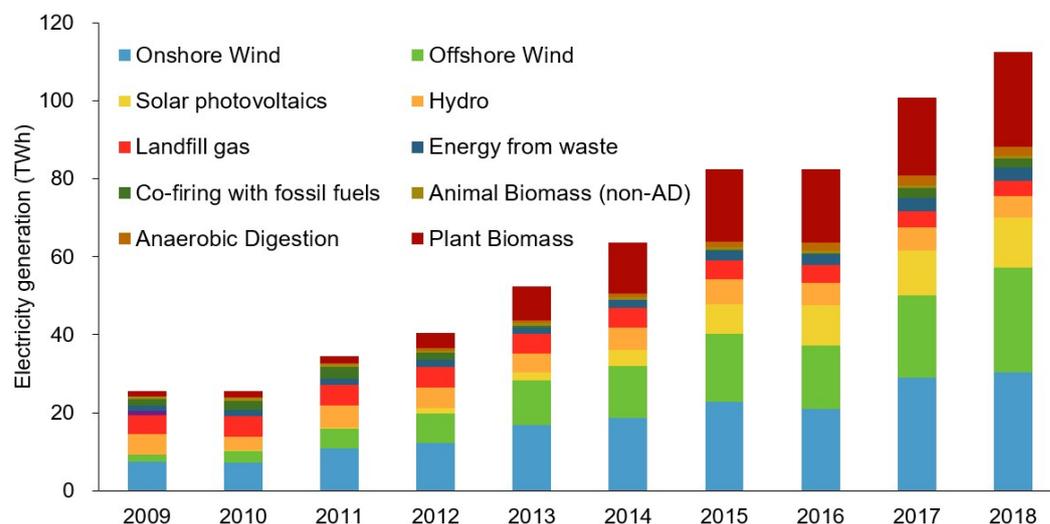


**Figure 6:** Share of renewable energy sources across the EU (taken from Eurostat)

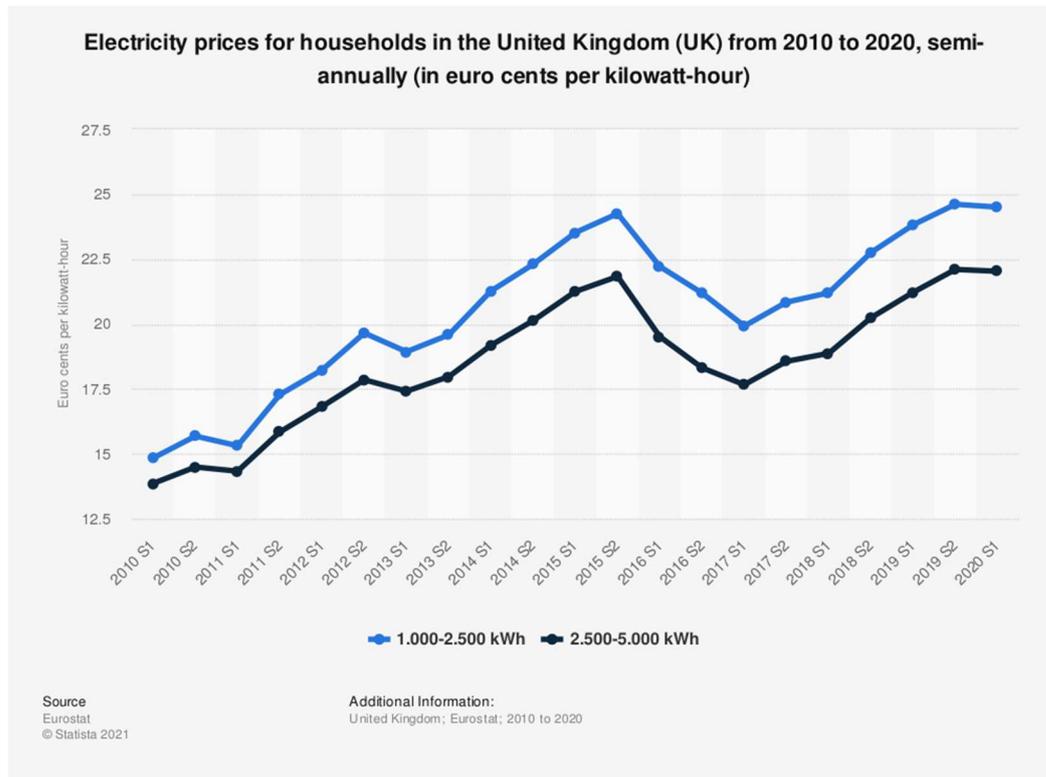
### Case Study: The UK

On August 26, 2020, the UK broke an amazing record. It was the day with the biggest share of electricity produced from wind energies, at a staggering 59.9%. The UK has implemented many new innovations in the green energy field such as offshore wind turbines and floating wind turbines, both connected to the grid via substations. Later this year, on December 18, a new record was set – most power ever generated from wind energy – a staggering 17.2GW.

If this was not impressive enough, the UK broke 2 similar records earlier in 2020 in the solar energy sector. It achieved the highest rate of solar energy production on May 30 (34%) and broke the record for most solar energy generated on April 20 (9.7 GW). In addition, the UK lasted coal-free for over 2 months in 2020, from early April to mid-June. These innovations come at the expense of paying more for electricity (as can be seen in figure 8).



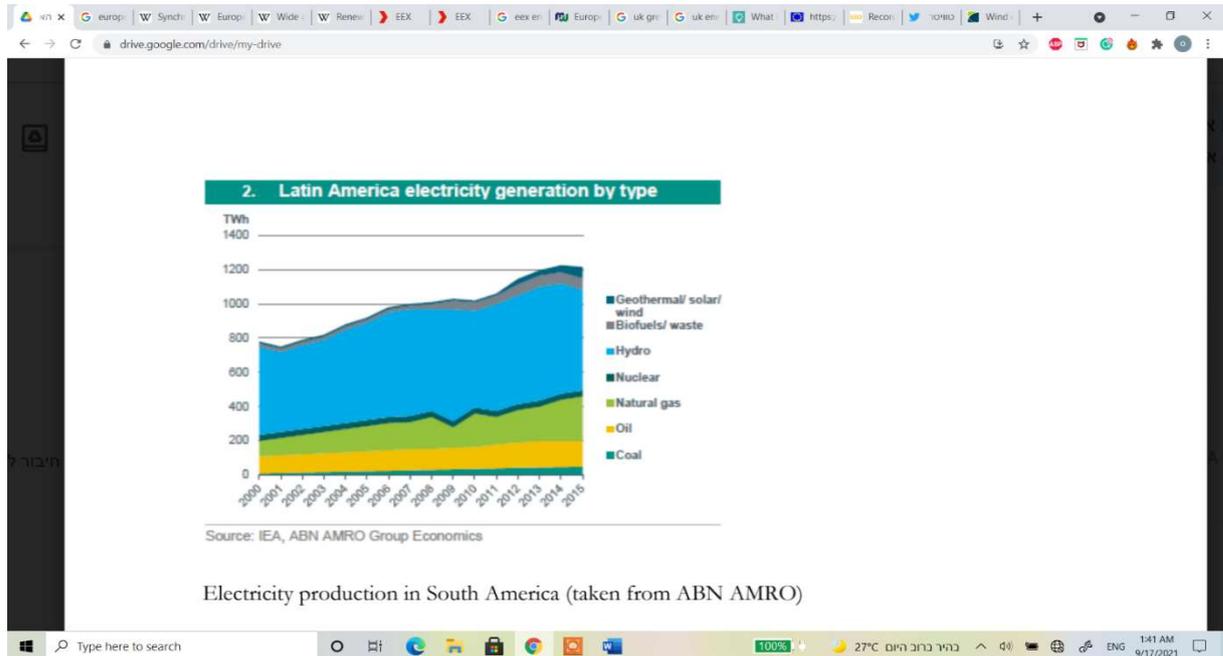
**Figure 7:** Green Energies in the UK over time (taken from Wikipedia)



