

LUISS 

Department of Political Science
Master in International Relations

Chair of International Economics

The Impact of US Economic Sanctions in a Global Economy

Prof. Marco Magnani

SUPERVISOR

Prof. Gregory Alegi

COSUPERVISOR

Pietro Seccia Matr. 646272

CANDIDATE

Academic Year 2021/2022

INDEX

| | |
|------------------------------------------------------------------------------------------------------|-----------|
| INTRODUCTION | 6 |
| CHAPTER 1. HISTORICAL OVERVIEW OF FINANCIAL SANCTIONS FROM THE END OF THE COLD WAR UNTIL 2020 | 8 |
| 1.1 INTRODUCTION TO THE CHAPTER: THE ECONOMIC STATECRAFT | 8 |
| 1.2 A DEFINITION OF ECONOMIC SANCTIONS | 10 |
| <i>1.2.1 Financial sanctions</i> | <i>13</i> |
| 1.3 US SANCTIONS: A HISTORY | 15 |
| <i>1.3.1 The framework coming out of WW2</i> | <i>17</i> |
| <i>1.3.2 The sanctions Decade</i> | <i>20</i> |
| <i>1.3.3 Sanctions and the War on Terror</i> | <i>22</i> |
| <i>1.3.4 US sanctions under President Obama : targeting Iran, the JCPOA and 2014's Russia</i> | <i>23</i> |
| <i>1.3.5 Sanctions under the Trump administration</i> | <i>26</i> |
| 1.4 THE EMERGENCE OF SECONDARY SANCTIONS | 28 |
| CHAPTER 2. CASE STUDY: RUSSIA | 31 |
| 2.1 INTRODUCTION TO THE CHAPTER: THE PECULIARITY OF THE RUSSIAN CASE | 31 |
| 2.2 RUSSIA'S ECONOMIC MODEL | 32 |
| <i>2.2.1 Russia's exports</i> | <i>35</i> |
| <i>2.2.2 Russia's imports and its role in the Global Value Chain</i> | <i>36</i> |
| 2.3 SANCTIONERS' STRATEGY | 38 |
| 2.4 EFFECTS OF ECONOMIC SANCTIONS ON THE RUSSIA ECONOMY | 39 |
| <i>2.4.1 Donbas sanctions</i> | <i>40</i> |
| <i>2.4.2 Key differences in Western sanctions</i> | <i>41</i> |
| <i>2.4.3 The Strategy behind the Russian Response</i> | <i>41</i> |
| <i>2.4.4 Sanctions and the energy industry</i> | <i>43</i> |
| <i>2.4.5 Financial Sanctions</i> | <i>44</i> |
| 2.5 RUSSIA'S RESPONSE | 45 |
| <i>2.5.1 Replacing Western Capital</i> | <i>45</i> |
| <i>2.5.2 Currency and Payment systems</i> | <i>45</i> |
| <i>2.5.3 Did these efforts succeed?</i> | <i>47</i> |
| <i>2.5.4 Russia's pivot to Asia: facing reality</i> | <i>48</i> |
| 2.6 2022 SANCTIONS | 49 |
| <i>2.6.1 Russia's protective measures</i> | <i>50</i> |

2.6.2 *The critical juncture of Europe’s energy dependency* 50

2.6.3 *Contraband* 52

2.6.4 *Beijing and Delhi devise alternative routes* 53

2.6.5 *Future implications of US economic sanctions* 53

CHAPTER 3. US-CHINA AND THE WEAPONIZATION OF INTERDEPENDENCE 56

3.1 THE GLOBAL FINANCIAL NETWORK AND WEAPONIZED INTERDEPENDENCE 56

3.1.1 *The Dollar Hegemony* 57

3.1.2 *SWIFT and the Weaponization of Finance* 59

3.2 THE PROBABLE CHALLENGER 60

3.2.1 *Central Bank Digital Currencies and the e-CNY* 61

3.2.2 *CBDC as a network* 62

3.2.3 *m-Bridge* 63

3.2.4 *Chinese digital payments in Africa* 63

3.2.5 *The Cross-Border Interbank Payment System (CIPS)* 64

3.3 THE WEAPONIZATION OF GLOBAL VALUE CHAINS: THE CASE OF 5G AND HUAWEI 65

3.3.1 *Huawei’s response to sanctions* 67

3.4 THE PROSPECTS OF A FRAGMENTED GLOBAL ECONOMY 68

CONCLUSIONS 70

BIBLIOGRAPHY 72

SUMMARY 79

TABLES AND FIGURES

FIGURE 1 SHARE OF ECONOMIC SANCTIONS BY SENDER COUNTRIES. 11

FIGURE 2 NUMBER OF US SANCTIONS BY THE OFFICE OF FOREIGN ASSET CONTROL. 12

FIGURE 3 SECONDARY SANCTIONS. TARGETS BY SECTOR FROM 2010–2021 29

FIGURE 4 OIL PRICE AND GDP GROWTH OF VLADIMIR PUTIN'S RUSSIA 33

FIGURE 5 RUSSIAN EXPORTS BY CATHEGORY 36

FIGURE 6 RUSSIAN IMPORTS BY SECTOR AND IMPORTED GOODS AND SERVICES AS PERCENTAGE OF RUSSIAN GDP 37

FIGURE 7 RUSSIA’S PARTICIPATION IN GVCS AND THE TEN MOST DEPENDENT MARKETS ON IMPORTS FROM RUSSIA 38

FIGURE 8 CURRENCY COMPOSITION OF SETTLEMENTS FOR GOODS AND SERVICES INFLOW. 47

FIGURE 9 RUSSIAN GAS EXPORTS IN THE WORLD ENERGY OUTLOOK 2022 VS. 2021 51

FIGURE 10 RUSSIAN OIL EXPORTS IN THE WORLD ENERGY OUTLOOK 2022 VS. 2021 51

FIGURE 11 RUSSIA'S GDP EVOLUTION FROM 2018 TO 2023 55

TABLE 1 2019 MARKET SHARES FOR MAJOR DOMESTIC AND FOREIGN WAFER FABRICATION EQUIPMENT VENDORS 66

Introduction

In April 2018, the US imposed economic sanctions on seven Russian oligarchs and seventeen government officials, along with several state-owned companies, in response to Russia's interference in the 2016 US presidential election and its actions in Ukraine. One of the individuals targeted was Oleg Deripaska, a billionaire businessman and close ally of Russian President Vladimir Putin. The sanctions froze Deripaska's US assets and prohibited US individuals from conducting transactions with him or his companies, including the aluminium giant Rusal. The impact was swift: Rusal's share price plummeted, and the company struggled to refinance its debt and secure raw materials. The sanctions also caused a major disruption in the global aluminium market, as Rusal was one of the largest producers of the metal and its products were used in a wide range of industries, including construction, automotive, and packaging. This led to a surge in aluminium prices, which in turn raised costs for companies that use aluminium in their products. The sanctions also created uncertainty in the market, as companies and investors wondered what the long-term implications of the sanctions would be and how they would affect Rusal's ability to continue operating.

This is just one example on how economic sanctions can have a ripple effect on the global economy. Economic sanctions have been a foreign policy tool adopted by the US government since its inception to achieve its goals and address national security concerns. It was after the end of the Cold War, in what became known as the “sanctions’ decade”, that the number of economic sanctions started to increase consistently, eventually skyrocketing in the 2010s. Over time, the use of economic sanctions has evolved to encompass a broader range of targets and objectives, including the fight against terrorism, non-proliferation efforts, and cyber security. The rise of globalization and the interconnected nature of the world's economies have also influenced the use of economic sanctions, as they now often target individuals, companies, and entire industries, leading to complex and far-reaching effects on the global economy. By using economic sanctions as a tool to exert pressure on other countries, the US has effectively weaponized interdependence and global value chains for political purposes. This has caused significant disruptions in international trade and investment, leading to consequences such as higher costs of goods and services, and complications in global supply chains.

As a result, sanctioned countries like Russia, Iran, and China have strived for more independence from the US led financial system and its dominant currency, the US dollar. This has led to the development of new financial institutions, trade agreements, and other economic relationships that bypass traditional US-led channels. Russia has been working to reduce its dependence on the US dollar in international trade since 2014 and Iran has

similarly sought to reduce its reliance on the US financial system and has been working to develop alternative financial channels to bypass US sanctions.

In this way, the use of economic sanctions by the US has not only had significant impacts on the global economy, but it has also encouraged the development of alternative economic systems and relationships. These developments are likely to have far-reaching implications for the future of the global economy and the role of the US in it.

This thesis aims to answer the question on how countries, specifically taking as case studies Russia and China, have tried to respond to US economic sanctions by developing alternative systems beyond Washington's reach and if this is leading to an erosion of US global dominance through the creation of a fragmented global economy.

The first chapter gives an historical background of US economic sanction's history from the birth of the republic until the end of the Trump Presidency. The second chapter presents the case study of Russia. First, an economic overview of the Russian Federation is given which is followed by an analysis on the US economic sanctions imposed on Russia in 2014, after the latter's annexation of Crimea and occupation of the Donbass, and in 2022, after the full-scale invasion of Ukraine. The focus of the chapter is the response of the Kremlin to US sanctions, diversification of its exports and of the currency used and the creation of alternative financial payment systems to bypass US-controlled ones.

The last chapter is an analysis on the US weaponization of networks and global value chain and the Chinese response to it. The first half concentrates on the weaponization of financial networks by the US and the consequential steps taken by China. The Beijing government's main steps in the field of Central Bank Digital Currencies (CBDC), the Cross-Border Interbank Payment System settlement system, and the use of multilateral fora to address the issue are explored. In the second half of the chapter there is a more focused analysis on the US weaponization of the chip's global value chain involving Huawei and on China's attempt to address it.

The increasingly established practice of weaponization of interdependence is leading countries to re-evaluate interdependence. In this study I analysed how this has led countries not aligned with Washington to seek alternative routes in areas where the US controls chokepoints, such as international finance and advanced chip production. However, there are also other areas where other countries, such as China with rare earths, perceive their position of strength and could weaponize it. An acceleration of these trends could lead more rapidly towards a fragmentation of the global economy.

Chapter 1. Historical overview of financial sanctions from the end of the Cold War until 2020

1.1 Introduction to the Chapter: The Economic Statecraft

Giving a definition to economic sanctions can prove to be a daunting task since, depending on it, certain types of measures can either be included or excluded.

Economic sanctions are just a part of the broader spectrum of measures that fall under Economic Statecraft. Economic statecraft in foreign policy is in fact implemented through multiple measures among which there are mainly strategic embargoes, economic sanctions, cold economic warfare, and economic warfare. It is often difficult to distinguish these measures from each other since they are complementary and thus are frequently used concurrently (Dobson and Ebrary 2002).

The first differentiation that can be made is the one between trade wars, economic warfare, and economic sanctions (Pape, 1997). A trade war occurs when a state threatens or inflicts economic harm to compel the target state to accept trade terms that are more advantageous to the coercing party. The objective of trade war is not one of changing the target state's political conduct as for economic sanctions but to substitute the target's international economic policies. Trade wars usually involve established trading partners because they aim to alter the course of ongoing trade relations. The price adjustment the target state receives, or must pay, for an impacted commodity or service is therefore the most crucial indicator of the magnitude of a trade war.

An example of a trade war was the one between the United States and Japan in the 1980s, when the former imposed, along with monetary measures, voluntary export controls on Japanese industries such as automobiles. These measures were taken by the U.S. administration due to the relative competitiveness of Japanese cars, given the relative appreciation of the dollar.

The second distinction would be the one between economic warfare and economic sanctions. In an ongoing conflict or a peaceful arms race, economic warfare aims to reduce an enemy's overall economic potential to diminish its military prowess. Economic warfare's primary objective is not the infliction of economic pain on

the target but rather its change in military production. Economic warfare focus is a lot more on supply chains and a niche of international trade aiming at the military sector in the target country.

A further differentiation can be made between economic warfare, which involves military action, such as blockades and strategic embargoes, and cold economic warfare, which is conducted without military actions in times of peace (Dobson and Ebrary 2002).

The literature, however, is not unanimous on this distinction of different international economic weapons. For example, Baldwin (1985), contends that the definition of economic sanctions should entail all sides of economic statecraft including trade disputes, trade wars and economic warfare.

This all-encompassing view of sanctions becomes problematic especially when trying to assess the effects of such measures, since, for example, states subject to economic sanctions do not respond with the same rationality as those part of a trade dispute. In fact, states involved in trade disputes have wealth maximisation as the primary driver of their reasoning, whereas when they are sanctioned states must balance political objectives with the imposed economic costs of sanctions (Pape, 1997).

Robert Pape believes that differentiating between instruments of economic statecraft is crucial in studying their implications.

The author takes as examples two similar instruments of economic statecraft: trade war and economic sanctions. Pape claims that trade war should be separated from sanctions due to the discrepancy in the effects of measures such as Japanese voluntary export control, defined as trade war, and U.N. sanctions imposed on Iraq, clearly part of economic sanctions.

Different types of economic statecraft can be distinguished not only by the effects they have on target but mainly by their goals. For example, economic warfare has as its primary goal the reduction of the target's military capabilities. However, this plays into a broader military engagement which does not recognise economic sanctions as its primary driver (Pape, 1997). Though, we could have a mix of both measures. An example is the blockade of Germany during World War I, which qualified both as a measure of economic warfare and of economic sanction, since it was designed to decrease German military power as well as to inflict damage that would force Germany to surrender. The military aspect of the blockade was successful, given that Germany struggled to replenish its military, though the same cannot be said about the economic sanctions, given that no popular pressure demanding policy change arose within Germany (ibidem).

This thesis mainly looks upon economic sanctions, but it also tackles other aspects of economic statecraft, both from the sender's and the receiver's perspective.

Having established what distinguishes the types of international economic weapons, this research will now try to provide a definition of economic sanctions.

1.2 A definition of economic sanctions

Hufbauer et al. (2007) define economic sanctions as the intentional, government-instigated threat or suspension of customary commercial or financial relations, to change the target state's political behaviour. Customary refers to trade and financial activity levels that would have most likely taken place in the absence of sanctions. What distinguishes sanctions from one another is how they differ in three principal characteristics: the goals, the number of senders and their content.

According to Barber (1979), three types of goals or objectives can be distinguished: primary, secondary, and tertiary objectives. The target state's actions and behaviours are the focus of the primary objectives. The primary objectives of sanctions can vary from pursuing internal political change to deterring the target from attempting an offensive action. The actions taken in pursuance of primary objectives also include reprisals for breaching international norms or the act of bringing a misbehaving regional alliance member back.

Secondary goals are related to the standing, reputation, and expectations of the sending government; specifically, they aim to show to the public, both at home and abroad, that they are ready and able to act. Secondary goals are characterised both by positive and negative elements: the formers are intended to demonstrate the resolution of the sanctioner, and the latter are meant to anticipate or deflect criticism. Secondary goals frequently include a significant symbolic component. Economic coercion, due to its powerful symbolic function, is often used by governments to achieve its secondary objectives (Schreiber, 1973).

Ultimately, tertiary objectives focus on broader international issues.

They involve a deterrence component since their main concern involves the framework and behaviour of the international system, or those aspects of it that have an impact on the imposing states. Tertiary goals have as objectives the defence of the status quo that could be a structure or organisation, an alliance, an international body, or the adherence by the targeted state to international law.

Evaluation of secondary and tertiary objectives is very difficult to assess given the elusiveness of some objectives (such as the prestige of an imposing state) and the complexity of others (such as the layout of the international system).

Different approaches exist on the classification of the goals or objectives of economic sanctions. Giumelli (2013) analyses sanctions based on the effect that they plan to have on the sender or to a broader audience: to coerce, to constrain and to signal.

Galtung (1967) views economic sanctions as a tool to punish the receivers and make them follow the sender’s demands. In fact, most scholars of economic sanctions focus their studies on the compliance aspects since it has measurable data and takes into account the target’s changing behaviour post application of sanctions.

The second parameter of sanctions is the number and composition of sender countries. The range can go from unilateral sanctions to universal sanctions, such as the ones adopted by the UN Security Council. Until the 2000s, the United States imposed sanctions in around 35% of overall cases, usually accompanied by a posse of allies (Global Sanctions Data Base, 2020). The former Soviet Union, the United Kingdom, and the European Union were next in line (Figure 1).

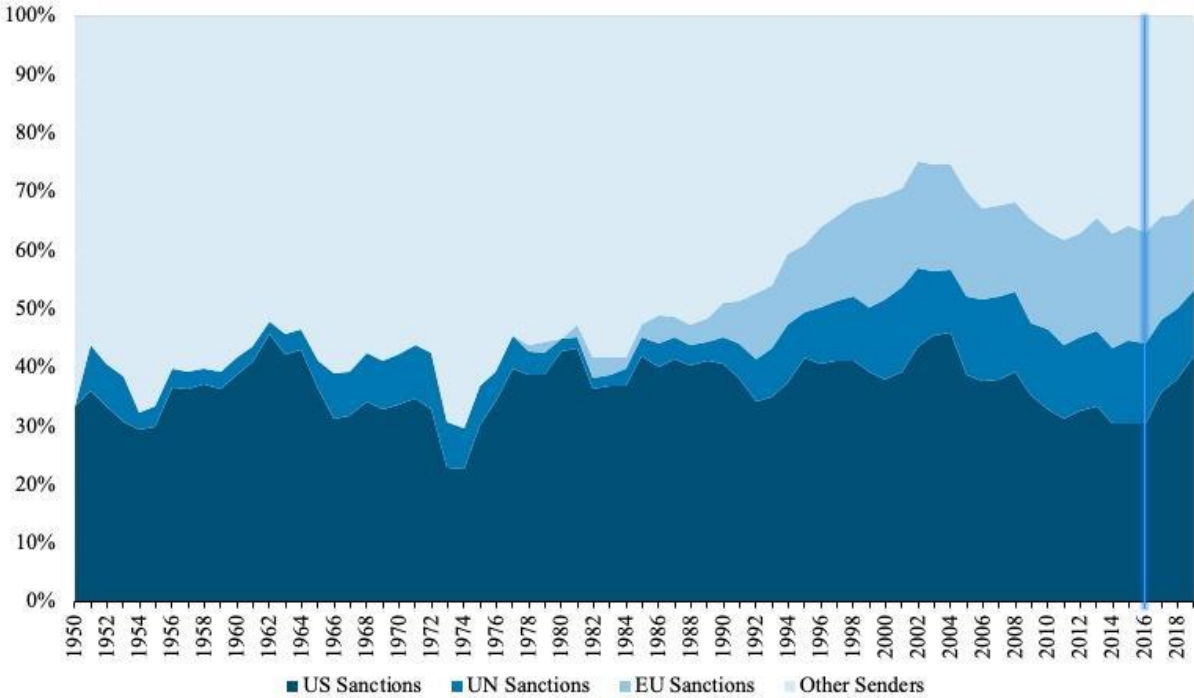


Figure 1 Share of Economic Sanctions by sender countries.