**Figure 8:** Electricity process in the UK (taken from Eurostat)

### South America – the Greenest Continent

While mentioning the fossil fuel giants, it is critical to remember the great progress made in South America in the integration of Renewable Energies, portrayed in the following figure:



**Figure 9:** Electricity generation by type in South America (taken from ABN AMRO)

It is possible to see that the primary source of energy in the continent is hydroelectricity, however, the usage of solar and wind power is increasing. Nowadays, fossil fuels account for just a third of electricity production in South America.

Spending on renewable energies in South America is facilitated by the Inter-American Development Bank (IDB), which was established to reduce poverty and promote socio-economic development throughout American countries. The IDB is a great investor in green energy infrastructure projects such as installing solar panels and building hydroelectric dams. According to the International Renewable Energy Agency, investment in renewable energies across the continent has grown by 1000% since 2004.

### Case Study: Chile

Chile is a country blessed with unique geographic and climatic conditions, from the cold and windy southern frontier to the boiling hot Atacama Desert, both

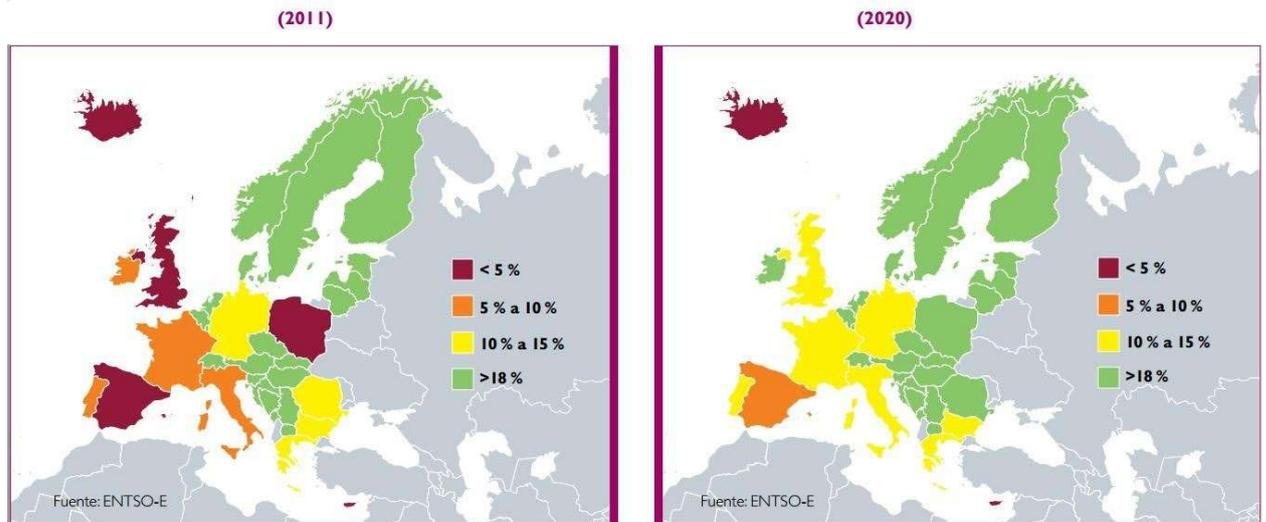


providing weather fit to sustain wind turbines and solar panels respectively throughout most of the year. While remote and disconnected from the populated areas of the country, Chile has recently built transmission lines carrying energy from the far south and the far north to the populated areas. These actions taken by Chile have reduced the cost associated with solar power and wind power by 37% and 87% respectively in the past decade. The completion of this project has reduced the dependency of Chile on fossil fuels, and reduced electricity prices domestically.

Nonetheless, the IDB has bigger plans for Chile's renewable energy sources. Seeing as the Atacama deserts are fairly adjacent to Peru, the IDB is considering connecting the Chilean solar panels to Peru's electricity grid, through which it'll be able to spread across the continent to Brazil, Bolivia, and Ecuador. Greater energy connectivity in South America can also contribute to greater energy security by combining different sources of energy that are effective throughout different times of the day and different times of the year. For example, wind power in Brazil is mostly generated at night while solar power in Chile is mostly generated during the day.

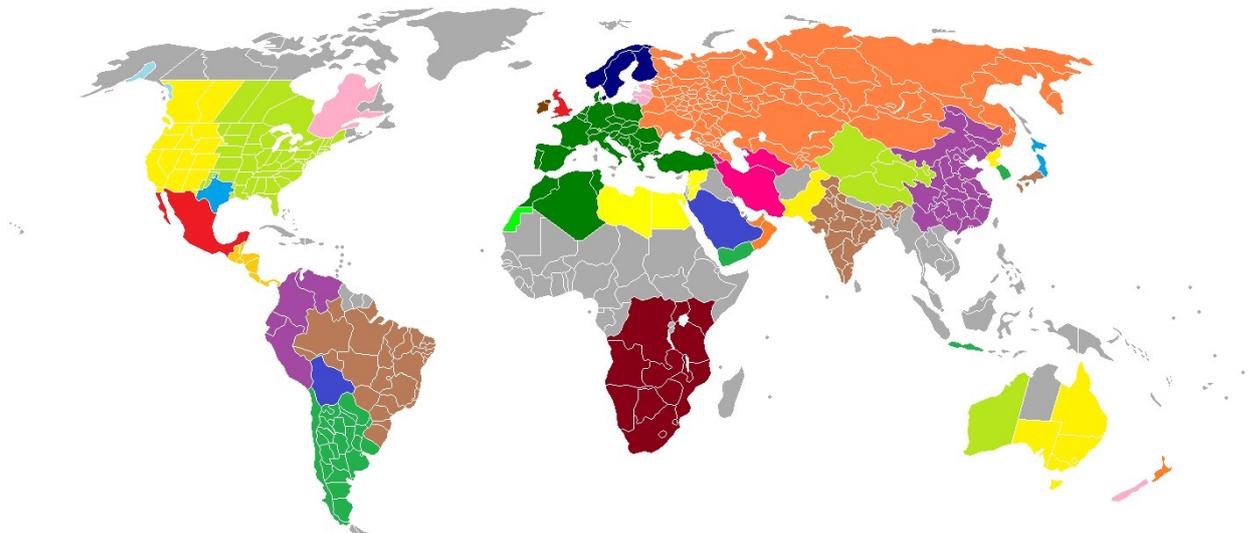
### **The Status of Multinational Grids and Electricity Trading**

The largest and most advanced synchronized power grid is the one in central Europe known as ENTSO-E. Numerous plans exist to expand its area and number of synchronized countries (as can be seen in figure 3). In addition, the EU has set a goal of a 10% interconnection rate (the ratio between interconnected electricity and the generation capacity) by 2020 and a 20% goal until 2030.



**Figure 10:** Interconnection levels in 2011 and the goals for 2020 (taken from Wikipedia)

In addition to the ENTSO-E, many more wide area synchronous grids (WASGs) exist, as can be seen in figure 11.



**Figure 11:** WASGs across the globe (taken from Wikipedia)



## Conclusion

Promoting the use of sustainable renewable energy sources is indeed a worthy cause, and it seems as if multinational power grids are a key element in order to ensure widespread, global, cheap, and reliable green energy sources.

This committee must decide upon the proper way in which to regulate these grids in the following manners:

- Energy trading and relevant regulations
- Taxation of fossil fuels
- Mutual elimination of fossil fuel subsidies and the use of countervailing taxes
- Coordinating levels of interconnection

In addition, the committee must find the proper ways to encourage countries to support energy trading and join multinational grids as well as promoting more interconnections across different WASGs.

We trust you to make the best decisions for a more sustainable and secure future in the energy sector.

## Questions to Consider

### **Familiarizing Questions**

- Is my country in the category of the least developed countries or a developed nation? What are the main electricity sources in my country?
- Does my country support green energy policies? How?
- What is my country's view on sustainability and environmental protection?
- Is my country a signatory of the Paris Accord?
- Is my country connected to a multinational power grid? Would it wish to become part of one?



## Clash-Oriented Questions

- How can more countries be encouraged to join a WASG? Who is responsible for facilitating such encouragement?
- Should the G20 financially support efforts to enable intercontinental connections between WASGs across the Atlantic and Pacific in the future? How?
- Should WASGs encourage the trade and use of green energy? How?
- How should energy trading across WASGs be regulated? Who should be responsible for that?
- Should power generation from fossil fuels in WASGs be discouraged? How?
- Should fossil fuel subsidies be discouraged in WASGs? If not, would countries be able to impose countervailing taxes against such subsidies?
- What should be the role of the UN and the World Bank regarding WASGs?

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## Topic B: Post-Covid Sustainable Debt

### Management Background

#### Background to the Topic

#### **Recession, Debt, and a little bit of Macroeconomics**

According to the Cambridge Dictionary, government debt is “the amount of money owed by a government to lenders at a particular time”. It is also sometimes called public debt or national debt. A government begins to accumulate debt when its spending surpasses its revenue from taxation, state-run enterprises, etcetera.

In order to fully understand the macroeconomics behind this topic, we must understand the basic identity of macroeconomics:

$$GDP = C + I + G + N - X$$

GDP = Gross Domestic Product = The sum of all goods and services produced in a given economy in a given amount of time

C = Consumption = All the money spent domestically by consumers on the purchase of goods and services within the country

I = Investment = All the money which firms and private consumers invest, either domestically or abroad

G = Government spending

N = Net Imports      X = Net Exports

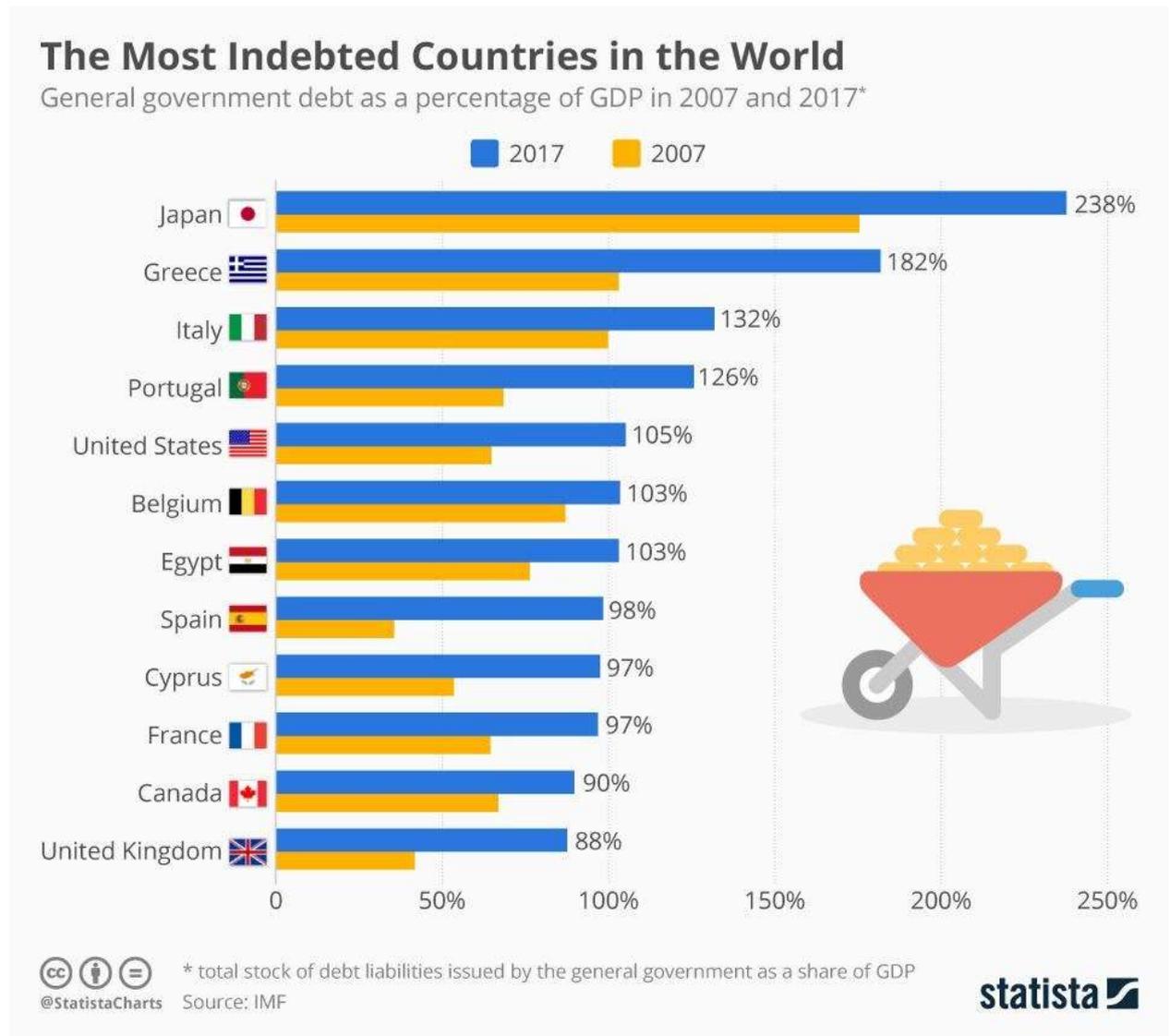
The Government’s tax revenue mostly stems from C and I (though imports and exports can be highly significant in some areas), therefore recessions can cause a sharp decrease in the government’s tax revenue, and therefore encourage the development of public debt. The catch is that by reducing the government’s