Source: Data from the Global Sanctions Data Base (Yotov et al. 2021) <https://cepr.org/voxeu/columns/global-sanctions-data-base-mapping-international-sanction-policies-1950-2019>

After the Cold War ended in 1990, the US occasionally succeeded in getting UN Security Council resolutions that included purportedly committed sending nations. At that time, US targets were dispersed throughout the world, Russian’s were focused on nearby nations, UK and EU targets were primarily in Africa (even though the

UK often sided with the US in the latter's comprehensive sanctions). In the last decades, due to the latest geopolitical shifts new actors and targets emerged and the advent of new technologies changed the way in which sanctions are implemented.

These changes contributed to the number of sanctions skyrocketing in the last decades (Figure 2).

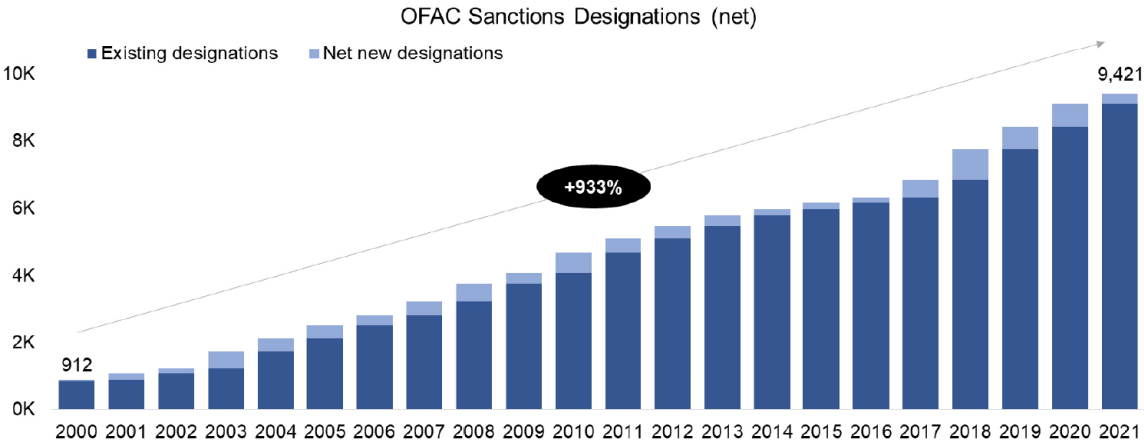


Figure 2 Number of US Sanctions by the Office of Foreign Asset Control.

Source: US department of the Treasury OFAC

The content of sanctions is the third determinant used in the classification. Trade restrictions and finance limitations are the two types of international economic weapons, and each one can be used to varied degrees of intensity and effect.

The restrictions of trade have been historically used in times of war until the establishment of the League of Nations in the 1920s (Alexander, 2009).

Trade restrictions focus on limiting the targeted country's exports and its imports. When the aim is restricting the revenue resources of a country, the country's export market is targeted. This leads to a reduction in the country's foreign exchange earnings.

In Hufbauer et al. (2007) studies it is highlighted how countries use export controls more than import controls. Applied to US measures it can be narrowed down to two main reasons. First, the sender country usually finds itself in a dominant market position, meaning that it is the source of supply for essential exports to the target. The target can often shift to a different buyer of its exports, but it is difficult to replace certain imports, especially when dealing with innovative technological equipment and military hardware. The higher strain on replacing high-technology imports vis a vis redirecting exports, which are often commodities, is the first reason

why it is more effective to enforce restrictions on the target's imports, rather than its exports. Though, since the end of World War II the know-how for the development of sophisticated technologies reached far beyond the US and European border, making it easier than previously to create an autonomous sector or diversify importers.

The second reason for the pre-eminence of export sanctions is specific to the US polity.¹ The president has been given much more freedom by Congress to limit exports than to halt imports. Furthermore, import restrictions are seen as a violation of the spirit of international trade obligations, even though Article XXI of the General Agreement on Tariffs and Trade (GATT) permits restrictions in the cases of national security objectives (Hufbauer et al. 2007).

1.2.1 Financial sanctions

Financial sanctions aim at limiting a country's ability to operate on the international financial system. In their studies Hufbauer et al. analyse 174 cases of economic sanctions spanning from the first World War until the early 2000s. They found the interruption of development assistance as the most prevalent kind of financial sanction.

The first broad use of financial sanctions was during World War I when British Intelligence introduced a system of 'blacklisting' the names of persons or entities of neutral third countries who were known or suspected of acting on behalf, or for the benefit, of the Germans (Alexander 2009). This system was integrated by the US through the Trading with The Enemy Act (TWEA) of 1917. The blacklist was deemed to be effective and a relevant factor in the defeat of Germany (ibidem). A similar system was then used during WWII: cooperation on a new blacklist between the two parties of the Special Relationship began in 1939, and by the beginning of the war it was a comprehensive list revealing more information about the financial holdings and trade preferences of foreign nationals working for the Axis nations. The next major innovation in financial sanctions came in the 1990s when targeted, also known as "smart", sanctions began to be frequently used. Before the end of the Cold War there was little to no-consideration for the humanitarian impact of sanctions. This was mainly because sanctions were never comprehensive, given that if one side, the Western or the Eastern bloc, sanctioned a state, the latter could ultimately switch to trading with the other faction. Furthermore, the Security Council, given its paralysis due to the Cold War, could not issue large scale measures. With very few exceptions, this led to a lack of concern for the humanitarian effects of sanctions (Gordon 2011).

¹ Exports May be stopped readily through the mechanisms of the Export Administration Act, whose authorities have been maintained by executive order issued under the International Emergency Economic Powers Act of 1977 (IEEPA). Presidential authority also exists to curtail imports—for example, under the national security provision (section 232) of the Trade Expansion Act of 1962, under preexisting quota legislation that covers sugar, and under IEEPA.

The only two mandatory economic sanctions issued by the Security Council before 1989 were the ones against Southern Rhodesia from 1966 that lasted until 1977 and the ones against South Africa from 1977 to 1990. Both regimes of sanctions were enforced because of the imposition in the country of a white minority rule that denied political, social, and economic rights to the majority of the population.

Then in 1989 the Berlin wall fell and after two years the entire Soviet apparatus crumbled, leaving the United States as the hegemon player on the world stage for the following decade. The End of History meant that comprehensive sanctions could be applied without the risk of a black knight². Under the leadership of the UN Security Council, 12 sanction regimes throughout the 1990s were imposed. Among these sanctions were the ones imposed on Iraq in August 1990, on Yugoslavia in May 1992 and the ones imposed on Haiti in 1994. These comprehensive sanctions have been described as disproportionately affecting the civilian population and even as tools of “mass destruction” (Mueller and Mueller 1999). In 1995, the UN Security Council permanent members recognized the destructive side-effects of the comprehensive sanctions program. The UN started developing smart sanctions in reaction to the severe social costs of the UN sanction program on Iraq. In April 1995 the Oil-for-Food Programme was established through Resolution 986, to mitigate the negative effects that the sanctions had on Iraqi civilians (Biersteker and Hudáková 2021). Following that, several targeted sanctions were developed. It was made possible by a transnational policy network of experts in sanctions design and implementation, including UN Member State officials. A sanction reform process developed through meetings between 1998 and 2003. These were crucial in the development of a UN framework on targeted sanctions, specifically one that included asset freezes, arms embargoes and travel bans which became the prevalent types of smart sanctions (Biersteker and Hudáková 2021). These sessions also set the groundwork for the sanction’s regimes of the EU and the U.S., especially given that since 2000 most of their sanctions became targeted. Since comprehensive sanctions are an all-or-nothing policy tool, any indication of their relaxation could be seen as a show of weakness or a waning of the sanctioning parties' commitment. Conversely, targeted punishments are far more adaptable, being strengthened or dampened according to the response of the sanctioned country (Biersteker et al. 2018). They are therefore more effective when used in conjunction with other policy measures leaving space for negotiations.

The centrality of the U.S. and its allies to the world financial system has led to the increasing use of financial sanctions in the post-9/11 world.

By denying US trading partners the access to US exports and imports and limiting their access to US capital, a carefully crafted trade and financial policy could impose significant costs. This is because of the relative openness and size of the US economy in terms of international trade, direct investment, and financial

² wealthy and powerful allies that the target state can turn to when is under sanctions

transactions compared to most other countries. Hereafter financial sanctions are explained as the components of a more comprehensive economic sanctions strategy.

1.3 US Sanctions: a history

The US has experienced the implementation of sanctions in warfare even before its inception. The first economic sanctions applied by the colonies was to boycott English goods, in retaliation for the UK Parliament's passing of the Stamp Act in 1765 (Alexander 2009). The two key political philosophies that characterised the foreign policy of the United States are at the base of the country's sanction policies. These two policies are antithetical and have characterised American foreign policy since the country's foundation: isolationism and internationalism. Isolationism grew out of the need to safeguard the Republic's integrity from being contaminated by Europe's corrupt political system as well as the risk of becoming caught up in its dynastic power struggles. Internationalism was also born out of an awareness of American exceptionalism, but it had a different goal: to export this exceptionalism abroad while advancing American economic interests. Both philosophies grew out of pride in American society and system of government and were part of the contrasting approaches on foreign policy at the heart of the constitutional debates of the founding fathers. The two stances on US foreign policy approach are clearly exemplified by Thomas Jefferson, the first Secretary of State, and Alexander Hamilton, the first Secretary of the treasury. While Jefferson looked to the future and saw the US standing as an example for others, fiercely protecting its integrity without much engagement abroad, Hamilton preferred the development of the U.S. as an industrial and commercial nation capable of projecting its power abroad. George Washington's stance on foreign policy represented a middle ground between the idealism of internationalism and the realist perspective of isolationism. Washington favoured an expansion of trade and commerce while keeping away from political and military ties (Dobson and Ebrary 2002). The United States, throughout its history, has repeatedly shifted from an idealist to a realist position and vice versa. This was the result of changes in the administrations and circumstantial factors. The Republic, in its first century of life, certainly took a more isolationist stance, due to the position of economic and military inferiority that it held in comparison to the old continent. The Monroe Doctrine of 1823 was the maximum expression of isolationism, nevertheless it would not have been possible without the silent British approval which, with its navy, allowed the United States not to be harassed by European states. Later, with the expansion of the economy, trade, and colonial acquisitions the need for defending its "sphere of influence" grew proportionally. Internationalism grew as the US took a more decisive step in international trade and started to wage its economic power first in its continent and then overseas. Moreover, the military developments of the 1930s reduced the effectiveness of the two oceans as buffers from the world. The US stance on global trade has been one since its foundation of

neutrality. However, this stance was proving increasingly difficult to maintain due to the growing US commerce and power which could be decisive in the assertion of US interests on the world stage. The US tried keeping a neutral stance at the beginning of the First World War, upholding free trade, and refusing Britain's request of export controls and economic sanctions towards the Central Powers (Alexander 2009). It was only after Germany's reintroduction of unrestricted submarine warfare that the US entered the war, joining in 1917 Britain's embargo policy through the Trading with the Enemy Act. The success in the war can be greatly attributed to the effectiveness of the allied blockade and the coordination between the two shores of the pond (ibidem). However, after the war, the US went back to their policy of neutrality.

Conflicting with neutrality was the rise of trade and commerce and the necessity to safeguard those interests which soon became the primary drivers of American internationalism's self-interest. Washington had proven to have a realist approach when it came to its immediate security interests, exemplified by the Mexican American war of 1846-48 and the Spanish-American war of 1898. The US throughout the nineteenth century did not have the necessity of balancing its moral precepts against power-political security demands like its European counterparts (Dobson and Ebrary 2002). The Great War was interpreted as an exception in its isolationist tradition; the position of revisionist historians of the 20s and 30s was that the US exited the war with a feeling that neutrality had not been adopted rigorously enough (Dobson and Ebrary 2002). Woodrow Wilson had intended to devise a new international securitarian system based on his "Fourteen Points" that would ensure free trade and accountability, in terms of economic sanctions and collective security enforced within the League of Nations framework, for the countries that violated international norms. However, the League found stiff opposition in the Senate because its membership was perceived as stripping the Congress of its constitutional prerogative over declarations of war. A new view of neutrality emerged in the 1930s and it was embodied by the 1935 Neutrality Law which prohibited the transfer of arms and other military hardware to any party in a conflict. The United States, to avoid conflict with belligerent states, changed its approach to neutrality. Neutrality became so important that it now aimed to limit U.S. trade when it could create friction with belligerent countries. (Dobson and Ebrary 2002). These isolationist positions helped in the creation, between the two wars of a legal framework that greatly complicated and slowed down the implementation of sanctions when, at the end of the 30s, tension rose, and the allied forces would have certainly benefited from a firm US stance (ibidem). Another emerging view on trade was the one of internationalists, which wanted the President to have more discretionality *vis a vis* the Congress to implement the Neutrality Laws, meaning arms embargo, only on the aggressor side in a state of war. The internationalists' position emerged because of the growing awareness of the increasing importance of the United States in global trade, implying that if the U.S. chose one faction over the other this would have more than tangible effects. Internationalists thought that the U.S. should use its position of strength to advance a moral standing during conflicts, by helping the aggrieved and participating in international collective security. Though, implementations of this policy, due to the low effectiveness of

internationalists in Washington, came too late to prevent the Second World War. The U.S. remained on a wait-and-see attitude regarding sanctioning Japan until the full outbreak of war. This was due to congressional resistance in repealing the Neutrality Laws which prevented the Roosevelt administration from supplying Britain with military equipment as well as the implementation of an embargo on Japan on raw materials and oil. Sanctions were imposed too late to have any real impact on Japan's ability to conduct wars, and they were implemented in such a way as to barely convey their reprimand. In addition, at the outbreak of war, U.S. authority over sanctions implementation was distributed among numerous agency departments, resulting in a slower enforcement process.

Despite all the shortcomings, the U.S was able to implement an effective sanctions policy through cooperation with the British. In fact, the British had already been preparing plans for the implementation of economic warfare for more than a decade through the Industrial Intelligence Center, gathering information on Germany's trade, which turned out to be instrumental in the deployment of the worldwide paper blockade. The paper blockade aimed at targeting world trade at the very source, blocking supplies aimed at the Axis before they could leave ports (Dobson and Ebrary 2002). The British showed the Americans how to perform economic warfare and by 1942 the US repealed its tradition of neutrality in trade becoming the "most ruthless wagers of economic warfare" (p.46, Dobson and Ebrary 2002). The US trade policies during WW2 contributed to the notion of economic statecraft that shaped American reasoning during the Cold War. US policymakers came out of the war conscious of the fact that appeasement did not work and that in the future the US not only would have had to be at the centre of the new international order but also that the country's boldness and determination would have had to be clear and effectively implemented. Signalling resolve would later be conveyed by the increasing use of sanctions and embargoes during the Cold War to nations at odds, not only to the Soviet Union but also to non-aligned states and even allies, when they did not cooperate.

1.3.1 The framework coming out of WW2

World War 2 represented a turning point in the US' foreign policy of economic statecraft.

In the previous century and a half, the United States applied trade restrictions only to belligerent countries, if at all. By 1946 the US decided that for the application of trade restrictions, the label of 'unfriendly country' to the target would suffice.

When countries were given the choice of imposing a complete embargo in violation of international norms or defending those standards and facing the possibility of losing, the issue of neutral rights in terms of principles, moral claims, and international legal claims became of distinctly secondary concern.

Given that the policy of neutrality had proven to only further the spread of the War, in addition to changing domestic policies, the United States acted to modify international policies as well, through the establishment of the new international economic order.

The new order would be led by the New Deal's philosophy of responsible capitalism and the elimination of discriminatory practices.

Secretary of the Treasury Henry Morgenthau wanted to establish the US currency as the international medium of exchange embedded within the new international monetary system.

The Lend-Lease act played a pivotal role in setting the groundwork for the establishment of the new liberal economic world order characterised by the progressive dismantling of economic barriers (Dobson and Ebrary 2002). Moreover, it promoted the creation of a comprehensive strategy that embedded economics in the foreign policy tools at the disposal of US administrations, and it paved the path for multilateral cooperation and the provision of US aid to allies during the Cold War. It was an updated version of the "open door" policy, but this time, the doorkeepers were the United States and the international organisations it aimed to establish and govern.

Under the US Constitution, the prerogative to regulate international trade and the related imposition of sanctions rests with Congress.³ Throughout American history, Congress has repeatedly delegated this authority to the President, while still retaining control of its ability to always renege power through legislative authority. The delegation of such power to the President by the Congress supports the policy's goal of encouraging the effective use of foreign policy. It does so by enabling the President to act as the executive agent of the legislature in creating and enacting sanctions measures to advance national security and foreign policy goals of the legislature.

The first time that the President was given these exceptionally broad powers was during World War I with the implementation of the TWEA (Hufbauer 1998).

The TWEA was then providing the legal basis upon which the US implemented sanctions in 1940, before the US participation in World War II. Though, initially, being devised during the war, the TWEA did not provide for the enactment by the President of sanctions policies when the country was not itself at war. This changed in 1933 when Roosevelt, in light of the Great Depression, invoked the emergency powers under section 5(b) of the TWEA and this procedure was retroactively ratified by Congress through the enactment of the Emergency Banking Act. The amendment of section 5(b) of the TWEA enabled the President to invoke unilaterally the emergency powers in time of peace.