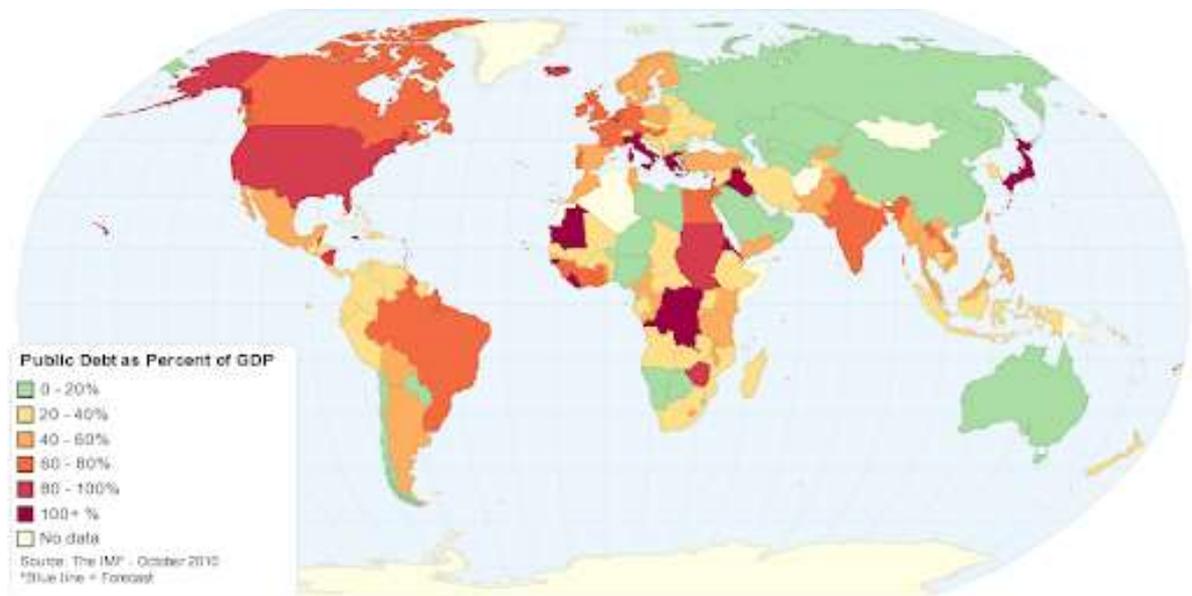
spending, the government will cause a decline in GDP, which will probably worsen the recession.

A prolonged public debt is usually a result of either a significant recession caused by major events such as wars or economic crashes, which require the government to undertake expensive measures or due to irresponsible behavior of the government and the treasury ministry, which creates significant budget deficits. As a result, the first step in resolving an ever-increasing public debt is to mitigate the recession, thereby increasing the government's tax revenue.

The following 2 figures showcase public debt globally:



**Figure 1:** Public debt as a share of GDP in the most indebted countries in the world (taken from Statista)



**Figure 2:** Public debt as a share of GDP globally (taken from Chartsbin)

## Fiscal and Monetary Policies aimed at Countering Recessions

There are various strategies aimed at pushing an economy out of a recession, each associated with a different stream of macroeconomists:

### The Classical Approach:

Up until the 21<sup>st</sup> century, every single economist deeply believed that the economy can stabilize itself perfectly fine, without any form of interference, and that such intervention would only destroy the natural economic equilibrium.

Essentially these economists argued that much like in microeconomics, the overall economy can be represented by a supply and demand curve, and that much like supply and demand rules control small markets and help them be efficient and operate at equilibrium, the same is true to the overall economy. Their cure for



recessions is to simply do nothing and wait it out. This solution worked out quite well for many recessions until the greatest one of all – The Great Recession.

### Fiscal Policy (Courtesy of the Keynesian economists):

Fiscal Policy is the use of tax rates and government spending in order to balance the economy, fight recession and inflation and promote sustainable economic growth. It was first invented by John Maynard Keynes in the 20<sup>th</sup> century as a response to the Great Recession and the classical approach.

Keynes and his followers argued that when the shift from one point of the equilibrium to the next on the supply and demand graph, instead of stabilizing itself, the economy may enter a death spiral caused by people and firms who fail to meet their economic commitments (such as mortgage payments), which leads to a domino effect throughout the economy and to its collapse.

According to the Keynesian economy, in order to prevent such a vicious cycle, the government must invest money that will be used to employ people in order to create public infrastructure or to reduce taxes in order to assist struggling firms and individuals.

Keynes argued that the investment of 1 dollar can go far beyond that mere 1 dollar. Let's imagine that the government of Alphaland pays George 100 USD and that everyone in Alphaland saves 50% of the money that they earn. George goes to a nice restaurant and spends the entire 100 USD there. Bill, the restaurant owner, keeps 50 USD and spends 50 USD. He goes to buy a frying pan from Susan's cooking store. Susan keeps 25 USD and spends 25 USD. She buys a nice purse from Angel's store, and so on and so forth. In the end, one donation of 100 USD created almost 200 USD of goods and services (100 USD restaurant meal, 50 USD frying pan, 25 USD purse...). Keynes called this phenomenon the Keynesian multiplier, which is calculated as follows:

$$\text{Keynesian Multiplier} = \frac{1}{\text{The rate of saving}}$$



The rate of saving is the share of the money that the average person in the country allocates to his personal savings.

In our example, the rate of saving is 50% and the Keynesian multiplier is 2 (meaning that every Z dollars invested will lead to a 2Z increase in GDP). Keynes uses the argument of the multiplier in order to justify increasing public spending during recessions.

During the recession, the Keynesian approach calls for implementing an expansionary fiscal policy – cutting taxes and/or increasing public spending, whereas, during times of high inflation, it calls for a contractionary fiscal policy – increasing taxes and/or reducing public spending.

### Monetary Policy (Courtesy of the Monetary economists):

Monetary policy is the use of different economic tools in order to balance the money supply, and thus stabilize the economy, fight recession and inflation, and promote sustainable economic growth. It was first invented in the 20<sup>th</sup> century by Monetary economists, headed by Milton Friedman, the most famous monetary economist.

The core of the approach of monetarists is the concept of the money supply and its relation to the GDP and the price level, which the following equation describes:

$$M*V=P*Q$$

M = the Money Supply = all the money that is in use in a country  
(Cambridge Dictionary)

V = the velocity of money = How quickly people spend their money

P = The price level

Q = GDP



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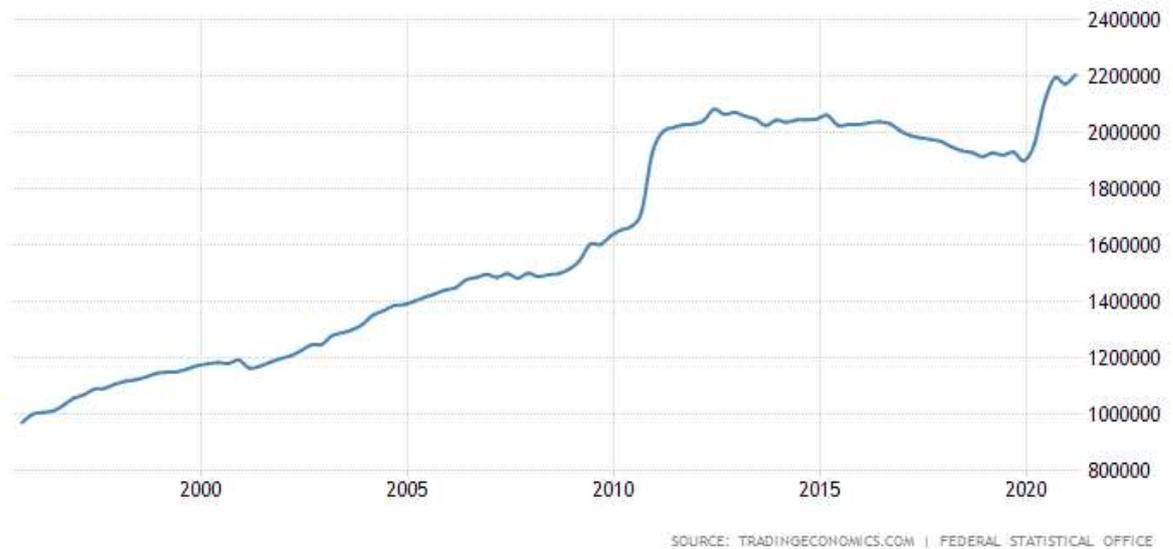
In the short term, it is reasonable to assume that the velocity of money and the GDP is fairly constant, and thus it is easy to establish that a sharp increase in the money supply causes inflation, and the opposite causes deflation and may lead to a recession.

The monetary policy mainly concerns controlling the money supply in order to affect inflation rates, which is crucial in order to avoid recessions and solve them. Central banks have numerous tools in order to do so, and the most popular one is interest rates. High-interest rates promote saving while low interest rates promote spending. Usually, governments lower interest rates in order to encourage spending and thus counteract recessions. Other tools include the purchase of bonds, quantitative easing, etcetera.

An expansionary monetary policy, implemented during recessions, usually involves the central bank lowering the interest rates and acquiring bonds, whereas a contractionary monetary policy is an exact opposite.

A key difference to remember is that while fiscal policy is decided and implemented by the government, fiscal policy is usually decided and implemented by central banks, which usually operate independently from the government.

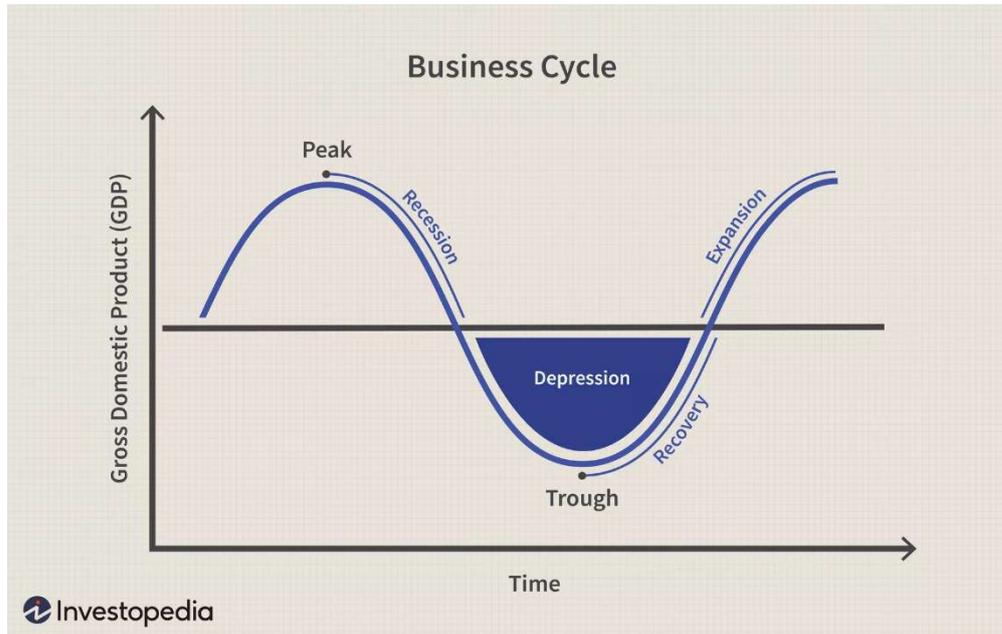
Both expansionary fiscal policy and expansionary monetary policy come with a great cost that may dramatically increase the public debt, as can be seen in the following graph.



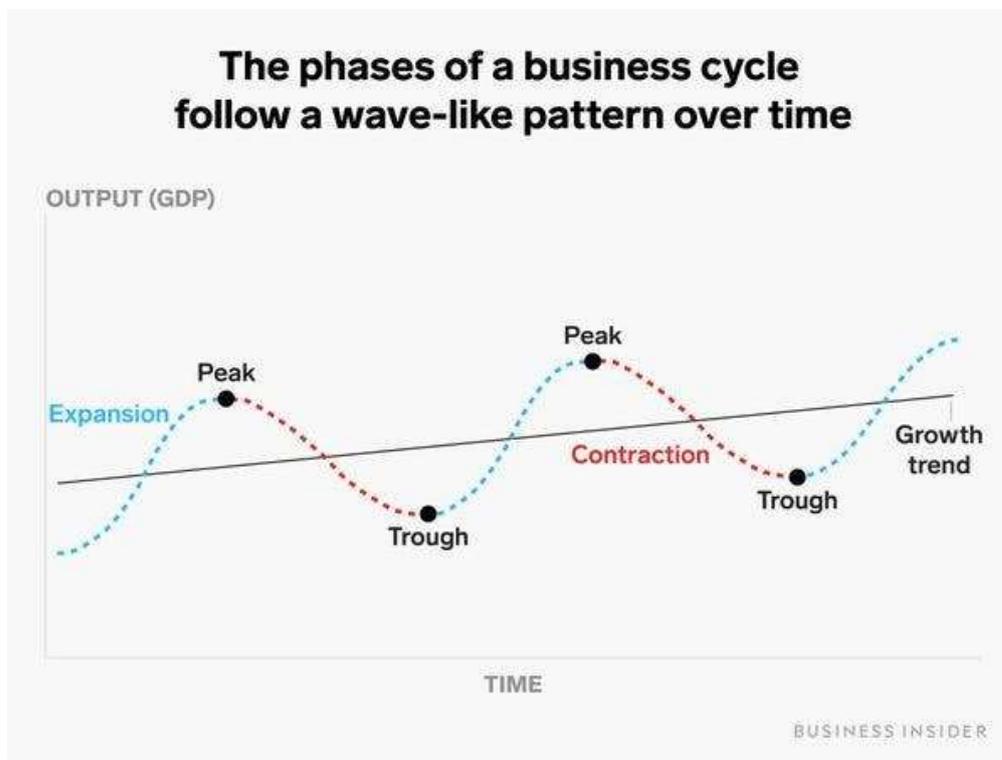
**Figure 3:** Germany's public debt from 1995 to 2021 (taken from Trading Economics)

## Recessions and the Business Cycle

According to the Cambridge dictionary, the business cycle is defined as “a period during which a country's economy goes from growth to recession (= a time when business conditions are bad) and back to growth”. All economies experience recessions and growth periods of differing magnitudes regularly. Properly activating fiscal and monetary tools is instrumental to reduce the recession's length and financial implications and to facilitate an effective recovery, as can be seen in figure 5.