³ The Commerce Clause as in Article 1, Section 8, Clause 3 of the United States Constitution

In April 1940, during Germany's occupation of Norway and Denmark, President Roosevelt was able, through section 5(b) to issue an order banning the transfer of any property in which the governments of the two occupied nations, or any of its citizens, had a stake. To give the President's order broad effect, the Treasury Department adopted the Foreign Funds Control Regulations. These regulations forbade foreign exchange transactions involving the property of Norway, Denmark, unless authorised by the Secretary of the Treasury (Polk, 1941). Congress, once again, approved the President's adoption of the Foreign Funds Control Regulations through the adoption of a joint resolution. The US Treasury, during the Cold War, applied the foreign assets control restrictions much as how the Foreign Funds Control Regulations were applied during World War II. The TWEA proved useful in the Korean War, enabling President Truman to declare a national emergency, delegating the Treasury to enact financial and commercial sanctions against North Korea and Communist China. The declaration of national emergency by Truman lasted 25 years and it provided the legal framework around which the following presidents applied comparable restrictions.

The President's powers in this aspect remained unchanged until 1976 when the Congress, in response to both Vietnam's war and the Watergate scandal, decided to limit the authority of the President under the TWEA, with the enactment of the National Emergencies Act (NEA), determining the end of the state of national emergency declared by Truman.

With the enactment of the NEA the Congress started to fear that the President lacked the resources to limit private international financial transactions to implement an economic sanctions strategy in times when the country was not at war.

The solution was found in the implementation of the International Emergency Economic Power Act (IEEPA), which granted the President the authority to enforce restrictions on financial transactions and any assets a designated state or its citizens had a stake in.

This time, the Congress, differently from the TWEA, placed some restrictions on the President's authority. Specifically, the President, to implement the restrictions, had to declare a national emergency during peacetime and keep the Congress informed of the findings about the application of sanctions (Alexander, 2009).⁴

The third cornerstone of legislation after the TWEA and the IEEPA regulating economic sanctions was the Export Control Act (ECA) enacted in 1949 by Congress. The ECA replaced the Neutrality Act of 1939 under which Congress had to annually reaffirm the President's authority to decide which goods might be exported and to which countries.

⁴ 50 U.S.C. secs 1701

The Export Control act was then replaced by the Export Administration Act in 1969(EAA).

The EAA carried over the three main goals of the ECA, including avoiding domestic supply shortages, promoting the economic growth of Europe and Asia, and preventing military and technological support to the Sino-Soviet bloc.

Until 1970, the US had only occasionally used export controls to further its foreign policy goals. The emergence of international terrorism and human rights violations by foreign nations led Congress and the Carter administration to amend the EAA in 1977 to respond to those threats. The provision enabled the President to tighten export restrictions on Libya in 1978 by forbidding the sale or leasing of aircraft or aviation components to US and foreign companies conducting business with the country (Alexander 2009). Next came the turn of Uganda's Idi Amin regime, which eventually collapsed the following year.

Congress amended the EAA in a significant way in 1979, and as a result, created the foundational legislative structure that was effective until 2018, when it was replaced by the Exports Control Act.

The main feature of the amendments was the distinction between controls on measures taken on foreign policy grounds and those in the realm of national security grounds. The Amendments were born out of the need of Congress to limit the President's power in implementing measures based solely on foreign policy reasons. In December 1979 following the Soviet's invasion of Afghanistan, President Carter, on national security concerns, restricted the exports of high technology and agricultural products to the Soviet Union.

Carter, by basing his sanctions on national security criteria, was trying to avoid congressional control. The new checks, restricting the President's power, would have been applied only if the sanctions were based on foreign policy objectives rather than national security ones. (Alexander 2009). In 1982 President Reagan imposed stringent export controls on the USSR to halt the construction of a gas pipeline. The sanctions were met with discontent from US businesses operating in the project, Congress, and European allies. This, in November 1982, brought the administration to lift the restrictions. In 1985 the Congress reinstated its vigilance towards the Raegan administration use of export controls by amending the EAA, restricting the President's powers to implement export restrictions without first consulting Congress. With the amendments, the Congress wanted to remedy the problem of the President's implementation of measures repealing existing contracts.

1.3.2 The sanctions Decade

Hufbauer et al. (2007) comprehensive study found that, during the Cold War, the effectiveness of US sanctions has been declining over time. It has been attributed mainly to four factors. The primary cause is ascribed to the US's relative fall in global economic power since the 1960s. Secondly, the US, starting in the 1970s, tended to take smaller steps regarding sanctions enforcement due to worries about Soviet influence and geopolitical

positioning. Thirdly, in the last decades of the cold war, the priority of sanctions shifted to export controls of key hardware, necessary for nuclear proliferation in countries such as Pakistan and India. Though, countries found alternative suppliers even in US's allies, undermining non-proliferation. Lastly, the share of financial measures fell compared to overall sanctions, due to the replacement of measures of economic restrictions by military export controls. This changed in the 1990s with the collapse of the Soviet Union: US financial sanctions geographically shifted to African nations and half of them had among its objectives the democratisation of the target (Hufbauer et al. 2009).

The end of the Cold War also replaced such a clear threat as the Soviet Union with a lack of consensual view on the national interests' objectives. This left room in US politics for other forces, such as NGOs and small constituencies to advance issues, such as respect for human rights in other countries, as grounds for implementing economic sanctions. Even when the foreign policy elite was ambivalent or opposed to sanctions, NGOs frequently succeeded in gaining congressional or state legislature support for them. Sanctions that functioned outside of struggle of the Cold-War were already tested in the mid-1970s, when the US started using unilateral economic sanctions in response to the violations of human rights, toward nations that wanted to develop their own nuclear program and against states or entities that were deemed responsible for sponsoring terrorism (Carter 1997). This initiative was stalled in the 1980s by the unilateral sanctions against the USSR of President Carter and Reagan.

Due to the failure and international outcry of the experience of the early 1980s, the US restrained for the rest of the decade in the application of new unilateral sanctions. In 1994, from the midterm elections, a strong Republican Congress emerged in opposition with the democratic President Clinton. The new Congress in 1996 implemented two important pieces of legislation regarding unilateral sanction: the Cuban Liberty and Democratic Solidarity Act (known as the Helms-Burton Act) and the Iran-Libya Sanctions Act (ILSA). Already in 1995 President Clinton executed a sequence of executive orders which forbade any US financial, commercial, and trade relations with Iran (Hufbauer, Schott, and Oegg 2001). The ILSA's placed secondary boycotts on international companies that made significant investments in the Iranian or Libyan oil industry and enhanced the export restrictions and foreign asset checks that had already been in place against Tehran and Tripoli. Moreover, it codified already existing Security Council resolutions 748 and 833 which forbade the sale of aircraft components and engaging in any financial activity with Libya (Alexander 2009). Given the provisions imposing sanctions against third country investors in the oil and gas sectors of the targeted states, ILSA sparked vehement opposition from US allies which businesses had interests in investing in the target countries. However, non-US companies were exempt from sanctions. The Helms-Burton Act codified the existing U.S. economic embargo on Cuba, tying the lifting of sanctions and the provision of humanitarian assistance to precise guidelines. It also targeted through secondary boycotts Canadian, European, and Mexican businesses trading with Cuba. European

and foreign allies were opposed to both acts of Congress due to the extraterritorial measures that were taken unilaterally.

After the collapse of the USSR in 1991, the US increasingly relied on the extra-territorial application of economic sanctions. These were intended to isolate designated nations and targeted states by economically pressuring third governments to join a global system of sanction application against pariah states and other transnational organisations. The US's unilateral decision to impose extraterritorial measures reflects its hegemonic position in the global economy and its power to regulate and affect global trade and investment.

Under President George H.W. Bush, comprehensive sanctions were applied leading the UN effort against Saddam Hussein invasion of Kuwait. The focus of sanctions on Iraq then shifted to both preventing the development of weapons of mass destruction and rebuilding Iraq's military program. Bush imposed “list-based sanctions”, also known as smart sanctions, to improve human rights around the world and promote democracy. President Clinton followed suit. Under Clinton’s presidency comprehensive sanctions programmes were devised, including the ones against Iran, Sudan, and Burma. There was also the addition of smart sanctions targeting foreign government officials, members of terrorist organisations and persons linked to drug trafficking. The efforts of both Clinton and H.W. Bush, Congressional acts and the thirteen mandatory sanctions levied by the U.N. earned the 1990s the title ‘Sanctions Decade’.

1.3.3 Sanctions and the War on Terror

Since the beginning of the “War on Terror” Senior US leaders, such as Secretary of Defense Donald Rumsfeld, have indicated that success would have depended as much on financial and economic initiatives as it would have upon military operations.

Since the 1970s the US considered sanctions as a primary weapon against state backed international terrorism and it relied on two pieces of legislation: the presidential determination of Specially Designated Terrorists (SDTs), and the designation of state sponsors of terrorism and Foreign Terrorist Organizations (FTOs) (Hufbauer, Schott, and Oegg 2001).

The Section 6(j) of the EAA (1979) defines State sponsors of terrorism as countries have “provided state support for acts of international terrorism”. Listing a nation exposes it to severe economic restrictions under U.S. law. This usually happens in conjunction with imposed global financial and trade sanctions by the President, according to IEEPA.

In 1995, through Executive order 12,947, President Clinton delegated to the Department of the Treasury the power to label non-state terrorist organisations as “Specially Designated Terrorists” (SDTs) and restricted their properties (Alexander, 2009).

The 23rd of September 2001 Bush froze economic assets linked to Al Qaeda through an executive order, while also providing the Department of the Treasury with a new Foreign Terrorist Asset Tracking Center. This brought an additional innovation in this battle with the employment, in relation to other states, of a “stick and carrot” approach to the US sanctions strategy.⁵For example, US sanctions on Pakistan imposed in 1998 in response to the country’s nuclear tests were waived after the country joined the war on terrorism. After 9/11, the U.S., through a multilateral approach, succeeded in freezing the assets of SDTs throughout the world. The Bush administration creatively exploited the sizable stock of US sanctions already in place to provide incentives for newly found allies-of-convenience. It made a concerted effort to quickly get further financial aid for these same allies through the doors of the IMF, the World Bank, and other organisations (Hufbauer, Schott, and Oegg 2001).

1.3.4 US sanctions under President Obama: targeting Iran, the JCPOA and 2014’s Russia

As the Obama administration struggled to back out from the decades-old conflicts that saw the US involved in the Middle East, it started to use sanctions to bring to the table foreign policy adversaries. In 2010’s first National Security Strategy (NSS), sanctions were mentioned only once as a credible alternative to military action. In the 2013’s NSS they appeared nine times and they were seen as preferably used multilaterally. However, if necessary, unilateral decisions could be taken (Drezner 2015a).

Between 2010 and 2015, in Obama’s foreign policy sanctions, Iran was considered the priority (Harrell 2019). The Obama administration started in 2010 to replace Congress’s 1996 Iran and Libya Sanctions Act, devised under President Clinton with the Comprehensive Iran Sanctions, Accountability and Divestment Act (CISADA). The act aimed at the Iranian petroleum sector, highly dependent on import of gasoline for 40% of its consumption in 2010. Section 104 of CISADA provided for the implementation of restrictions on Iran’s banks’ access to the international markets by sanctioning foreign banks that engaged in “significant” financial transactions with Iran’s Central Bank and other Iranian banks (Katzman and Library of Congress. Congressional Research Service 2018).

Congress too intended to directly curtail Iran's oil exports in 2011 by putting sanctions on the means through which importers were using to pay Tehran for its petroleum. Transactions with Iran's Central Bank were subject

⁵ The ‘carrots’ comprised the promise of ending economic sanctions towards any country that would join the effort on fighting terrorism.

to the sanctions' penalties through Section 1245 of FY2012 National Defense Authorization Act (ibidem). The provision required the President to prevent a foreign central bank from opening an account in the United States or restrict one already in place if the foreign bank transacted with Iran's Central Bank for oil purchases. Though, this law provided for a mechanism that rewarded countries which "significantly decreased"⁶ their purchases of oil. With the exemption measure in place, many countries such as Japan, 10 EU countries (among which Germany, Italy, France) qualified for the exemption. Soon followed by Turkey, China, Taiwan, South Korea, and India. Singapore, Malaysia, South Africa, and Sri Lanka retained to be excluded from the ban on buying Iranian oil from June 2012.

The last piece of legislation targeting Iran was the Iran Threat Reduction and Syria Human Rights Act (ITRSHRA) of 2012, which sanctioned again Iran's export of crude oil, also targeting companies which provided insurance for the National Iranian Oil Company (NIOC) and the National Iranian Tanker Company (NITC). ITRSHRA obstructed Iran's capability of repatriating its hard currency abroad to Iran's Central Bank. This clause effectively locked up all foreign currency gains Iran made in foreign financial institutions worldwide, primarily the banks of Iran's major oil buyers. Iran was essentially constrained by the clause to purchase goods from oil-consuming nations (Ibidem). Overall, President Obama, between 2010 and 2013, issued 9 executive orders regarding sanctions against Iran.

This brought extreme pressure on the Iranian government, as stated by Iranian President Ahmadinejad ("Fact Sheet: Sanctions Related to Iran" 2012). Iran's crude oil exports were more than halved between 2011 and mid-2013, from 2.5 million barrels per day to 1.1. Additionally, over \$120 billions of Iranian deposits kept in foreign institutions were no longer available due to sanctions. All of this meant a 9% shrank of Iran's economy (Katzman and Library of Congress. Congressional Research Service 2018).

The consequences, caused by the economic sanctions, brought Iran to the negotiating table with the US. The table led to the 24th of November 2013' signing of the Joint Plan of Action (JPA), an interim nuclear agreement, which led to the signing of the Joint Comprehensive Plan of Action (JCPOA) the 14th of July 2015. The JPA was an international agreement, signed by Iran and the 5 members of the UN Security Council - plus Germany, which conceded a relaxation of the sanctions in exchange for a temporary halt to the Iranian nuclear program. The JPA was made in preparation for a long-term agreement.

Under the JPA, the provision that punished countries that did not "significantly reduce" purchasing oil from Iran was lifted. Other restrictions were suspended, which allowed Iran to receive 700 million dollars per month of oil sales. Furthermore, the JPA provided for the end of the imposition of new nuclear related sanctions by the P5+1 group.

⁶ The Treasury Department considers a reduction in Iranian oil purchases to be "significantly diminished" when the buyer has cut its purchases of Iranian oil by at least 18 percent in the past 180 days.

The JCPOA was signed less than two years later and most of the lifting of sanctions went into effect on Implementation Day, on January 16, 2016, once the IAEA confirmed that Iran had finished the mandatory core nuclear operations.

Therefore, the aforementioned sanctions were lifted: the energy sanctions, which restricted Iran's ability to export oil, prohibited international sales of gasoline and energy equipment to Iran, and restricted foreign direct investment in Iran's energy sector; the financial industry sanctions; the sanctions on Iran's automotive sector and currency trading; the EU ban on purchasing oil and gas from Iran; and the suspension of Iran's use of SWIFT.

Though, the prohibition on direct financial transactions between the US financial system and the Iranian one remained in place. The JCPOA did not require the removal of American sanctions on bilateral trade between the United States and Iran, as well as the ones against Iran for its human rights violations, its support of regional armed groups, and the state's acquisition of military equipment. The JCPOA posed an end to Section 1245 of the National Defense Authorization Act, which provided for the use of sanctions on countries that did not reduce the import of Iranian oil.

In response to Russia's occupation of Crimea and the Donbass in 2014, President Obama issued four executive orders implementing sanctions on Russia. The Russia sanction program became the priority of the administration's efforts between 2014-16 (Harrell 2019). The main legislative pieces in this regard were the 'Sergei Magnitsky Rule of Law Accountability Act' of 2012, which preceded Russia's invasion of Ukraine, the 'Support for the Sovereignty, Integrity, Democracy and Economic Stability of Ukraine Act' in 2014 and finally the 'Ukraine Freedom Support Act' of 2014. The US sanctions on Russia were part of a broader multilateral effort, which saw the EU as the main partner. Under executive Order 13685, all investments in occupied Crimea were barred and entities that involved operations in the peninsula sanctioned. Furthermore, based on the four Executive Orders connected to Ukraine, the Office of Foreign Asset Control (OFAC) developed four Specially Designated Nationals programs: two for targets deemed to have participated in actions related to the unrest and occupation of Ukraine, and two targeting larger groups. Among the ones hit by sanctions were many government officials.

1.3.5 Sanctions under the Trump administration

Donald Trump put in question the US adherence to the JCPOA along all his presidential campaign trail of 2016.⁷ The Trump administration turned out to be very aggressive in the implementation of sanctions against Iran, Venezuela and North Korea and expanded the Global Magnitsky Sanctions program against countries that violate human rights, namely Russia, Syria, and Cuba. The Trump administration widely broadened the implementation of targeted sanctions and secondary sanctions (The Economist 2019). Smart sanctions have the objective of influencing policymakers' decisions by sanctioning them directly through travel bans or financial restrictions. According to the Global Sanctions Database, at the end of Obama's term, US sanctions represented 30% of global sanctions, a percentage that under the Trump administration rose to 40% (Yotov et al. 2021). Over the years of the Trump presidency covered by the GSD (2017–2019), there was a notable rise in financial and travel restrictions, which was followed by a decline in the share of arms related sanctions during the same years (ibidem).

Trump mainly relied on unilateral sanctions for achieving foreign policy goals, drawing criticism from long standing allies (Harrell 2019). Secondary sanctions, especially on allies, like in the case of Iran, were implemented by the Obama administration only after diplomacy failed.

The aggressive policies of the Trump administrations towards hostile governments showed in the case of Venezuela. The country had been under sanctions for over a decade but in August 2017 the US restricted Venezuela's access to public and private international debt markets. Within the following two years these sanctions expanded to include crypto currencies, the central bank, oil exports, gold mining and state officials, thus, essentially, leading to the country's embargo. The White House objective was regime change in Caracas. The sanctions were designed to bring up such a severe economic collapse and widespread misery among Venezuelans that the dictatorship would be compelled to make concessions. By ignoring historical precedents, the result was far from the one desired. The sanctions only furthered Maduro's cling on power. Venezuela's President, in response to the sanctions, allowed for the progressive privatisation and dollarization of the country's economy. This operation negatively impacted the poorer sectors of society while providing a lifeline to the richest, by providing them access to foreign currencies (Mulder 2021).

Notwithstanding international criticism, the Trump administration imposed secondary sanctions as a first-choice option, as part of its policy, towards Iran. The U.S. under Trump focused on sanctions signalling, outlying the steps the target would have to take to see the sanctions removed.⁸ The same administration started using

⁷ <https://talkingpointsmemo.com/livewire/donald-trump-downplays-iran-threat-nuclear-deal>

⁸ <https://www.heritage.org/defense/event/after-the-deal-new-iran-strategy>

coercive economic measures outside of the economic sanction's spectrum, such as targeted export control in the case of Huawei (Harrell 2019). Trump's campaign promises to withdraw the United States from the JCPOA were fulfilled on May 8, 2018. The exit of the United States from the agreement involved the reimposition, as of November 5, 2018, of all sanctions that had been suspended. Since then, oil exports from Iran fell 95% in volume in 2019 compared to 2017 (IMF).

Trump's attitude towards Russia was ambiguous throughout the campaign trail.

Therefore, Congress felt that it needed to constrain him by passing through a bipartisan vote: the Countering America's Adversaries Through Sanctions Act (CAATSA) in 2017. CAATSA was designed to give Congress more leverage on the sanctions programs towards Iran, North Korea and Russia while restricting the President's power to revoke sanctions.

Throughout Trump's tenure in office, the Treasury proceeded to impose additional sanctions on Russia, despite congressional reservations about the President's political and diplomatic inclinations. These sanctions were distinguished by a blatant lack of planning and preparation and were inconsistent with the president's rhetoric. An illustration of this was the imposition of sanctions targeting Russian businessman Oleg Deripaska and his aluminium firm, Rusal. (Mulder 2021). The US administration underestimated the move on a company of Rusal's size. The US Treasury Department action could have resulted in a shortage of aluminium, greatly impacting the world market. In fact, Rusal accounts for around 6% of the global supply of aluminium, selling around 10% of its product to the US market. Rusal is also the second supplier of the US after Canada (Foy, Seddon, and Raval 2018). Eventually, a settlement was reached: Deripaska separated himself from his business, limiting the harm to the world's commodity markets. But the incident amply demonstrated how hastily implemented sanctions might substantially disrupt some aspects of the global economy.

During the Trump administration, a major issue regarding US allies and partners was their purchase of the Russian S-400 surface-to-air missile system. Turkey in 2017, as Egypt and India, decided to continue the missile defence system procurement process, despite warnings of impending sanctions from the U.S. administration.⁹ Sanctions were then imposed on the country in 2020 under CAATSA, which provided for sanctions on nations that made "significant transactions" with Russia's defence industrial sector.¹⁰ The sanctions prohibited all export permits and authorizations from the United States to the Presidency of Defense Industries of Turkey.

⁹ <https://www.forbes.com/sites/pauliddon/2020/08/05/why-are-egypt-and-turkey-risking-us-sanctions-for-these-russian-weapons-systems/?sh=17903b49220f>

¹⁰ <https://www.cnbc.com/2020/12/14/us-sanctions-turkey-over-russian-s400.html>

Furthermore, Ismail Demir, the organisation's president, and other senior executives, had their assets frozen and their ability to travel restricted.

The United States administration ceased on any realistic pretence that it was employing sanctions to uphold international law during Trump's tenure. It soon became clear that he was pursuing what he considered US strategic interests without giving much consideration to international norms and allies concerns (Mulder, 2021).

1.4 The emergence of Secondary Sanctions

Typically, sanctions fall into one of two categories: "primary" and "secondary" sanctions. Primary sanctions apply to US citizens or in circumstances where there is a US link, such as when a US citizen is involved, when items are produced in the US, or when a transaction occurs there. Secondary sanctions allow the State Department or OFAC to impose sanctions on an individual, including someone who is not a US citizen, for a specific activity. Secondary sanctions are meant to deter non-US persons from carrying out certain transactions, even if the transaction has no link to the US (exempting it from primary sanctions).¹¹

Persons who are found to be engaging in an activity that is liable to secondary sanctions, such as contributing to a transaction with an individual or entity already subject to primary sanctions, will be himself/herself subject to sanctions of different magnitudes, issued by the Treasury or State Department. In the worst-case scenario, this may entail designating the foreign individual as a Specially Designated National (SDN). SDNs are individuals or companies whose assets are blocked or restricted by the US Treasury. Other potential sanctions involve actions like the refusal of export permits or lending from U.S. financial institutions. The effectiveness of secondary sanctions depends on the US government's ability to use the predominance of the American financial system to force foreigners to avoid engaging in otherwise legitimate transactions with sanctioned parties (Bartlett and Ophel 2021).

Secondary sanctions have been a tool available to the United States since the 1990s, but they were implemented only 25 times prior to the Trump administration. One of the first acts that provided for secondary sanctions was ILSA, but its implementation was delayed until 2010, when CISADA went into effect (Bartlett and Ophel 2021).

¹¹ <https://complianceconcourse.willkie.com/resources/sanctions-us-overview-of-us-sanctions>

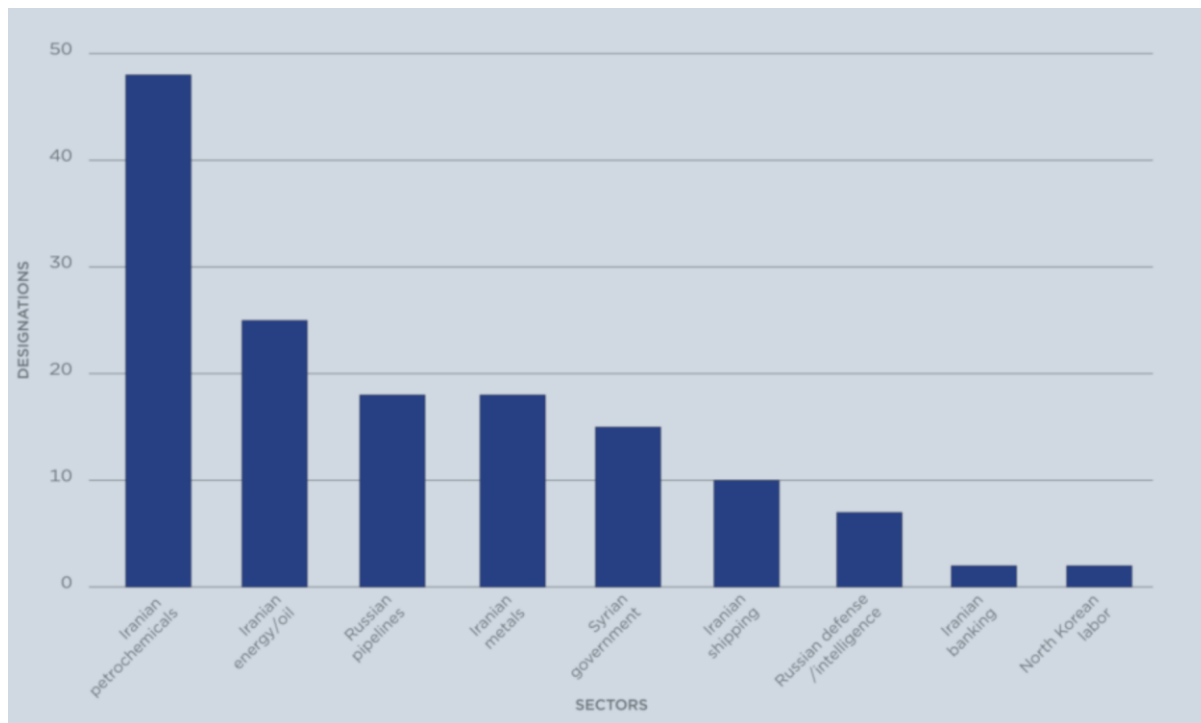


Figure 3 Secondary Sanctions. Targets by Sector from 2010–2021

Source: Data retrieved from U.S. Department of the Treasury OFAC and the U.S. Department of State and elaborated by the Center for New American Security

The vast majority (68%) of the more than 2,000 specifically designated citizens who were subject to secondary sanctions in 2021 were targeted due to their business dealings with already sanctioned Iranian authorities (US Department of the Treasury OFAC and the US Department of State). Then this statistic was subverted by The CISADA, under the Obama administration, enabled the implementation of secondary sanctions on third parties that traded with Iran, which eventually helped in pressuring Teheran into the JCPOA. In 2011, for the first time, seven companies not covered by primary sanctions schemes were subjected to secondary sanctions for illegal operations in Iran's oil industry.¹² The same year an additional 25 firms became subject to secondary sanctions due to transactions that they made with already sanctioned Iranian shipping, energy, petrochemicals, and banking businesses.¹³

Then most Iranian related secondary sanctions were suspended after the implementation of the JCPOA.

As explained by Edoardo Serravalle in *The Watchful Eye of the U.S. Dollar* (2021) European companies, even after the lifting of secondary sanctions, maintained their internal policies of not associating with the country.

¹² <https://2009-2017.state.gov/r/pa/prs/ps/2011/05/164132.htm>

¹³ <https://2009-2017.state.gov/r/pa/prs/ps/2012/08/196258.htm> <https://2009-2017.state.gov/r/pa/prs/ps/2013/05/210147.htm> <https://2009-2017.state.gov/r/pa/prs/ps/2014/231159.htm>

Banks resisted even when then-Secretary of State John Kerry intervened to ask them to restore business with Iran.¹⁴ Yet, in doing so, the companies were prescient, since one presidential term later Donald Trump re-imposed all previous sanctions on the nation. Moreover, Trump imposed an unprecedented number of secondary sanctions, 104, on the metallurgical, construction, manufacturing, mining, and textiles sectors. European and international companies prefer to comply with US authorities to avoid being cut off from the US dollar and banking clearing systems, given that they are essential for operating internationally. The result is that European businesses that want to trade with Iranian companies cannot access a bank willing to handle their transactions, as the penalty attached to the operation would prove fatal for the bank.

The penetration of the U.S. financial system reduces the ability of states sanctioned by the United States to engage in international economic relations. This undermines the economic survival of nations sanctioned by Washington. The next chapter will analyse how countries under comprehensive US sanctions, namely Iran and Russia, managed to trade internationally and evade sanctions.

¹⁴ <https://www.wsj.com/articles/kerrys-peculiar-message-about-iran-for-european-banks-1463093348>

Chapter 2. Case study: Russia

2.1 Introduction to the Chapter: the peculiarity of the Russian case

This chapter will analyse how the Russian government has responded to the economic sanctions imposed by the US and its western partners.

To understand the impact of economic sanctions on the Russian economy, it is first necessary to analyse Russia's political economy system and its relationship to the global economy. Thereafter, it is possible to proceed to analyse the impact of economic sanctions on the main sectors of the Russian economy.

Russia in 2022 was the ninth largest economy in the world according to IMF data. Russia has significantly improved its economic situation over the last two decades by increasing 5.2 percent annually on average between 2000 and 2012, which was higher than the world average of 2.9 percent. In 2014, the Russian economy faced challenges from falling oil prices and economic sanctions, which made the country more isolated and less connected to the global economy. This led to a decrease in foreign direct investment (FDI) in Russia since 2014. Despite some recovery from the recession of 2015-2016, the potential growth of the Russian economy has continued to decline. This decline in potential growth is not unique to Russia, as it has been observed in both developed and developing economies around the world since the Global Financial Crisis. However, the speed of the decline in Russia's raised questions about the country's medium-term economic prospects and the potential for convergence with advanced economies in terms of GDP per capita.

Russia plays a key role in the global economy as one of the world's largest producers and exporters of natural resources, particularly oil and natural gas. These resources have been a major source of revenue for the country and have played a significant role in driving its economic growth. Russia is also a major exporter of other commodities such as metals, timber, and wheat. Russia, as one of the world's largest producers and exporters of oil and natural gas, is a member of the OPEC+ group, which coordinates the production and export of oil among a group of countries. The country is also a major supplier of energy to Europe, and its pipelines and ports are a critical component of the region's energy infrastructure.

Russia is taken as an example since in February 2022 it became the largest economy to be subject to US comprehensive sanctions. Moreover, Moscow has been working since the implementation of the first large-scale

sanctions in 2014 to reorganise its economy against possible future sanctions, which materialised eight years later.

The weaponization of finance, applied by the US to put pressure on the Kremlin, pushed the latter to seek alternative ways of operating in international markets. Russia progressively applied both a de-dollarisation of its economy and the construction of alternative financial infrastructures to those of the US. Russia's case study is useful and interesting for understanding how an economy integrated into international markets seeks to pursue independence from the dollar-centric and US-centric international financial system.

2.2 Russia's economic model

Russia's economic system has been defined as a "limited access order" economy, which describes economies in which the state intervenes in the operation of the market to maintain dominant coalitions. (Connolly, 2018) The Russian government finds itself at the centre of the system by guaranteeing that those owning market power may collect rents, frequently conducting systematic market manipulation. The Russian economy thus follows a "rent addiction" model (Gaddy and Ickes 2005). According to this model the Russian economy is centred around the extraction and distribution of resource rents. Therefore, the economy is divided into two sectors, one rent-producing, formed by natural resources companies, some agricultural conglomerates, nuclear power machinery and defence enterprises. Companies operating within the field of these industries often compete on a global scale in so far as they offer their products or services both domestically and abroad.

These businesses typically do not need public subsidies to run, as they are able to make sizable profits. Due to their great profitability and competitiveness, companies in these industries contributed a sizable portion of Russia's tax receipts.

In 2021 oil and gas exports amounted to \$240 billion dollars, half of the total of Russian exports of \$489 billion.¹⁵ Oil and Gas revenues accounted for 36% of the Russian federal budget. On average 85% of the total value of Russian exports annually can be traced back to Sector A (Connolly, 2018).

¹⁵ <https://www.reuters.com/markets/europe/russias-oil-gas-revenue-windfall-2022-01-21/#:~:text=%2D%20According%20to%20the%20central%20bank,liquefied%20natural%20gas%20%247.6%20billion.>



Figure 4 Oil price and GDP growth of Vladimir Putin's Russia

Source: Author's elaboration based on World Bank chart data for Russia GDP growth and US EIA for BRENT Spot Price.

The role of the state in the rent-producing sector, or “Sector A”, is major but not absolute. The state owns most of the firms operating in the oil and gas sector such as Rosneft, Gazprom, Gazprom Neft. It also retains companies controlling the nuclear power sector, such as Rosatom, as well as enterprises in the defence industry, through the holding company Rostec.

There are some private entities, such as Novatek, but usually, for firms, having strong links to the state is essential to survive.

The second sector, “Sector B”, depends on the rents provided by the State. Sector B is made of industries that are not globally competitive and focus primarily on the internal market. This sector depends on the State through subsidies or other forms of assistance, such as the suppression of competition through bureaucracy. Shipbuilding, automotive machinery, oil and gas equipment and parts of the defence sector are some examples of such industries in Russia. In addition, there are also social groups, such as civil servants and retirees, whose livelihood depends on the state.

According to this model the state directs the rents produced in Sector A to sustain economic activity in Sector B (ibidem). The state performs the basic function of redirecting profits, through direct control of state-owned enterprises or through coercion of private companies in performing this "social" function. This is accomplished

via direct means, e.g., buying arms stocks from the defence industrial complex through taxes raised from the oil and gas sector, and indirect ways, e.g., selling gas supplies to Sector B companies at below market price. Connolly (2018) adds to this model the role of the state in the elimination of competition through regulation. This creates a market form in Sectors A and B of monopolistic or oligopolistic nature. In addition, the state uses the granting of proprietary rights as leverage on Sector A industries to make them share their revenues. The state's persistent and systematic intervention in the economy has several detrimental effects, such as high entry barriers that reduce economic competition, low rates of private sector investment, low innovation, and, eventually, slower rates of growth that would ordinarily be conceivable.

Since the 1990s a new sector in the economy made of SMEs emerged. These companies respond to internal market forces performing as relatively unconstrained from state interference. Though, this sector, since its inception, has been affected by *reiderstvo* which is the “The illicit acquisition of a business or part of a business in Russia”.¹⁶ This practice has been used since the 1990s by private entities and involved bribing government officials to acquire by legal and illegal means a third-party asset. Since the beginning of the millennium, the promoter of this practice has become the state itself, and it has also affected companies in Sector A, as for example occurred with the Yukos company.

The last Sector in the Russian economy is the Financial one. Russia's financial sector is relatively small compared to countries with a similar GDP and is highly reliant on banks. The overwhelming majority of the companies operating in this sector are controlled or owned by the state (Kirdina and Vernikov 2013). The stock exchange is relatively small and almost monopolised by the natural resource industry. The State controls more than two thirds of the banking sector. According to a 2018 IMF report State Owned Banks (SOBs) account for 66% of the banking sector assets and around 65% of loans. As of 2017 the three biggest SOBs, Sberbank, TVB and Gazprombank held around 50% of the Russian financial system assets (IMF, 2018). These characteristics of the Russian financial sector are essential to understand how it operates within the economy and how it shapes the Russian political economy system. The relatively small size of the country's financial system makes the capital available scarce. Mostly the capital is in the hands of SOBs, which makes the state a key part in the process of funding companies. Enterprises in Sectors A and B, politically connected, are the ones enjoying cheaper fundings. The Gaidar Institute estimated that in a year, Russian banks only provide about 1 percent of the capital utilised by SMEs (2017).

¹⁶ <https://reiderstvo.org/en/>

Moreover, due to the state's backing as a creditor, SOBs enjoy a higher credit rating. The State finds itself at the centre of Russia's financial system exerting, through SOBs, its control on Sector A and B companies which are at the foundation of Russia's economy.

The state plays its most significant function by controlling the flow of rents between domains of the Russian economy to accomplish its larger social and political goals. This function is achieved by using a variety of mechanisms, including ownership and management, the development and execution of law and regulation, the distribution of public spending and using SOBs. After 2000, the state's involvement in all these areas of public policy increased, mainly because of a centralization strategy during Vladimir Putin's presidency (Monaghan 2012). Nonetheless, large State-owned companies still maintain the power of shaping in some aspects government policy even if this is less common than it was in the 1990s, when private companies disproportionately influenced governmental policy (Connolly 2018). Since the beginning of the century the Russian state pursued a strategy of centralization of authority, which allowed for a reassertion of the state in the economy. In Vladimir Putin's Russia, the government has returned to its function as the main allocator of resources, taking the market's role. This entails that Russia's system of political economy depends uniquely on Sector A's ability to generate rents. Rents, which are dependent on the international market, make Russia vulnerable to the international consumer's demands.

2.2.1 Russia's exports

The dependence of Sector A on the international market has been one that Western nations have sought to target using economic sanctions.

Therefore, the most profitable industries, namely those in Sector A and especially the oil and gas industries, are the most vulnerable to international sanctions, representing most Russia's exports. Depending on the price of commodities, oil, gas, and coal account for 55 to 75 percent of Russia's annual exports. The other relevant export sectors are other natural resources, such as metals, which makeup on average around 10% of Russia's total exports, nuclear power plants, modules, and weapons. Russia is the second largest exporter of weapons just after the United States.