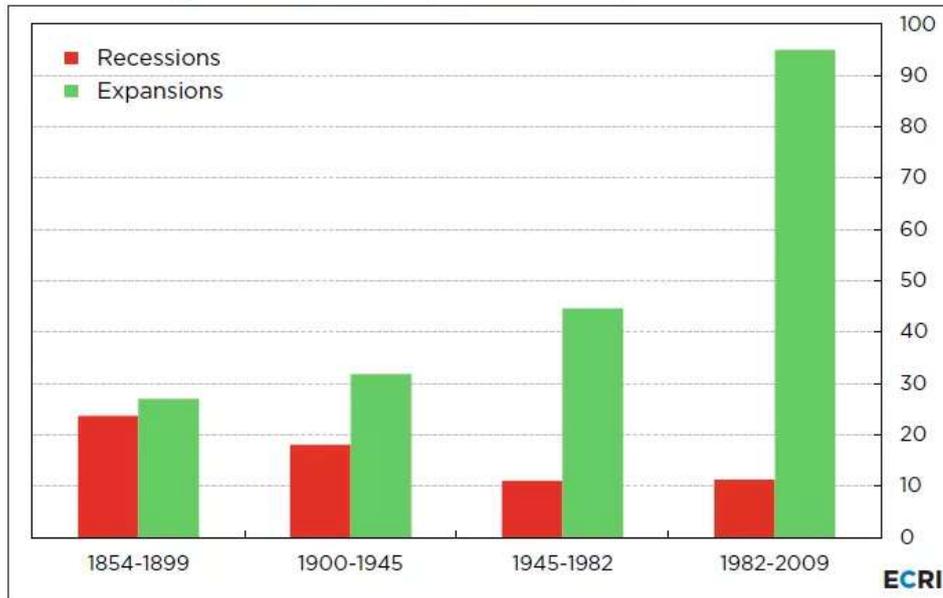


**Figure 4:** One business cycle (taken from Investopedia)



**Figure 5:** The business cycle demonstrated on a GDP graph (taken from Business Insider)

## Average Durations of U.S. Recessions and Expansions (Months)



**Figure 6:** length of recessions and expansions over time (taken from Investopedia)

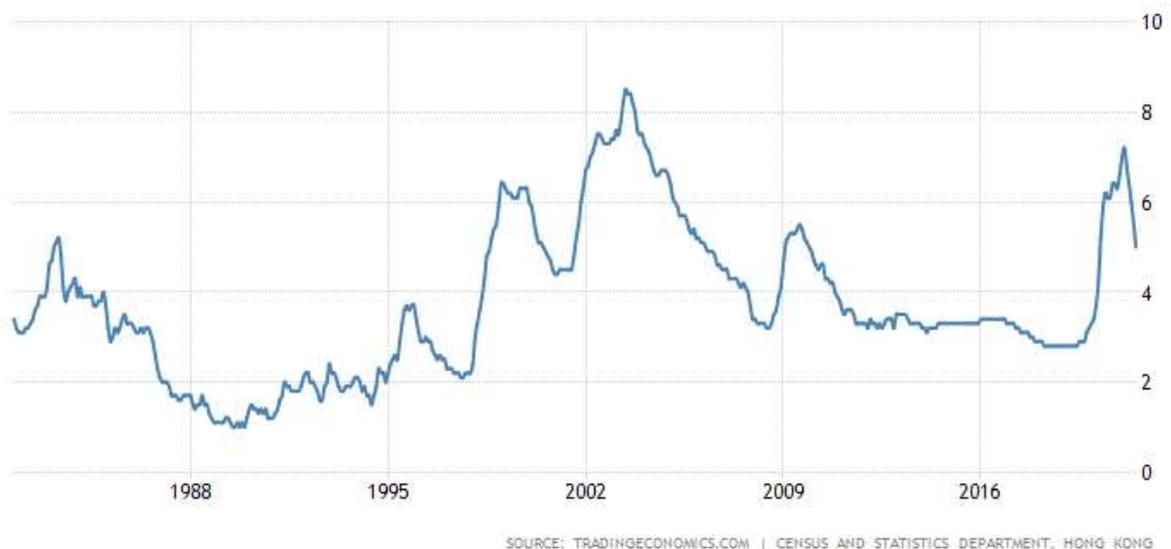
Recessions that stem exclusively from the business cycle are commonly referred to as cyclical unemployment (as unemployment and recessions are deeply interlinked), and are often not a major concern to economists, as they will likely be resolved using fiscal and monetary stimuli. A different type of recessions is caused by structural changes to the economy; for example, an aging population, a massive wave of immigration, the collapse of major firms and markets, etcetera. These cases are called structural unemployment.

Structural unemployment is indeed one of the toughest challenges in the world of macroeconomics. While monetary and fiscal stimuli can often improve the financial conditions of a country experiencing a structural change, the country must fight the structural change using dedicated plans and strategies aimed at affected populations.

A good example of managing a structural change in the economy and avoiding structural unemployment can be found in Hong Kong, which, in the 1970s and

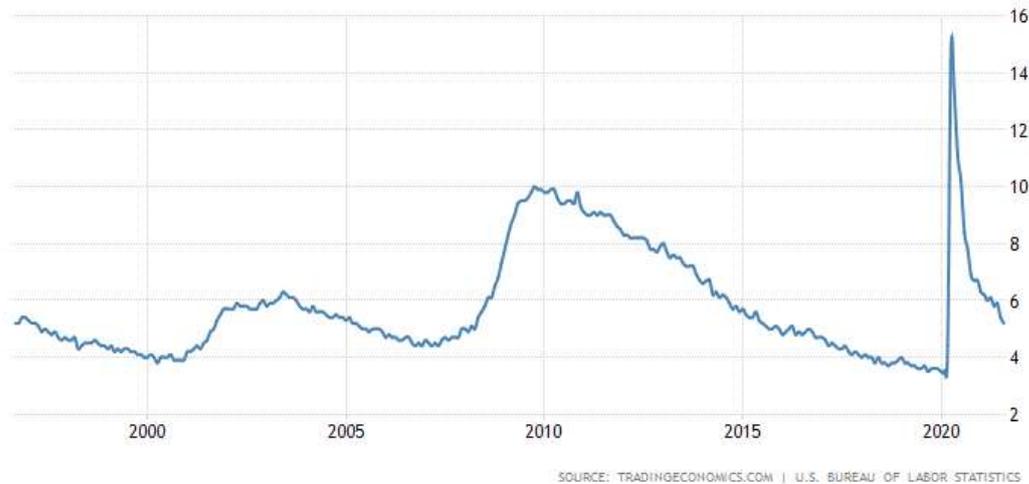


1980s traded its production lines for western world-style offices of banking and hi-tech giants. Hong Kong successfully kick-started an education system to support such a rapid change and successfully provided vocational training to factory workers whose factories were relocated to China. Hong Kong's success is evident in its unemployment figures, as can be seen in figure 7.



**Figure 7:** Unemployment in Hong Kong from 1981 until 2021 (taken from Trading Economics)

Conversely, a bad example for coping with structural changes can be seen in the US these days. Many US-based production lines and factories were deemed obsolete, following the influx of cheap imported products that have rendered these factories economically inviable. Another industry that faced its coming collapse is the coal mine industry because coal is one of the most polluting fossil fuels. The Trump administration attempted to fight the death of these two economic sectors, and while his valiant efforts were for a good cause and were able to counteract these trends to a certain degree, his achievements were in no way unique (unemployment rates in the US have been falling steadily from 2010, as can be seen in figure 8), and may prove problematic in the future, given that the structural problems were not fully avoided.