Figure 5 Russian Exports by Category

Source: Author's elaboration based on OEC dataset <https://oec.world/en>

2.2.2 Russia's imports and its role in the Global Value Chain

Machinery, chemicals, and other items used for manufacturing make up most Russia's imports (see Figure 6). In an average year before Russia's invasion of Ukraine, four out of ten dollars of Russia's demand for manufacturing goods were provided by imports (Erixon et al. 2022). The EU accounted for 14% of the supply compared to the 9% of China, the world's largest manufacturer (ibidem). These complex manufacturing imports are necessary, for example, for the more challenging oil and gas field of the Arctic. In fact, to exploit the Arctic oil and gas fields, the equipment made in Europe and the United States becomes indispensable (Connolly 2018). The high-quality capital goods are supplied mainly by the EU and the US. Russia's low labour productivity is one factor contributing to its dependence and sectoral trade structure. Russian labour productivity in the industrial sector is 21% of the US's and 36% of the EU's (Erixon et al. 2022).

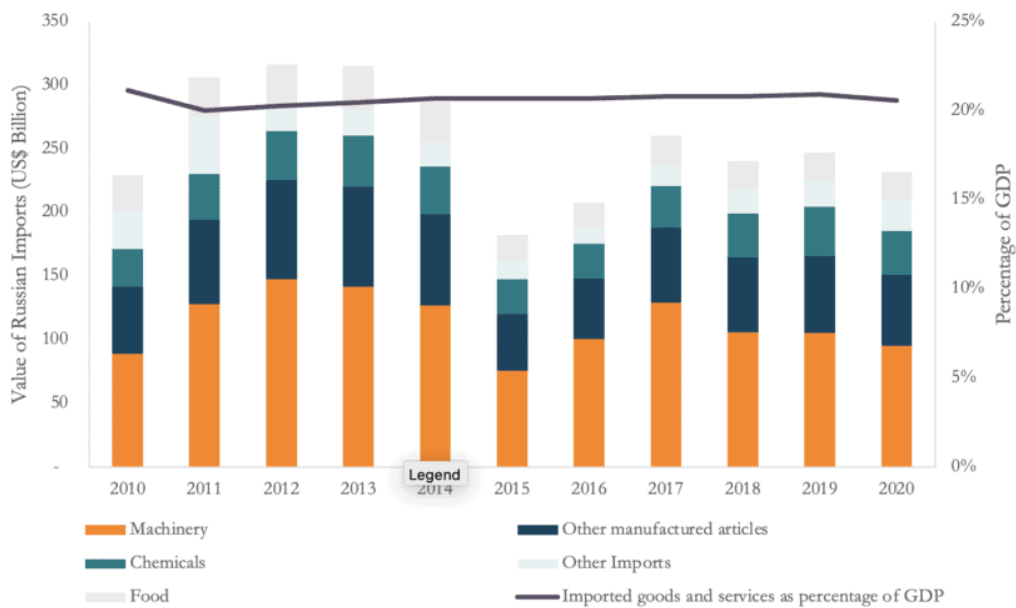


Figure 6 Russian imports by sector and imported goods and services as percentage of Russian GDP

Source: (Erixon et al. 2022) data UNCOMTRADE, World Bank

Russia's main role in the global value chain is the one of upstream supplier. Russia exports primary and intermediate products and services that are employed at the earliest stages of production of other nations' exports (Wuester and Winkler 2022).

Although Russia is the upstream supplier and buyer of the finished product of GVCs, whose main productions are in China, the United States and Europe. However, the most dependent countries on Russian exports remain its neighbours (ibidem) (see Figure 7). Russia is the main supplier of several commodities with few substitutes, such as metals and fertiliser. It is also the primary supplier of the services needed to provide these exports. Russia's neighbours, in particular members of the Eurasian Economic Union, depend on it for fertilisers, timber, grains, alloys, cars, and machinery.

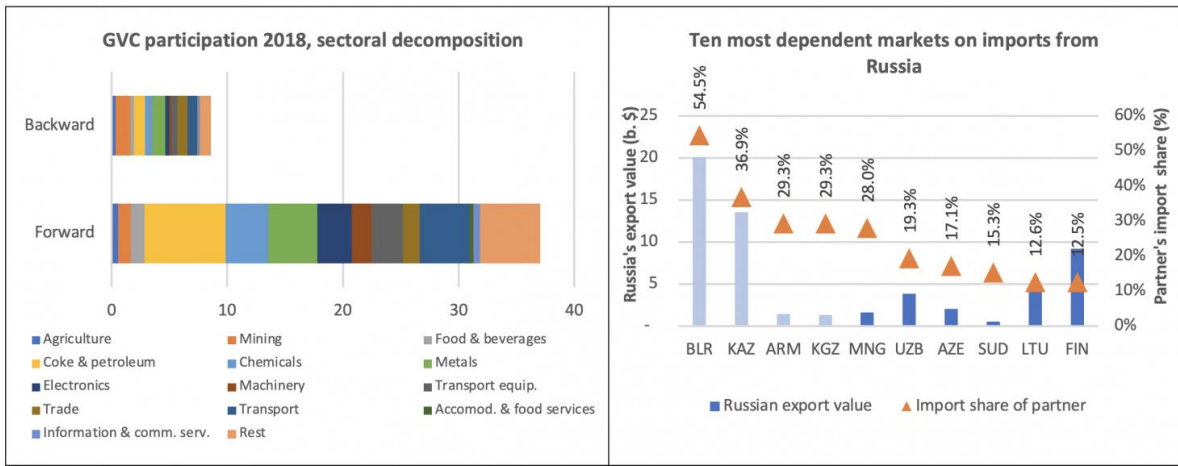


Figure 7 Russia's participation in GVCs and the ten most dependent markets on imports from Russia

Source: (Wuester and Winkler 2022) data: OECD-WTO TiVA 2021 release (left panel) and UN Comtrade (right panel).

Before 2014 Russia was fairly open to inward foreign direct investments (IFDI). These were mainly concentrated in manufacturing, especially in the automotive, retail, financial intermediation, and natural resources sectors (Connolly 2018). During most of the decade, before sanctions were imposed, Russia's stock of IFDI stayed close to 30 percent of its GDP. This was higher than that of numerous high-income nations, like Italy and Korea, as well as several other significant low and medium-income countries, such as the other BRICS (ibidem).

Since the early 90s Russia developed in what was an open economy, within the range of 45 to 50 percent trade-to-GDP ratio (World Bank). This made Russia in 2022 the largest economy to ever be under comprehensive sanctions.

2.3 Sanctioners' strategy

The objectives of the sanctions imposed by the US and the EU against Russia, after the latter's annexation of Crimea, were manifold. Connolly (2018) distinguished at least five.

The first objective was, for Western governments, to unequivocally condemn Russia's actions on Ukrainian territory and, consequently, to procure diplomatic aid for the invaded state. The second objective was to condemn the use of force in international relations and to affirm the commitment of Western powers to preserve the *status quo*. This objective corresponds to what Barber, as seen in chapter 1, calls 'tertiary goals.

The tertiary goal was to demonstrate a united western front against the aggression of a sovereign state. This signal of unified determination was aimed not only at Russia, but also at Brussels and Washington. In fact, for

nations such as Albania and Japan this was an opportunity to reaffirm their commitment to Western partners. However, the inclusion of nations with different economic and political interests meant that the common front was not always a united front.

The fourth goal was to cause an extreme burden on Russian coffers such that the Russian government would have to reconsider its actions. The goal was not so much to hit the Russian economy but to directly go after, through smart sanctions, the Russian establishment responsible for the Russian occupation. Connelly goes so far as to suggest, backed by anonymous State Department officials, that the wider objective of Sanctions was regime change. This could be achieved by targeting the Russian elite, which under severe economic pain, would push for the removal of Vladimir Putin from the presidency to see the sanctions removed.

The last goal was to deter the Russian state from pursuing an expansionist policy in Ukraine and around the world.

The achievement of these goals was based on the effectiveness of sanctions in forcing a change within the Russian ruling elite minds.

In the following paragraph the effects of the 2014 economic sanctions are assessed.

2.4 Effects of Economic Sanctions on the Russia Economy

The sanctions imposed on Russia starting in March 2014 can be divided in 2 macro-categories: the ones responding to the annexation of Crimea and those targeting Russia's military occupation of the Donbas region. The first to be implemented were the sanctions related to Crimea, which targeted individuals and businesses operating in the annexed territory or related to the military operation. The sanctions targeting the Russian army involvement in the Donbass war were placed later in 2014 and they aimed at entire sectors of the Russian economy (Connolly 2018).

Through a series of Executive Orders, within the first week of Crimea's occupation, the Obama administration imposed a series of sanctions on several Russian persons and entities. The very first measures to be implemented were the freezing of assets and travel restrictions which later expanded to other targets: government officials and top SOE figures in finance, energy companies, commodities extraction and export, and defence conglomerates.

Then, as Russia pursued its aggressive policy in the region of the Donbas, the US and the EU imposed "sectoral" sanctions. The new sanctions targeted distinct enterprises within three sectors of the Russian economy: the energy, the financial and the defence sectors.

2.4.1 Donbas sanctions

After March 2014, the involvement of Russian forces in fuelling instability in eastern and southern Ukraine increased. The establishment of strongholds in Luhansk and Donetsk by the troops receiving help from Russia marked a new era: western sanctions against Russia's economic, energy, and defence industries escalated as it became clear that Russian forces were active in aiding the insurgency forces. Although these sanctions were put in place quickly after Malaysia Airlines Flight 17 (MH17) was destroyed on July 17, 2014, while flying over rebel-held territory in eastern Ukraine, they were not implemented because of that tragedy. The July 2014 sanctions prohibited access to capabilities or commodities utilised in the three vital industries of the Russian economy or targeted individual businesses within those sectors. As a result, even though the "Tier 3" sanctions have been referred to as "sectoral," they do not necessarily have a homogeneous impact on different parts of the Russian economy. For example, not every Russian bank was subject to the financial sanctions that forbade the supply of specific financial services to major state-owned banks in Russia. Technologies utilised in various steps of the energy extraction procedure were banned in the energy industry, although very similar technologies were not. Therefore, so-called sectoral sanctions rarely had an equal impact on all the firms within a given industry. The US Department of Commerce's Bureau of Industry and Security (BIS) declared on April 28, 2014, that, in reply to Russian acts in southern and eastern Ukraine, it was broadening its export restrictions on certain products covered by the Export Administration Regulations (EAR). This intervention was the initial of the so-called sectoral sanctions. It gave the BIS the power to reject any incoming requests for permits to export or reexport high-tech goods covered by the EAR to Russia or the annexed Crimea that were thought to strengthen Russia's military strength. Additionally, any export licences that matched these requirements could not have been revoked by the BIS. Between July and September 2014, additional sectoral sanctions were implemented. Under Executive Order 13662, the US released orders that subjected Russia's financial and energy sectors to US sanctions. These restrictions forbade the issuance of new equity or debt with maturities longer than ninety days to certain entities. The European Bank for Reconstruction and Development (EBRD) also stopped its favourable economic development loans to Russia. Four days later, Executive Order 13662 provided four further directives. Sberbank was added to the original list of designated parties, and Gazprom Neft and Transneft were forbidden from obtaining debt with a maturity of more than 90 days. Sanctions on Russia were not imposed by several significant and developing world powers, including South Korea and the BRICS nations (Brazil, China, India, and South Africa).

2.4.2 Key differences in Western sanctions

Although the US and EU harmonised their sanctions, there were some notable discrepancies in the individuals who were the targets of asset freezes and travel restrictions, as well as in the planning and execution of sectoral sanctions. For instance, the EU did not target several prominent Russian officials like Igor Sechin, Sergei Ivanov, and Vladimir Yakunin, but the United States, Canada, and Australia did. Sanctions against Gazprom, the main natural gas provider to Europe, were imposed by the US rather than the EU. Japan likewise made the decision to apply sanctions that were however very different from those of the US and the EU. In fact, even if Japan restricted significant Russian state-owned banks from operating, enforced asset freezes and travel restrictions on named individuals, and took part in the arms embargo, it notably avoided placing sanctions on Russia's energy sector. Japanese government authorities wanted to ease collaboration between Russian and Japanese energy companies. Japan was thus ideally positioned to take advantage of any fall in Western interference in the Russian energy industry. “Tokyo has played its cards in the best possible manner. It has restrained the sanctions against Moscow as far as possible so that they are more symbolic than substantial” (Kitade, 2016). The EU's provision allowing EU enterprises to carry out contracts that were concluded before the implementation of the original sanctions is the most noticeable distinction between the EU and the United States in terms of execution. It is crucial to note that the Office of Foreign Asset Control of the Department of Treasury in the United States is principally in charge of executing sanctions. In contrast, member states are given discretion in evaluating and implementing the sanctions legislation when it relates to the application of EU sanctions. To maintain the sanctions regime in the EU, all twenty-eight member states must agree in frequent (annual or biannual) summits. As a result, bureaucratically, sanctions are simple to lift. Contrarily, the Congress and the executive branch must both consent for US sanctions to be reduced or withdrawn. In fact, in August 2017, new legislation that both broadened the range of sanctions and constrained the president's ability to revoke them was enacted, which boosted congressional control over the sanctions placed on Russia.

2.4.3 The Strategy behind the Russian Response

The Russian state responded with countersanctions targeting EU agricultural exports to Russia. Significantly more important was the strategy adopted by the Russian government to address the disruption of the economic sectors created by the sanctions.

The strategy comprised three main elements. The first was the securitization of strategic sectors of economic policy. The second was the replacement in key sectors of the economy, where possible, of western imports through domestic production. Where replacement was not viable through internal production, non-western

dependency was the next best option. Lastly, a shift towards enhancing economic relations with non-Western partners was pursued (Connolly 2018).

Securitization of economic policy occurs in two stages. In the first stage, national security language is adopted to justify certain exceptional actions in the economic policy area of interest. In the second stage, when the securitarian language has been assimilated by the target groups as a particular ministry, extraordinary economic policy manoeuvres are implemented and accepted as legitimate (Bacon, Renz, and Cooper 2013).

The securitization was evident in Russia's 2015 National Security Strategy, which favoured economic manoeuvres aimed at preserving independence from other nations in key sectors of the economy. The manoeuvres included the accumulation of foreign exchange reserves and the substitution of imports through domestic production.

In 2015, a new commission dedicated to the import substitution was created (Connelly 2015). According to a plan from the Ministry of Industry and Trade within 4 years over \$25 billion would be spent on over 2000 projects designated for import substitution (ibidem).

Direct national budget investment, preferential access to government procurement money, favourable lending to beneficiary enterprises, and other financial strategies were all used to boost output in certain economic sectors. Tax exemptions, state-subsidised lending through the state development bank Vneshekonombank (VEB), and preferential loans from the recently founded Fund for the Development of Industry were all used to offer financial assistance for import substitution.

These projects were especially focused on the three sectors that had been the target of sanctions. Overseeing it all was a government commission on import substitution headed by Prime Minister Dimitri Medvedev. After 2016 the government focus was more on improving Russia's integration into global value chains and guaranteeing that a larger share of the value contributed to the manufacturing process occurred within Russia's borders. Though, the overall objective of becoming more industrially and technologically independent remained.

If prior to 2014 Russia's eastward shift was already an ongoing process, the events of that year played a major part in accelerating it. However, between 2014 and 2022, by far the most significant trading partner region remained Europe, even though the increased share of trade outside the Western hemisphere was evident. Russian policymakers emphasised that the development of economic ties with new markets was to be seen as a path to rebalancing the Russian economy which could provide greater room for manoeuvre in the event of tightening sanctions (Connelly 2018). Europe would still have continued to be an important reference market.

2.4.4 Sanctions and the energy industry

The West provided components, capital through loans, investments through joint ventures and most of the demand for Russian oil and gas. The sanctions imposed between July and September of 2014 targeted services and equipment provided by foreign companies. Russia's dependency on the West for technologically advanced components for the extraction components was targeted by the sanctions that aimed at hampering Russia's exploitation of arctic reserves. On one hand, stringent US sanctions made it impossible to continue a JV between Exxon and Rosneft for the exploitation of oil fields in the Kara Sea (Staalesen 2018). On the other hand, the EU implemented less stringent sanctions so that, for example, Italy's ENI and Norway's Equinor were able to continue their JVs with Rosneft (ibidem).

Moreover, the EU did not impose financial sanctions on Gazprom, the biggest exporter of gas in the EU.

To meet sanctions on Western offshore oil extraction equipment, more than \$2 billion was allocated to the construction of the Zvezda shipyard, in Russia's Far East. Zvezda was intended to create a fleet of ships that could serve Russian operations in the Arctic, like tankers and icebreakers. A russification strategy was also promoted in the oilfield services sector, through both the acquisition by Rosneft of stakes in foreign companies operating in Russia and the expansion of competences by the state-owned company Rosgeologiya (Connelly 2018).

Financial sanctions halted access to external financing to Russia's energy companies. Initially, the Russian government supported those energy companies it believed needed help with public funding, particularly in the case of Rosneft, and loans from SOBs. Resources from the National Welfare Fund were utilised to fund Novatek.

Russian firms accessed Asian, particularly Chinese, and Middle Eastern, sources of financing.

By lowering expenses, the steep devaluation of the ruble of 2014, that came along with the drop in oil prices at the end of the year, increased the competitiveness of energy companies in the international markets. Russia was able to develop closer ties with the eastern market, particularly with China, through the 2019's completion of the pipeline Power of Siberia. The deal was signed in 2014 and it was estimated to provide \$400 billions of revenues through a period of 35 years (*Reuters* 2022). When it reaches full capacity in 2025, Power of Siberia is expected to provide 38 bcm of gas to the Chinese market, the fastest growing gas market in the world (Razlomalin and Sushin 2020). Russia was able to weather the storm of Western economic sanctions partly due to its economic policy system in which the state, having a strong presence in the economy and a centralising tendency, was able to reallocate resources where it was needed.

2.4.5 Financial Sanctions

The Russian economy between 2014 and 2015 was hit by a crisis caused by multiple factors simultaneously. In mid-July 2014 the price of oil peaked and then immediately began to collapse, leading it to reach 70 percent of its initial value in January of the following year. Almost simultaneously with the beginning of the crisis, 'Donbas' sanctions were applied. These two events had the effect of leading to a capital crisis, as Russian companies could no longer access refinancing of the debts, they had with Western banks because of the sanctions imposed. Russian banks found themselves forced to repay debts in foreign currency, selling rubles to buy dollars or euros, thus decreasing Russian foreign exchange reserves.

In addition, with falling oil prices, foreign companies had no incentive to invest in the nation.

The collapse of oil prices, together with the withdrawal of foreign investors from the Russian economy, led to a collapse of the Russian currency.

The consequence was a net capital outflow from the country, which lasted for longer than in previous crises, such as 2008-9. This further confirmed the restrictive effect that economic sanctions had on Western capital. Another factor that inhibited the return of foreign capital was the Russian Central Bank's decision to adopt a floating exchange rate so that it did not have to sell foreign exchange reserves.

Initially, the Russian bank, to cope with the crisis, intervened by raising interest rates and selling foreign exchange reserves. When this proved insufficient to stop the currency collapse, capital controls were imposed, and repatriation of Russian capital located abroad was encouraged. Russia's central bank governor, Elvira Nabiullina, in order not to drain Russia's foreign exchange reserves, left a floating exchange rate, so that inflation could be contained through interest rates.

The Russian government gave priority to assisting State Owned Banks through the disbursement of \$22 billion (IMF, 2018). These, in return, provided loans to companies in sectors A and B of the Russian economy. The little assistance given to non-state-owned banks and the continued policy of regularising the Russian banking sector led to a growth in assets in the hands of State-Owned Banks.

2.5 Russia's response

2.5.1 Replacing Western Capital

Russia has also acted replacing missing Western capital with new capital from other countries. Russia was among the founding countries of the BRICS Development Bank, in July 2014, and the Asian Infrastructure Investment Bank (AIIB), in 2015. These two development banks enable Russian companies to receive financing for projects and ensure Russia's closer ties with financial institutions not influenced by the West.

2015's crisis led to a 92 percent decrease in FDI from the previous year (Szakonyi 2017). The influx of foreign capital recovery started in 2016, with FDI investments in non-sanctioned sectors such as pharmaceuticals, agriculture, mining and automotive. Examples have been partnerships between Rostnef and European energy companies, such as Royal Dutch Shell and BP, and the openings of factories from Volkswagen and Mercedes-Benz. Sanctions also proved to be an opportunity for Russia to raise capital from non-Western nations through the Russian Direct Investment Fund (RDIF), which was added to the US sanctions list in 2014. RDIF sees as its main contributor Saudi Arabia, which in July of 2015 pledged to invest over \$10 billion over five years, followed closely by (Ellyatt 2015).

Russia resorted to pre-payment schemes when US sanctions prohibited long-term financing of Russian companies (Hume and Sheppard 2015).

2.5.2 Currency and Payment systems

Since 2014, Russia, to insulate its economy from the decisions of the U.S. government, has pursued a policy of de-dollarization of its economic relations with the world.

This policy was carried out in three ways: through a reduction of dollars in foreign exchange reserves, a relative reduction in the use of dollars to settle trade, and the construction of a new financial infrastructure independent of the US.

First, the Russian Central Bank, in addition to having increased monetary and gold reserves to \$630 billion as of January 2022, decreased the share of dollars in its reserves from 43% in 2014 to 16.5% in 2022 (Central Bank of Russia 2022). The dollar has been replaced by gold and yuan reserves. In fact, in January 2014, gold accounted for about 8.4% of the central bank's reserves, which rose to 20.9% in the same month of 2022. The

yuan went from a total absence in the basket of currencies held by the BCR in 2014 to being its third most present currency with 13% in 2021.

Russia also changed the geographical location of its gold and currency reserves. In 2014, France and USA were the primary hosts of Russian foreign exchange assets, holding respectively 32% and 29.7%. Russia held only 1.1% of its foreign exchange assets inside its borders. To prevent the freezing of those assets by unfriendly countries, the RCB changed their location with China, becoming the primary storer of Russia's currencies holding 13.8%, while the US share dropped to 6.6%. Though nearly half of its reserves remained stored by US allies, mainly France, Germany, and Japan. This allowed Western countries to freeze the Russian currency reserves in their possession, approximately 300 billion, following the Russian invasion of Ukraine (Hersher and Murphy 2022).

Secondly, Russia pursued a policy aimed at diminishing its use of dollars in trade settling. The share of USD in Russia's trade settling fell from nearly 80% in 2013 to 54.5% in 2021. The vacuum left by the dollar has been filled mainly by the euro, which has increased its share from 9% in 2013 to about 30% in 2021. The ruble's share, on the other hand, increased from 10% to 14% (see Figure 8). The best example is the change in recent years in the currency composition of trade between Russia and China. In 2014, the two countries' trade was monopolised by the dollar, with 97%. By 2020 the dollar share dropped to 22,7% with the euro at 65,3% and the ruble at 5,7%.

Since 2014, India and Russia trade relationships have seen a fivefold increase in the use of their respective currencies, from 6% to nearly 30% (Shagina 2022). Moreover, to minimise the possibility of US sanctions, the two countries agreed to conduct India's military purchases from Russia in rupees.

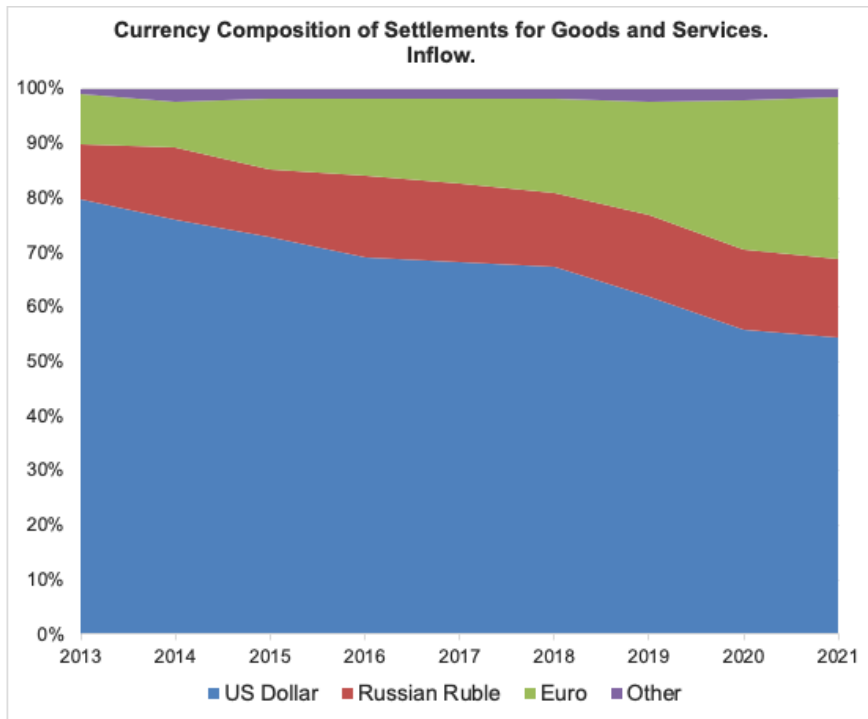


Figure 8 Currency composition of settlements for goods and services Inflow.

Source: Author's elaboration based on the Central Bank of the Russian Federation data

Lastly, Russia developed its own financial infrastructure. In 2014, Russia created the transaction clearing system called System for Transfer of Financial Messages SPFS as an alternative to the Belgium based SWIFT. SPFS has so far remained a system restricted to Russian borders, its expansion attempts being rejected by the BRICS countries and those part of the Eurasian Economic Union. Also in 2014, the Russian government created an alternative payment system to Visa and Mastercard by introducing "Mir", the National Payment Card System. Mir cards have been popularised by making them the sole vehicle through which state subsidies could be received, bringing them to account for about 25% of transactions made in 2021.

2.5.3 Did these efforts succeed?

De-dollarization did not work in the Russian private sector given the reliability of the dollar. In this respect, Russian households, banks, and corporations have maintained or increased US dollar usage between 2013 and 2020, even if it increased their exposure in the event of sanctions (Dolgin and Pang 2020). Furthermore, the dollar remains highly correlated with the volume of oil exports (ibidem). The de-dollarization efforts significantly increased the role of the Euro in Eu-Russia trade and significantly in the Russia-China trade. The effort to de-dollarize has led to a greater dependency on the Euro.

Russia's diversification process has not allowed for a diversification of its rents. As of early 2022, the state's finances were still tied primarily to the rents from the energy sector, although it had diversified its importers. China in recent years has become the largest single importer of Russia's oil with 30% of Russian exports and the largest buyer of the country's coal (U.S. Energy Information Administration 2022). However, Europe remains by far Russia's largest buyer: in 2021 it purchased nearly 50% of Russian crude oil exports and 74% of its Natural gas exports. Furthermore, China only accounts for only 6.35% of Russia's gas exports, and the other major Asian buyers of Russian commodities remained, as of 2021, Japan and South Korea, close US allies.

According to the latest data from 2021, Russia has maintained its dependence on the West in two main areas: in technology and in finance (Dickinson 2022). The defence sector as of 2021 still imported from 20% to 30% of its electronic components. The effort to change from import substitution to the localization of production by foreign companies' investments in Russian facilities between 2017 and 2019 rendered the country even more vulnerable to western sanctions. In fact, most of these factories needed to import high grade equipment which could only be supplied by Europe. The Russian independence from the Western financial infrastructure has not seemed to be a successful attempt so far, only 12 foreign banks utilised the SPFS system and among them there was only one Chinese bank (Ibidem). Because of Russia's vulnerability in these sectors, technology and finance became the focus of the initial sanctions following Russia's full-scale invasion of Ukraine.

2.5.4 Russia's pivot to Asia: facing reality

The reality of Russia's pivot to Asia proved less impressive than the Kremlin's propaganda made it appear. Since 2014 China's investments in its neighbour have decreased 2.5 times (Трифоновна 2021). Furthermore, Chinese companies have not been willing to invest in major infrastructure projects like the ones needed for oilfields in the Arctic (Sukhankin 2021). The reluctance is also caused by the fear of Chinese companies to incur in US secondary sanctions. Russia has also been fearful of China's investments in Iranian and Iraqi oil fields and the green transition at home will lead to Beijing requiring less Russian oil in the future (ibidem).

Lastly, in the de-dollarization agenda framework the Russian National Wealth Fund lost funds due to the volatility of the Chinese currency (ibidem).

The economic strain of sanctions has been felt by most of the population. Russian standard of living has been badly impacted since 2014 by low growth and rising inflation. Even before the coronavirus epidemic, Putin's countersanctions raised the cost of basic foods. People in certain Russian regions claimed that their groceries in 2021 ended up costing 30% more than they did in 2014 (Dickinson 2022).

2.6 2022 sanctions

On the eve of the 24th of February 2022, there was hardly anyone within the Russian administration who would have expected such a large-scale invasion of Ukraine and the Russian elite was not fully ready for the magnitude of Western sanctions (Seddon and Ivanova 2022).

Since the beginning of the Ukrainian invasion, the United States and its allies have applied a strategy of progressive implementation of sanctions. As the war dragged on, sanctions were being tightened through progressively restrictive waves.

2022's Russo-Ukrainian war positioned Russia as the biggest economy to ever be under comprehensive economic sanctions. The new sanctions continued along the lines of those in Crimea and Donbas. The main targets remained the financial system, including Russia's central bank, the export energy sector, and the defence sector. However, the scale of implementation of sanctions has increased dramatically.

The US government has acted through its three main sanctioning bodies: the Treasury, the State, and the Commerce Departments. US sanctions have come in waves and have included the prohibition of transactions with the Central Bank of Russia ¹⁷(U.S. Department of the Treasury 2022), comprehensive restrictions on export controls by the Department of Commerce¹⁸ and targeted sanctions against Russian elites and against 80% of Russia's bank sector (Welt 2022).

Given the ubiquity and restrictiveness of the measures applied from the beginning, subsequent sanctions packages have had marginally less impact. This applies except for the measures taken against Russia's natural resource exports.

The EU is the largest importer of energy from Russia; hence its decisions are critical in the case of measures restricting Russia's energy exports. Europe, after an initial hesitancy in implementing restrictive measures in the energy field, also given the difficulty of replacing its largest energy supplier, banned the purchase of Russian seaborne crude oil. This measure was implemented by the EU's sixth sanctions package and its implementation started December 5, 2022. These measures restricted about 90% of Russian oil Exports to the EU (European Council 2022).

¹⁷ <https://home.treasury.gov/news/press-releases/jy0612>

¹⁸ <https://www.bis.doc.gov/index.php/policy-guidance/country-guidance/russia-belarus>

Russia had been hit hard by these sanctions; in fact, the IMF in October of 2022 predicted a 3 percent contraction of the Russian economy. However, this negative inflection was only half of what was experienced following the 2020 financial crisis, and oil exports, until December 5, 2022, when EU sanctions on oil kicked in, remained an important source of revenues for the state.

2.6.1 Russia's protective measures

To minimise the economic harm caused by sanctions, the Russian government has implemented several protective measures.

The Russian Cabinet began conducting regular meetings with top representatives of key sectors of the Russian economy to assess the impact of economic sanctions. As reported by Seddon and Ivanova (2022) in one meeting an executive of a state-owned bank listed the economy's sectors according to their level of risk. Aircraft manufacturers, pharmaceuticals, healthcare equipment, high-end IT equipment, microchips, and aerospace technology were all labelled as "super critical".

Russia's central bank was soon stripped of its ability to use half of its foreign currency due to a freezing of its assets allocated in foreign countries. This manoeuvre complicated the defence of the value of its currency, which immediately after the invasion plummeted by more than 30 percent. However, the ruble soon regained its initial value thanks to tighter capital controls applied by the Russian government, a doubling of the interest rate by the Russian central bank, and increased revenues from energy exports. Russian companies were also required to sell 80 percent of their profits in foreign currency in the domestic ruble market.

2.6.2 The critical juncture of Europe's energy dependency

On May 18, 2022, the European Commission unveiled a plan called RePowerEU that calls for an end to member countries' imports of Russian fossil fuels by 2030. Such a decision would deprive Russia of its largest export market. The European market is not replaceable by other buyers given both the fact that it relies on dedicated infrastructure and that there is no other buyer willing to buy in such quantities (see Figure 9 and 10). According to the International Energy Agency World Energy Outlook of 2022 Russia's overall share of international traded gas, in an Announced Pledges Scenario, will fall to less than 15% in 2030 compared to its 30% stake in 2021. This results in a 67% drop of its net income from gas exports from \$75 billion in 2021 to \$25 billion in 2030.

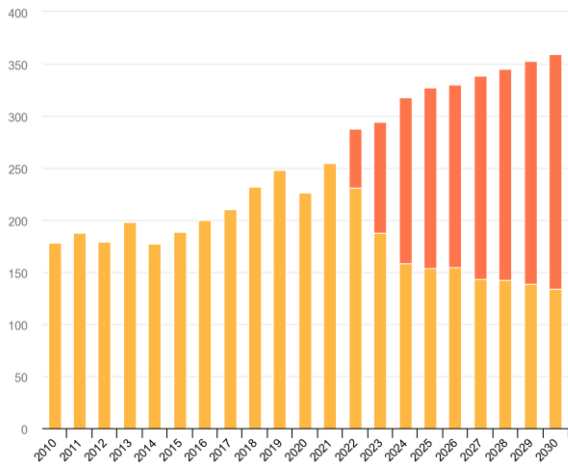


Figure 9 Russian gas exports in the World Energy Outlook 2022 vs. 2021

World Energy Outlook 2022 vs World Energy Outlook 2021

Data: IEA, Russian gas exports in the World Energy Outlook 2022 vs. 2021, IEA, Paris

<https://www.iea.org/data-and-statistics/charts/russian-gas-exports-in-the-world-energy-outlook-2022-vs-2021>

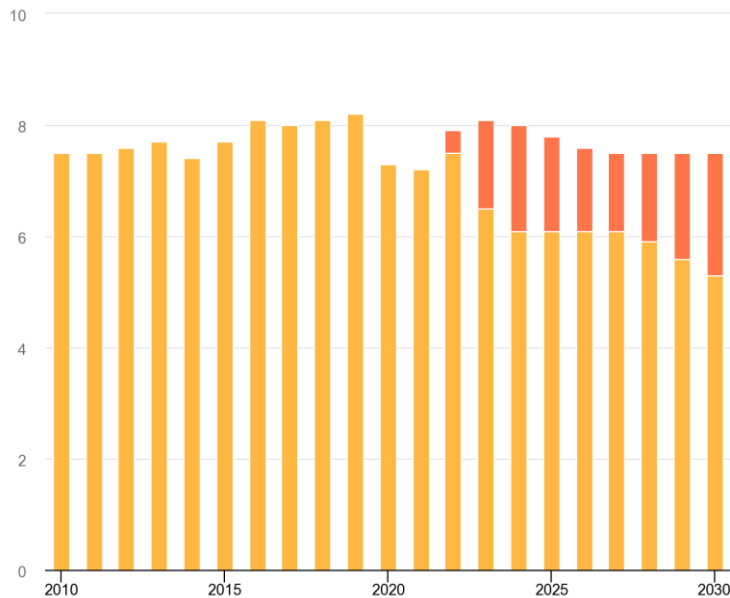


Figure 10 Russian oil exports in the World Energy Outlook 2022 vs. 2021

World Energy Outlook 2022 vs World Energy Outlook 2021

Data: IEA, Russian oil exports in the World Energy Outlook 2022 vs. 2021, IEA, Paris

<https://www.iea.org/data-and-statistics/charts/russian-oil-exports-in-the-world-energy-outlook-2022-vs-2021>

To prevent western sanctions the Kremlin has developed a “shadow fleet” of over 100 oil tankers through which it should circumvent the EU ban on seaborne Russian oil and the \$60 price cap for Russian oil. The provision

adopted by the G7, and the EU provides that any country that uses Western insurance and shipping services to purchase oil will have to purchase oil below the price cap. The measure was meant to target Russia's exports to countries that remained neutral, like China and India. In response, the Russian government stated that it will not buy oil from countries adhering to the price cap (Foy 2022).