**Figure 8:** Unemployment in the US from 1996 to 2021 (taken from Trading Economics)

## Implications of Public Debt

Public debt is essentially much like an individual taking a loan. Sometimes it can be the key to foster his economic growth and to help him invest his money so that it generates greater yields than the interest paid for the loan. However, sometimes loans, and particularly too many loans, can overwhelm a person and act as a weight that slows his progress down. There are 4 main implications of public debt:

1. Interest payments have an alternative cost – these funds could have been used for improving social welfare, improving social services, cutting taxes, etcetera.
2. Bonds sold to back these loans come at the expense of domestic investment, therefore naturally causing a contraction in the economy.
3. As public debt rises, the state's ability to obtain more loans decreases, and as a result, it has far less flexibility in responding to emerging crises.
4. When greatly indebted, further loans may only be obtained for higher interest rates, as investors' confidence in the country's ability to pay back decreases, and they demand greater yields on their investments. This can further aggravate the problems mentioned in section 1 and may



disincentivize investment and consumer spending, thereby aggravating the problems mentioned in section 2.

As a result, carefully planning debt goals is instrumental in maintaining a healthy and balanced economy and reducing the scope of the aforementioned implications.

## Current Situation

### **The 2007-2008 Financial Crisis and Quantitative Easing**

The 2007 financial crisis, or also known as the sub-prime crisis, was the result of a dangerous mortgage policy implemented by the US banks and supported by the US government. In the early 2000s following deregulation in the mortgage market and a sharp decline in interest rates, banks have begun approving high-risk high-interest mortgages for risky borrowers, sometimes up to 110% of the property's purchase price (for comparison, in Israel borrowers are only allowed to receive mortgages up to 70% of the property's purchase price, in order to reduce risk). These risky borrowers were called subprime borrowers, hence the crisis' name.

The lenders were highly satisfied with their subprime borrowers since they were able to charge them higher interest rates to compensate for the added risk. The lenders used MBS (Mortgage Backed Securities) in order to finance these loans, which reduced their risk and allowed them to mainly operate as a moderator who collected its commission. The lenders' ambition to provide more loans led to further deregulation which led to more loans being granted to more subprime borrowers.

In 2006, the bubble had begun to burst when interest rates rose, housing prices declined, and the first wave of mortgage defaults emerged. When borrowers default on their mortgage, their house is sold to the bank as a guarantee. This created an influx of houses for sale, which caused a decline in housing prices. This decline caused many mortgages to become overvalued, which led to more waves of mortgage defaults. These waves caused MBS holders and almost every single



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player involved in the housing industry and the banking industry to crash, thereby leading to the 2008 financial crisis.

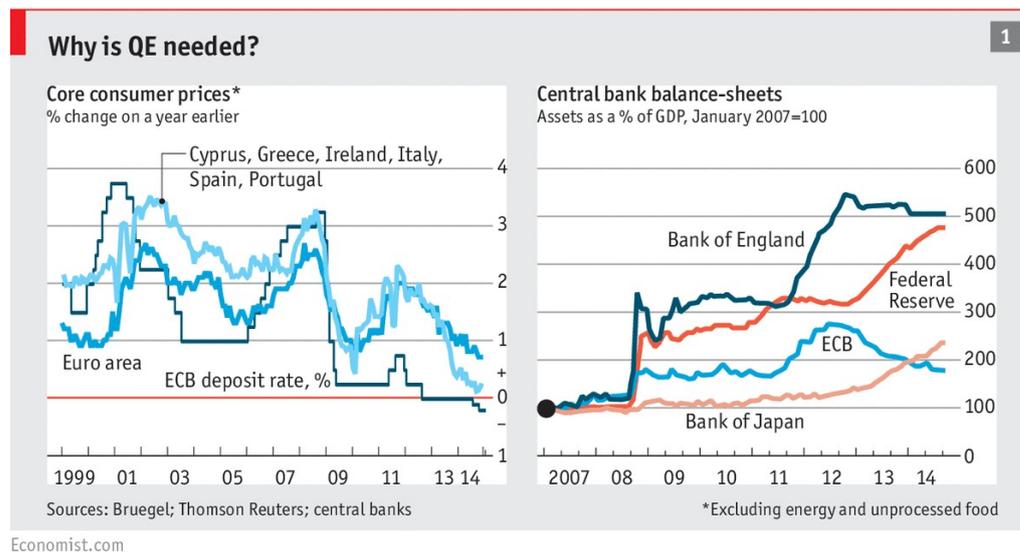
The 2008 financial crisis was a direct continuation of the sub-prime crisis, but it reached far beyond the USA. It was kickstarted by the collapse of the Lehman Brothers, the 4<sup>th</sup> largest investment bank in the USA. This collapse alongside many other giants such as Fannie Mae and Freddie Mac who were on the verge of collapse sent shockwaves in the US stock exchange, which triggered responses in stock exchanges worldwide from Southeast Asia to Western Europe.

Quantitative Easing (or QE) was one of the most important economic tools in order to promote economic growth and recover from the recession of 2008. QE is a relatively new concept invented in Japan in the 1990s and classified as a monetary tool. It essentially involves central banks purchasing large, predetermined sums of government bonds and/or financial assets in order to both inject money into the economy as well as to increase the prices of such bonds and services, and thus lower their yields and encourage alternative investments. QE is often used after exhausting other monetary stimuli, primarily when interest rates are nearing 0%, a situation that is a strong characteristic of monetary policy in the 21<sup>st</sup> century.

While its extent differed from one country to the next, QE was implemented worldwide after the 2007-2008 financial crisis. In the US, for instance, it was carried out in 3 rounds, from November 2008 until September 2012. Purchases were finally halted in 2014 after the US Federal Reserve accumulated roughly 4.5 trillion USD worth of financial assets (compared to less than 800 billion USD before 2008).



**Figure 9:** Total amount of assets and MBS held by the Fed over time (taken from Wikipedia)



**Figure 10:** QE as a share of GDP over time across different countries (taken from the Economist)

## COVID-19 and Public Debt

Nearly no other event influenced the world as much as COVID-19. In the first quarter of 2020, most countries in the world have almost stopped everything. People were self-isolating at home, the roads were empty, and planes were grounded. This situation has produced incredible pictures – an empty Champs-Élysée, swans swimming in Venice’s canals, dolphins nearing the shores of Sardinia, and moose rambling the streets of Tokyo.



The possibility of becoming infected with COVID-19 has long terrified governments worldwide as well as the general public, and thus many non-essential economic sectors, such as tourism and entertainment faced a sharp decline in economic activity, whether as a result of a formulated government policy or as a result of fear from infections. As a result, many people were fired from their jobs, and unemployment rates rose globally.

Governments worldwide immediately responded with substantial support packages including fiscal and monetary stimuli, starring quantitative easing measures. In the US alone, the Federal Reserve System implemented a whopping 2.7 trillion USD quantitative easing support packages – the first 700 billion in March 2020, and the rest throughout the summer of 2020. Meanwhile, the EU announced a 750-billion-euro support package to help mitigate the pandemic's economic implications.