Starting from June 2022, Russia became India's largest supplier of oil. India bought Russian oil given its lower cost relative to competition, and the price cap will give even more leverage to India and other buyers on future purchases of Russian oil (Cornish, Reed, and Wilson 2022). However, Russia, even with tanker purchases made in 2022, will not have the capacity to supply the same amount of oil after sanctions take effect, as the number of oil tankers in Russian hands is not sufficient (Sheppard, Cook, and Ivanova 2022). During the month of December 2022 over a quarter of Russian oil shipments was insured by western companies (Wilson, Cook, and Smith 2022).

2.6.3 Contraband

Another way in which Russia could make international payments would be through its massive gold reserve of around \$140 billion. The West has tried to prevent such a scenario, in fact on 7 March the London Bullion Market Association, the world's largest gold market, banned gold from Russian refineries (Keating 2022). This prompted other markets, including Switzerland, to voluntarily not accept Russian gold produced after 7 March. However, there are many methods to hide the provenance of gold, including transferring it through an intermediary. China, India, and the UAE have not imposed restrictions of any kind, leaving a chance for Russia to export gold around the world despite timely sanctions by the West.

The Russians have resorted to smuggling for western goods that have been banned by sanctions. The smugglers use front companies registered in Europe from which they then export to a former Soviet Union country that is part of the Eurasian Custom Union, such as Armenia and Kazakhstan, or a neutral state like Turkey.

Yet, importing technology via smuggling is not a sustainable method of sustaining industrial production due to the high risk and volatility in the provision of the commodity.

Two-thirds of Russian industries, according to a central bank poll conducted in April, were having trouble with their supply chains (Seddon and Ivanova 2022). By August, that percentage had dropped to 50%. However, aggregate data are not useful to determine the dependencies on foreign products in specific sectors.

The Russian government estimated that in 2022 more than \$20 billion worth of goods were imported thanks to the new law on 'parallel imports' (Ibidem). In practice, the law makes it legal to import products into Russia from third countries without the manufacturer's consent. This phenomenon occurred, like with smuggled items, in countries such as Armenia or Kazakhstan where front companies purchased high volumes of microchips and then exported them to Russia.

In June-August 2022 trade between Russia and EU countries was 43% lower than in 2021. Benefiting from this were countries such as Turkey, Kazakhstan, and China, which saw their exports to Russia increase. This sanctions deception already seems to be in place, in March 2022 Switzerland imported more gold from the UAE than in the previous 6 years, about 36 tonnes (swissinfo.ch 2022).

2.6.4 Beijing and Delhi devise alternative routes

After February 24th Russia accelerated its de-dollarization efforts by expanding the use of the yuan. Since then, one-third of new foreign currency accounts opened at Russian banks were opened in yuan (Shagina 2022). In addition, Russian demand for China-based UnionPay cards increased tenfold. However, UnionPay, to avoid secondary sanctions, has blocked the use of these cards outside Russian territory.

China has started to pay parts of its coal and oil purchases from Russia in yuan (Bloomberg 2022).

India has also explored new ways to circumvent secondary sanctions and the use of US dollars in its trade transactions with Russia. The two countries devised a new transaction platform that will connect the Reserve Bank of India and the VEB, the Russian state development corporation using Russia's SPFS system (TASS 2022).

Though these efforts represent just a dent in Russia's trade. The difficulty lies in substituting the dollar with another currency in trading commodities due to the scarcity of liquidity and the greater volatility of other currencies (Shagina 2022). Furthermore, the dollar fulfils the function of intermediate currency, by establishing the exchange rate between two other currencies, thus making the transactions susceptible to Western sanctions.

2.6.5 Future implications of US economic sanctions

The 2014 sanctions had begun as a response to the Russian annexation of Crimea and the occupation of the Donbas region by Russian paramilitary forces. The use of sanctions was being applied to specific sectors of the Russian economy, mainly the energy, military, and financial sectors, and to individuals within the Russian elite

deemed responsible for the events. The sanctions were applied mainly by the United States and the member countries of the European Union. These sanctions did not have the hoped-for effect due to multiple factors, the main ones of which include the Russian government's ability to reallocate resources where it most needed them due to the specific structure of Russian economic policy and the failure of European Union members to implement effective and uniform sanctions. Moscow has continued to accumulate profits from energy sales to Europe, where through new infrastructure, such as Nord Stream 2, it has gained even more leverage. The Russian market, given its size, has continued to be attractive to European companies, which, faced with fewer sanctions than their overseas counterparts, have continued to invest in the country. The Kremlin has not stood idly by and tried to reduce its import dependence on Western markets, especially in sectors considered to be of relevance to national security. However, this has been particularly difficult in high-tech import sectors such as high-end IT equipment, microchips, and finance that have remained heavily dependent on the West.

In energy exports, it accelerated its transition to eastern markets, although this did not diminish the importance of the European market, which continued to be the main importer.

Having experienced the blocking of essential systems for conducting international financial transactions such as SWIFT by US sanctions, Russia promoted the development of an alternative SPFS system and an independent electronic payment system MIR.

Moscow has also reduced its dependence on the US dollar, both in its foreign exchange reserves and in the use of the currency in international trade in preference to the rouble and the euro.

Finally, the Russian Central Bank pursued a policy of accumulating foreign currency reserves, decreasing the dollar share in favour of euros and other currencies and more than doubling the amount of gold at its disposal.

All this hinted that Russia was preparing for further sanctions and that if these were to arrive, Moscow would be better prepared than in 2014.

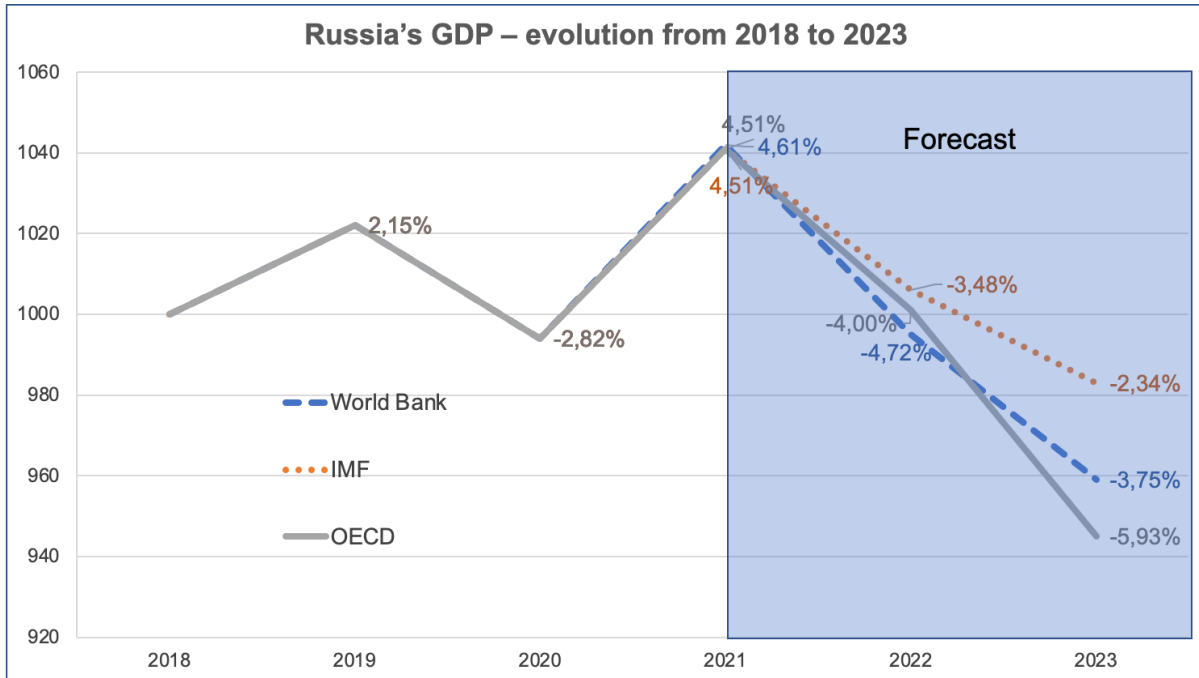


Figure 11 Russia's GDP evolution from 2018 to 2023

Source: Author's elaboration based on World Bank, IMF, and OECD data

In 2022 then the eleventh largest economy in the world faced comprehensive sanctions on an unprecedented scale.

Russia was not prepared for sanctions of such magnitude, however, thanks to several factors including the spike in the price of fossil fuels and the non-adherence of non-Western nations to sanctions, it managed to get through the first year without an economic meltdown and was able to sustain the war effort economically.

However, as time goes on, it is expected that sanctions will increasingly impact the Russian government's budgets and thus limit its ability to provide economic support to the war effort.

The economic sanctions of 2022 were the event that applied the weaponization of finance by the US institutions on a large scale.

This weaponization of finance is likely to create a growing backlash against US dominance of the financial system. The abuse of sanctions will encourage more and more countries to create an alternative financial system and to unite their trading partners behind currencies other than the dollar.

The next chapter will explore how other states, particularly China, are implementing a policy of independence from the dollar centric and US-centric financial system.

Chapter 3. US-China and the Weaponization of Interdependence

3.1 The Global Financial Network and Weaponized Interdependence

As the first chapter shows, since the end of the Cold War, the United States has progressively increased its use of smart sanctions, particularly financial ones.

According to Farrell and Newman (2019), the increase in unilateral financial sanctions by the US stems from the liberal order created at the end of the Cold War. Since the beginning of the end of history, the world has become increasingly interconnected. This was a process that happened increasingly, through the networks of private actors rather than through the multilateral actions of governments. The ways in which state power is exercised in international politics have been significantly impacted by this transition.

Interdependence was initially seen by liberal scholars as a democratising factor brought about by the new global networks (Nye and Keohane 2001). In fact, global networks, because they created interdependence between countries, were deemed to decrease the effectiveness of the use of force to achieve foreign policy objectives (*ibidem*). This came together with a strictly economic perception of currencies without giving enough consideration to the securitarian implication of currency choice.

However, these global networks have developed around a few hubs on which they directly relied. This concentration in hubs occurs mainly for market efficiencies. The presence of these hubs creates a strong asymmetry within the networks, making their control fundamental to exert influence on the network. Thus, the geographic location of the hubs becomes crucial, since when a state has control over them it has consequently control over the network.

Keohane and Nye (2014) argued that the network system would create several alternative hubs, which would lessen the influence of superpowers like the United States. Additionally, they contend that when the network's structural flaws are filled in, asymmetries are expected to become less pronounced over time.

In contrast, Farrell and Newman (2019) contend that the nerve centres of networks, or hubs, are mainly located in the US or in countries where the US has indirect control, e.g., allied territories. Networks with these characteristics are either those that developed after the end of the Cold War, such as the Internet, or ones that existed before and then expanded thanks to the globalisation brought about by American hegemony, such as financial messaging systems like SWIFT. The dominant role of the US between the 1990s and the early 2000s is

the reason why these networks developed around highly centralised hubs located under direct or indirect US control.

Through the control of hubs, states can weaponize interdependence through the exploitation of panopticon and choke-point effect. The panopticon effect is used when controlling states access the information belonging to a network, while the choke-point effect involves the obstruction of the network to exclude adversaries.

The areas in which US economic sanctions were most successfully applied, were precisely those in which the US had control over the hubs of networks so that it could exert both the panopticon and choke-point effect. One of these realms is the financial sector, where the US exercises direct or indirect control over its main hubs. In fact, the US holds both the dollar, the world's reserve currency, and has indirect control over the global infrastructure through which the currency moves, namely SWIFT.

3.1.1 The Dollar Hegemony

The dollar is the only global currency: in 2022, almost 60% of the world's reserves were denominated in dollars, followed by the euro, amounting to about 20%. The dollar is also the most widely used currency in international transactions in all continents except Europe, where, being a single market, the euro is the main trading currency. The US currency also dominates in international banking, accounting for about 60% of international and foreign currency liabilities and receivables.

The dollar is also the main currency through which countries and firms issue debt in the international market; about 60% of foreign currency denominated debt is in dollars. According to the index of international currency usage, which is constructed based on five parameters including official currency reserves, foreign currency debt instruments outstanding, FX transaction volume, cross-border deposits, and cross-border loans, the dollar ranks first with a value of about 75 followed by the euro at 25 (Bertaut, von Beschwitz, and Curcuru 2021).

The reasons why the dollar is the leading currency can be circumscribed to two complementary macro areas: factors of economic nature and those of a securitarian or geopolitical nature.

The formers are considered as the main factors and are the economy's size, complexity, and growth of the issuing nation; asset liquidity; the administration's dedication to both domestic and international price stability; and the country's economic openness.

The US and the dollar excel in all these aspects. The US is the single nation with the largest and most liquid market in the world, it has an independent central bank, the Fed, which has the dual mandate of maximum

employment and price stability. It is an economy with relatively no capital controls, and finally it has maintained this position since the end of World War II.

Securitarian reasons are also important to the extent that Adam Posen sees them as the main reason for the euro's inability to replace the dollar as the main reserve currency (Posen 2008). Indeed, nations prefer to hold currencies issued by relevant military players that offer defence guarantees. In exchange for these defence guarantees, the allies also adopt the guarantor's currency, which comes also because of increased economic exchange between the two countries (Norrlöf 2022).

The degree of consideration given by a country to the security reasons for adopting a certain type of reserve currency depends on the security threats faced and the security assurances provided by the ally, intended as the type of alliance undersigned by both parties.

The importance of securitarian versus economic reasons varies according to historical context. During the Cold War, the adoption of the dollar was seen as a way of forging political and military ties with the United States, called 'defence for dollars', to guard against Soviet intrusion (ibidem). After the end of the Cold War, securitarian reasons diminished vis a vis economic one.

Models that study the adoption from countries of an international currency do not consider defensive alliances as they are not considered relevant in this respect (Norrlöf 2022). The prevalence of currency choice is attributed to economic reasons, as the main purposes of maintaining currency reserves is to supply hard currency to the local financial sector and stabilise the currency through intervention in the forex markets.

The prevalence of the dollar in international finance is such that over the past 30 years even geopolitical adversaries of the United States, such as China and Russia, have both used the dollar in international transactions and as their primary reserve currency.

This was done mainly with economic considerations in mind. In fact, Russia before the invasion of Ukraine in anticipation of economic sanctions, had accumulated a wall of \$630 billion. However, this accumulation of dollars has only reinforced the sanctioning power of the US. As seen in the second chapter, Russia tried to preempt sanctions on its central bank by moving its reserves to non-antagonist countries but failed to prevent half of its reserves from being frozen by sanctions.

The sanctions on Russia are just the latest of the episodes in which the US has weaponized the dollar.

Washington has put their hegemonic position as hub of the international economy since the end of the Cold War in service of its foreign policy.

The US leveraged its position in global finance by threatening banks that did business with sanctioned entities with being cut off from doing business in the US unless they froze their assets. This happened under the Presidency of Bill Clinton during the 1990s with sanctions on Iran and expanded to terrorist's organizations and individuals during the War on Terror, under President George W. Bush. The latest examples before Russia were the 2019 block of Iran's National Development Fund and central bank assets based on terrorist financing grounds and the freezing of Taliban's assets after they seized power in Afghanistan in August of 2021.

3.1.2 SWIFT and the Weaponization of Finance

The US has indirect control over SWIFT, the service used by financial institutions, to transfer payment instructions between one another.

SWIFT was born in 1973 out of the need to speed up and streamline the process of transferring payment messages between financial institutions such as commercial banks, central banks, and settlement institutions. The company was based in Brussels but maintained a mirror server in Virginia, US. SWIFT soon monopolised financial transactions at the centre of world finance. In 2021, it connected 11,000 institutions in over 200 countries, processing around 42 million payments per day (SWIFT, 2021).

The concentration of sensitive information concerning the movement of economic funds first interested the Financial Action Task Force, a global money laundering watchdog, in 1992, which requested access to the SWIFT system to detect criminal activities (Farrell and Newman 2019). SWIFT refused to provide the information, claiming that the requests should have been addressed to the banks that had carried out the financial transactions. SWIFT only gave in to the demands after 9/11 when, through the Terrorist Finance Tracking Programme, the treasury department issued administrative subpoenas for terrorist-related data. SWIFT, having an operating centre on US soil, was required to comply with Treasury Department requests. The information provided by the system proved to be instrumental in disrupting the financing of terrorist groups (Lichtblau and Risen 2006).

The turning point came in 2012 when SWIFT went from playing a panopticon role to an active chokepoint role as the U.S. senate banking committee passed legislation that would have allowed SWIFT to be sanctioned if it continued to provide support to Iranian banks (Farrell and Newman 2019). The JCPOA agreement provided for the reintegration of the sanctioned banks into the system, but the agreement proved short-lived, as in 2018 the US exited the agreement by reimposing sanctions on Iranian banks via SWIFT. In 2022 several Russian banks

were disconnected from the system by the European Union in agreement with the US and Canada, after Russia's invasion of Ukraine.

In recent decades, the weaponization of finance, of central banks' dollar reserves and of the world's financial plumbing have led international players to seek alternatives to US-based systems. These needs are mainly expressed by actors who have major policy conflicts with the United States.

After the reimposition of sanctions on Iran during the Trump administration, even allies of the United States have begun to consider the creation of alternative financial payment channels less vulnerable to US sanctions (Farrell and Newman 2019). This happened when EU countries devised a new payment system called INSTEX that made it possible to trade with Iran avoiding the use of US dollar and the SWIFT payment system (ibidem).

The increasing weaponization of finance by the US could, in the long term, undermine the very system that enables it. For instance, after the freezing of Russian reserves, other nations that envisage policy conflicts with the US will be more careful about accumulating dollars to defend their currency. Likewise, they will try not to use systems undermined by Washington's sanctions such as SWIFT.

3.2 The Probable Challenger

Looking at the statistics on the composition of foreign exchange reserves, one might consider the dollar's main competitor to be the euro, which accounts for about 20% of the world's foreign exchange reserves. However, there are several reasons why its share in the currency reserves has not changed significantly in the last decades. The Euro has two major shortcomings when it comes to be considered as a possible dominant currency (Wolff and Claeys 2020). Firstly, the eurozone does not offer a sizable and elastic supply of a safe asset, as the one provided by the dollar (ibidem). Secondly, the EU does not have sufficient geostrategic and military power. The euro's climb to prominence as a world reserve currency was accomplished in the larger context of NATO military alliance. In fact, its framework made it possible for Europe and the US to trade more products, services, investments, and ideas than they ever had in the history of bilateral ties. As of 2023, Europe on its own does not have the military projection capacity and geostrategic power to sustain the World's reserve currency yet. This was confirmed by the European reaction to the Russian invasion, particularly in the supply of armaments. Europe's attitude has always been one of following the American initiative rather than pursuing its own policy. The United States' security belt continues to be crucial to Europe's geostrategic stance.