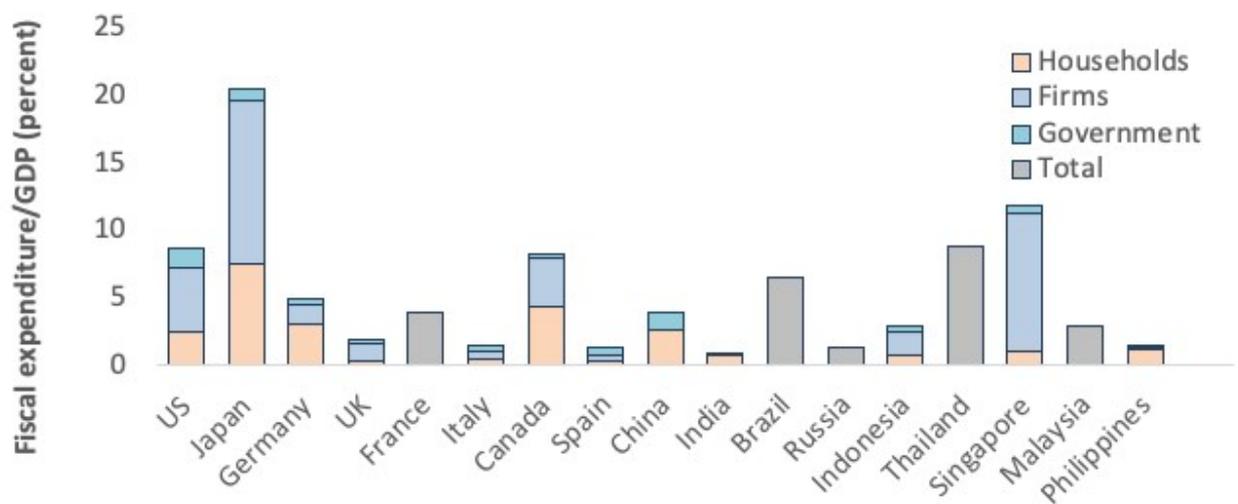


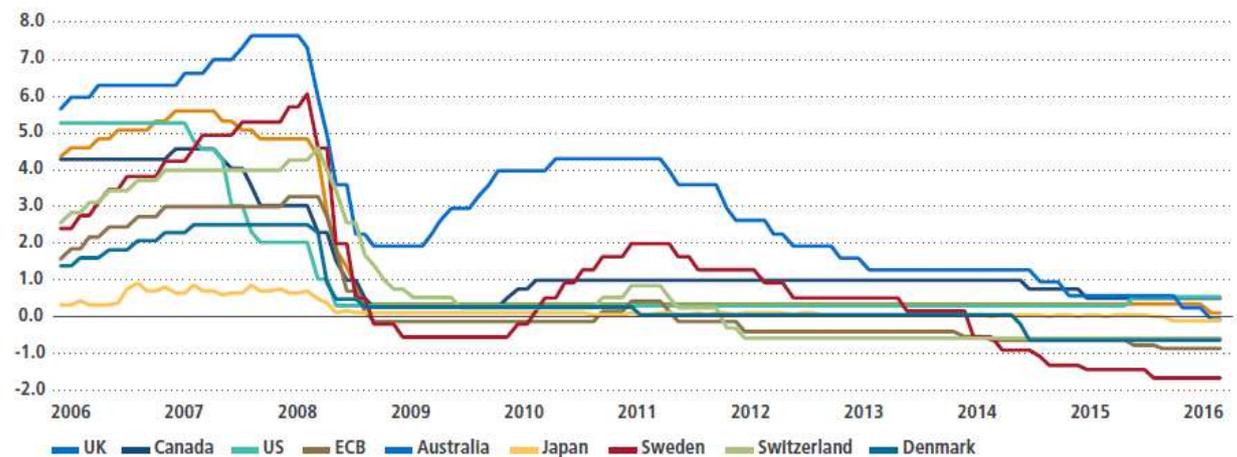
Figure 11: COVID-19 support packages as a share of GDP as of May 2020 (taken from Vox)

When faced with the economic challenge that is COVID-19, the global economy had one key monetary instrument disabled – the interest rate. Following the 2008 financial crisis, many countries worldwide kept their interest rates near or even below 0% (as can be seen in figure 12), and thus were not able to reduce it further.



These low-interest rates were also accompanied by ever-increasing public debt figures (see figure 1), therefore creating a substantially risky environment to encounter and mitigate a global crisis of such magnitude.

FIGURE 1: GLOBAL CENTRAL BANK RATES



Source: Bloomberg as of 17 October 2016

**Figure 12:** Interest rates of OECD members and the ECB 2006-2016 (taken from PIMCO)

Ever since then, vaccines were introduced, and many countries, mainly wealthy OECD members, were able to vaccinate the vast majority of their population, and thus enter a new norm, and a certain resurgence of non-essential economic sectors such as tourism, entertainment, leisure activities, etc. Yet, it is clear that the COVID-19 pandemic has caused temporary structural changes in the labor market that may last for years to come, as global control of the pandemic is out of sight and may only be achieved in the distant future.

Meanwhile, many countries are very far from herd immunity and thus, face many challenges. First, due to high infection rates, these countries can cause the development of new variants that can potentially render vaccines ineffective. Additionally, these countries can face great economic trouble – either from rising health expenses, the collapse of markets and economic sectors, an ever-increasing public debt, or rather from a combination of those problems.



## Conclusion

COVID-19 is perhaps one of the greatest economic challenges that the world has ever faced. It is a naturally unpredictable situation that has far-reaching economic implications. Nearly every single economy has taken a significant burden of public debt as a result of the pandemic, at a time of near-zero interest rates and ever-increasing public debt figures.

The end of 2021 seems to be a major crossroads for the world and particularly for the G20. On one hand, many countries, and particularly G20 members, have seen the emergence of a new normal of living alongside the pandemic with the help of vaccines, and on the other hand, many economies worldwide were pushed to the extreme and may crack under the pressure in the near future. As a result, it is crucially important to properly implement an expansionary policy while attempting to avoid increasing public debt.

Properly managing public debt can be a much-needed lifeline for many economies, however, choosing such policy independently will harm an economy's relative growth compared to the rest of the world and can thus lead to adverse economic consequences. As a result, multilateral coordination may be required in order to avoid this prisoner's dilemma.

Another issue at hand is the least economically developed countries (LEDCs) which may require foreign assistance in order to avoid adverse economic implications of the pandemic. However, in a time of such great debt, providing such aid is not an easy feat, and thus the issue of foreign aid must be planned and strategized as well.

We trust you to formulate the best solutions to the issues at hand,

Your Chairs, Michal and Niv.



## Questions to Consider

### Familiarizing Questions

- How well does my country's economy perform these days?
  - Debt as a share of GDP
  - Unemployment rates
  - Interest rates
  - Growth rates
- What is the COVID-19 situation in my country?
- What fiscal and monetary steps will my country take in the near future?
- What is my country's debt goal? Does it meet those goals?

### Clash-Oriented Questions

- Is the COVID situation stable enough to enable long-term planning?
- Should debt policy be coordinated in a multinational body or left to the discretion of individual countries?
- Should countries who fail to responsibly manage their public debt be sanctioned? How exactly?
- Should the G20 formulate a uniform foreign aid policy in order to provide help to LEDCs?
- Should countries keep interest rates near 0% in the long term? What can be done to fight this kind of economic policy?
- What is the role of the G20 in ensuring monetary and fiscal coordination among its members?

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