China is the only geostrategic competitor of the US that has been willingly attempting to internationalise its currency since the 2008 financial crisis. The difficulty in securing financing from the FED's, after Lehman

Brothers collapse, made China realise that it needed to use its currency for international transactions to gain financial independence and stability. By 2013 the PBOC had established RMB clearing centres in major financial hubs worldwide. In 2014, the Chinese government opened its financial markets and allowed foreign institutions to trade in its domestic markets, making it more attractive for other countries to hold RMB assets. On November 30, 2016, the RMB was included in the International Monetary Fund's Special Drawing Rights basket, which further elevated its status as a global currency. China also undersigned more than 35 Bilateral Swap Agreements with Central banks, mainly with countries taking part in the Belt and Road Initiative, though these have proved ineffective in the internationalisation of its currency (McDowell 2019).

Despite these efforts, the RMB still lacks key features, such as stability, convertibility, and openness of China's internal market, that would be necessary for it to replace the US dollar as the dominant currency. The Chinese government still exerts significant control over its financial markets and exchange rate, which limits the RMB's full integration into the global financial system.

However, in recent years, China has sought new ways to internationalise the use of its currency. It did so both by being a pioneer in the field of CBDCs, through the development of the e-CNY, and through the growth of the CIPS payment system, which in the future could replace SWIFT as a financial messaging system.

3.2.1 Central Bank Digital Currencies and the e-CNY

A CBDC, as defined by BIF, is a “central bank liability, denominated in an existing unit of account, which serves both as a medium of exchange and a store of value”. What distinguishes CBDC from paper currency is the former's digital format.

CBDCs come in different categories, including account-based, value-based, retail, wholesale, and general-purpose. Interest-bearing and non-interest bearing CBDCs, as well as centralised and decentralised CBDCs, are also being explored. CBDCs can be transferred through decentralised or centralised methods and can offer varying levels of anonymity and interest. The form of CBDC, such as retail or wholesale, depends on the level of financial development in a particular economy. The more an economy is financially developed the more likely it will be to adopt a wholesale CBDC, which is mediated by a wholesale counterparty, i.e., an account holder of the Central Bank like a clearing bank.

3.2.2 CBDC as a network

As of December 2022, over 100 countries had started the development of the digital currencies (IMF 2022). CBDCs are developing more rapidly in countries where the traditional banking system is not easily accessible, as they represent a more accessible alternative to it (Demertzis 2022).

Though, there are three main actors that are the most influential in terms of financial leverage in the development of the CBDC network: the Federal Reserve, the European Central Bank, and the People's Bank of China. Among the three, the PBOC is at the forefront of the new technology, having launched its CBDC pilot program in 2020. The same year the FED was not even at the research stage of its CBDCs, which it launched in January 2021.

The global financial network, as previously discussed, has developed as a centralised network around the US currency and the underlying financial transaction system. CBDCs will create a network of their own and the latter's development will likely reshape the global financial network (Wang and Gao 2021). The nodes of the CBDC network will be the economies, and in particular the central banks issuing the currency. CBDCs would enable nations to function independently of the American dollar-led system by connecting financial institutions through autonomous payment systems without relying on intermediaries and SWIFT (Raghuveera 2020).

China seeks to be at the centre of this network by establishing a leading position in terms of setting international standards and regulations. To achieve this, the PBOC has initiated the process of creating cross-border digital currency principles.

The PBOC development of e-CNY started in 2014 with the establishment of the Digital Currency Research Institute. In 2020 the PBOC launched its e-CNY pilot programme across 15 provinces and two years later it had been used in over 260 million transactions worth \$12billion (The Economist, 2022). The Chinese authorities were keen to highlight the importance of the e-CNY in the domestic market and have underplayed the currency's relevance to the renminbi's internationalisation plan (Hoover Institution Press Publication 2022). Chinese and international analysts see CBDCs as a new battlefield for competition with major powers, mainly the United States, and a new frontier for China to assert its dominance through its first-mover advantage (ibidem).

The introduction of the e-CNY could bring about several benefits for internationalising the yuan. One advantage is that it would simplify and reduce the cost for foreigners to carry out cross-border payments, making it more difficult for the US to interfere with these transactions for political reasons. This could result in greater

popularity for the yuan, even if China still implements capital controls. Another potential impact of the digital yuan is that it could modify the way capital controls are enforced by incorporating them into the currency itself (The Economist, 2022).

3.2.3 m-Bridge

One of the initiatives aimed at shaping international norms and guidelines for digital finance is the BIS multiple CBDC project. The project named m-Bridge is a technical platform that directly connects digital central bank money. The objective is to conduct peer-to-peer payments directly across jurisdiction using local central bank money, to avoid the pain points of international payments. The purpose, as stated by the project, is to “advance cross border payments in central bank money and support diversification of currencies in cross border transactions” (BIS, 2022). mBridge has been developed by the central banks of China, the UAE, Thailand, and the Hong Kong Monetary Authority in collaboration with five commercial banks operating in each country. Furthermore, thanks to the UAE's membership, any of the participant's digital currency could be used to pay for imported oil.

3.2.4 Chinese digital payments in Africa

China intends to spread the use of e-CNY where it already has a significant economic foothold, notably in Africa and the BRI countries.

In mainland China, the e-CNY is supposed to end the duopoly in digital payments of Tencent and Alibaba and transfer ownership and management of big data to the PBOC. Outside China, The PBOC could use the two private platforms as routes to distribute the e-CNY to international users, just as it has already done internally through the pilot programme (Bansal and Singh 2021).

It is estimated that the Chinese government, banks, and state-owned corporations hold between 17-24% of Africa's external debt. This gives China leverage over countries with growing Chinese debt, as it can encourage them to build up reserves of the digital yuan to repay loans (Bansal and Singh 2021).

China has a sizable payments infrastructure in place throughout East Africa. UnionPay is available in more than fifty African nations, with twelve of them issuing it domestically. In 2020 UnionPay International partnered with Interswitch East Africa, based in Kenya to be a third-party service provider for the Chinese payment system (Bansal and Singh 2021). As a result, UnionPay cards can be used for point-of-sale transactions,

withdrawals from ATMs, QR payments, and online payments throughout the East Africa region. Moreover, the e-CNY could find fertile ground in Africa given the difficulty in securing dollar financing in the poorest parts of the continent (The Economist, 2022).

The digital currency could be the solution Beijing was looking for, in fact it could be made available in the international market while, thanks to the programmability aspect of digital Currencies, maintaining full traceability by the PBOC (Ibidem). This could prevent sudden capital outflows from China, which have been the primary cause of Beijing's reluctance to open its domestic market.

3.2.5 The Cross-Border Interbank Payment System (CIPS)

The Cross-border Interbank Payment System (CIPS) was launched by the PBOC in 2015. It is a clearing and settlement service with the function to connect the offshore renminbi market with the onshore one. CIPS is the Chinese counterpart of the US Clearing House for Interbank Payment Systems, which clears USD transactions around the world. However, CHIPS handles 40 times more transactions with 10 times more institutions (Eichengreen 2022). For the transfer of payment information, CIPS mainly relies on SWIFT. For instance, Russian banks that use CIPS must use SWIFT as a vehicle for transmitting payment information (ibidem). However, CIPS has its own financial messaging system that would make it independent from SWIFT.

SWIFT, according to the latest figures from 2021, connects more than 11,000 financial institutions in over 200 countries. It has a commercial turnaround of more than USD 200 billion per day, processing some 33 million financial transactions. China's own system processed over \$12.68 trillion in RMB with an increase of 75% compared to the previous year (Reuters 2022). The system connected 76 direct participants with over 1288 indirect participants across 104 countries spanning in all the continents (BOFIT 2022). Direct participants hold an account in the system and indirect participants must rely on the former to use it. In 2021, the volume and value of transfers handled by CIPS grew by about 30% and 50% respectively, compared to the previous year. This growth has been attributed to the relaxing of capital controls between Hong Kong and mainland China (ibidem). The CIPS payment volume remains around 0.3% of the one handled by SWIFT (Cipriani, Goldberg, and La Spada 2023).

SWIFT transactions in renminbi in the year 2022 constituted just 3.2% of global payments, double the figure of 2020. The share is still negligible when compared to the 43% of the US dollar, though it identifies a positive trend for the PBOC. Overall, to make CIPS a game changer in international finance, the renminbi would have to increase its share in the global payment system.

Russia has started to accept renminbi in exchange for oil and coal exports to China, probably through CIPS (Eichengreen 2022). Though both countries continue to use mainly euros for their trade, given that the ruble is highly volatile and the renminbi, due to China's strict capital controls, is highly limited in the international market.

Greater usage of the CIPS system can only happen if China first implements the necessary political and economic reforms to make the RMB a secure investment. Building international confidence in the RMB as a safe asset and China as a dependable participant in global finance is crucial before CIPS can support China's role in the world's financial system.

3.3 The weaponization of Global Value Chains: the case of 5G and Huawei

5G has the potential to bring about significant changes in a variety of industries, spanning from telecommunications to manufacturing. The control over its infrastructure is considered strategic and therefore an issue of national security.

China was the first country to launch a 5G network in 2018. Chinese tech giant Huawei has been at the forefront of this effort by partnering in 2019 with major European telecommunication companies such as Orange, Vodafone, and Deutsche Telekom. The Chinese government has also been promoting 5G technology through initiatives such as the BRI. China has set out the goal to become a dominant player in the global technology market and promote the use of 5G in other countries.

On May 16, 2019, the US Department of Commerce added Huawei and its affiliates to the Bureau of Industry and Security (BIS) Entity List, which restricts the sale of US technology and products to the company. The US government decided to lift sanctions on Huawei due to the growing concern about the company's ascent to a dominant position in the world's 5G infrastructures. Concerning were also Huawei's alleged links to the Chinese government and the potential national security risks posed using its equipment in critical infrastructure.

The two primary concerns that drove the sanctions against Huawei were the potential for the company to be used as a tool for intelligence gathering and the theft of trade secrets by China, as well as the possibility that relying on Huawei's technology could compromise military operations by introducing vulnerabilities through "compromised networks" (Triolo and Fuller 2019).

The 5G equipment supply chain is a complex and multi-step process involving several countries and a variety of stakeholders. In the global value chain of 5G equipment, the US and its allies hold two essential chokepoints: the electronic design automation (EDA) software programs and advanced semiconductor manufacturing equipment (SME), used in the chip making process (Fuller 2022).

| Equipment Category | 2019 US\$ (bln) | Leading Global Suppliers | | | | | | Chinese Suppliers | | |
|-------------------------------------|-----------------|--------------------------|-------------------------|--------------------|------------------|------------------------|----------------|-------------------|-------------|-------------|
| | | ASML (NL) | Applied Materials (USA) | Lam Research (USA) | KLA Tencor (USA) | Tokyo Electron (Japan) | Screen (Japan) | AMEC | NAURA | ACM |
| Deposition | 12.0 | | 43.6% | 19.1% | | 10.4% | | 1.1% | 0.9% | 0.1% |
| Lithography | 11.7 | 83.3% | 0.3%* | | | | | | | |
| Etch | 10.8 | | 18.1% | 44.7% | | 28% | | 1.1% | 0.8% | |
| Process Control | 6.2 | 4.9% | 11.3% | | 53.6% | | | | | |
| Material removal/clean | 3.7 | | 18.3% | 34% | | 24.1% | 9.7% | 0.7% | 0.8% | 0.6% |
| Automation | 2.9 | | 4.7% | | | | | | | |
| Photoresist Processing | 2.1 | | | | | 91.3% | 5.6% | | | |
| Chemical Mechanical Polishing (CMP) | 1.4 | | 66.1% | | | | | | | |
| RTP | 1.4 | | 40.4% | | | 20.3% | 3.8% | | 1.7% | |
| Ion Implant | 1.2 | | 60% | | | | | | | |
| Total Market** | 55.5 | 18.1% | 18.7% | 13.9% | 6.5% | 13.6% | 3.1% | 0.5% | 0.5% | 0.2% |

Table 1 2019 Market Shares for Major Domestic and Foreign Wafer Fabrication Equipment Vendors

Source: Credit Suisse via Douglas B. Fuller <https://www.prclleader.org/fuller>

The inclusion of Huawei on the Entity List in May 2019 had the primary effect of cutting the company off from the supply of new EDA software tools produced in the US, essential in the design of new chips.

These early sanctions left a wide field in which Huawei could operate. In fact, the Chinese giant still had access to production, via TSMC, of chips produced before the sanctions, which would have lasted at least two years.

Moreover, Huawei could continue to rely on foreign foundries to produce their chips. To fill the legislative gaps in this matter, the US administration implemented new sanctions a year later, on 17 August 2020.

In this case, the US used secondary sanctions. In fact, not only the use of American EDA software was forbidden to manufacturers that would use it to produce chips for Huawei but also the US revised the Export Administration Regulations (EAR) Foreign Direct Product Rule so that it could prohibit third-party use of US machinery to produce chips for Huawei.

The US had weaponised the parts over which it had control in the global value chain of 5G technology. EDA software and SMEs were also the most sensitively technological components of the IC industry (Fuller 2022).

The US had such leverage on EDA companies because the five biggest producers of EDA tools are all American. According to a report from Technavio, in 2020, the top three companies held a combined market share of over 60%. Cadence Design Systems and Synopsys were the leading players in the market with a share of nearly 30% and 25% respectively, while Mentor held a market share of around 5%.

The United States also leveraged their position in the production of IC capital equipment, with American companies holding a 52% market share, followed by Japanese companies with 27% and European companies with 17% (Fuller 2022).

According to Fuller (2022), the existing competitors, rather than new entrants, are the firms that are likely to displace incumbent American SME firms. These existing competitors come from US allies, such as Japan and the Netherlands. However, compliance with US sanctions is uncertain. To preserve the chokepoint, the US must be cautious not to impose excessive costs on its allied firms rather than being concerned about potential competition from China.

3.3.1 Huawei's response to sanctions

The restrictions presented Huawei with the challenge of either hacking the licence keys, finding intermediaries to access the EDA tools, or turning to purchasing chips from others (Fuller 2022). With the reinforced rules, Huawei could only secure international foundry services by disguising the origin of its orders or using non-American foundry production in the long term. Huawei attempted to develop alternatives to access EDA tools, such as partnering with ST Micro and investing in Chinese EDA start-ups. However, the first attempt to link up with the French-Italian company would have breached EDA licences, hence it was not undertaken. Replacing American firms with Chinese EDA start-ups would take too long, assuming it would work.

Fueller (2022) argues that the most favourable solution for Huawei is not to create alternatives, but to find ways to legally access the American EDA tools it currently uses. The drawback of hacking is the uncertainty and the risk of being suspected by foundries for engaging in such conduct. It is more beneficial for Huawei to establish a series of shell companies with no clear links to the company to access the EDA tools. A representative from a foreign EDA tool vendor mentioned that at least one Entity List company has already set up a shell company to serve as a legal front for EDA licences (Fuller 2022).

Regarding the chip manufacturing aspect, Huawei had placed advance orders with TSMC before the sanctions came into force in September 2020. This allowed the company to have inventories for the next 18 months. However, breaking away from the American machines is also very difficult, since the alternatives are still presented by American allies.

Huawei has tried to replace American-supplied foundries with components made by SMIC (Semiconductor Manufacturing International Corporation), but the partially state-owned company faced challenges in producing high-end, advanced technology chips that are comparable to those made by its American counterparts. However, SMIC is actively investing in upgrading its technology and capabilities, and it is possible that in the future, it may be able to replace some SME components. But this depends on various factors such as market demand, investment, and innovation.

The results of the sanctions on Huawei have been dire. Following years of continuous expansion, Huawei's revenue fell by about 30% in 2021 from a record of around \$140 billion in 2020 (The Economist, 2022). Due to the US ban on 5g chips Huawei had been forced to spin off its Honor smartphone brand in 2020. As a result, the company's device business saw a 25% drop in revenue in the first half of 2022 compared to the previous year (ibidem).

Huawei's founder, to save the company, started to expand its business from a manufacturer of telecom products to a tech and service supplier in a range of sectors, from auto manufacturing to agriculture, since the sanctions came into force. This restructuring, in the wake of US sanctions, could take the company from being a leader in mass telecommunications hardware to developing customised products and providing consultancy services.

3.4 The prospects of a Fragmented Global Economy

The use of economic sanctions by the US has resulted in a speeding up of the development of alternative systems by its main strategic rival, China.

The weaponization of interdependence in global finance that became apparent with the sanctions imposed by Washington first on Tehran and then on Moscow has reignited the debate on the role of the dollar in the global economy and its possible alternatives.

The only feasible substitute to the dollar is seen as the Chinese currency (Wolf, 2022). In fact, History indicates that a currency from an economy with similar size, level of development and interconnectivity is likely to become a widely accepted form of payment globally. However, the renminbi has had great difficulty in

positioning itself among the top currencies in circulation and its use is still dwarfed by the dollar. This is largely due to capital controls and the absence of rule of law in the mainland.

However, the latest sanctions and Washington's increasing weaponization of finance have increased the need for states to find alternatives to the greenback. Although this may be more of a requirement of the increasingly protectionist monetary and economic policies adopted by the US than a rejection of Washington's weaponization of finance.

The 2014 sanctions led Russia to develop its SPSF financial communication system and China to try to make its CIPS clearing and settlement services system more independent from SWIFT in the transmission of transactions.

China ranks first among the great powers in the development of a CBDC and is already part of multilateral projects, such as m-Bridge, which are aimed at shaping international norms and guidelines for digital finance. Oil-producing countries such as Saudi Arabia are considering accepting alternative currencies to the dollar for oil. In December 2022, the first transaction between Riyadh and Beijing was made in renminbi.

Another area of competition between the two geopolitical rivals is chips. Here, the US has an advantage in the chip-specific Global Value Chain, in the two sectors with the highest technology concentration: EDA and EMS. Here the US together with its allies have exploited choke points by cutting off the Chinese giant Huawei from the 5G device production chain. China reacted by trying both to create shell companies to serve as a legal front for EDA licences and to internalise the production of EMS. The chip sector, especially when it comes to EMS, is very difficult to replicate as the Chinese industry lacks in photolithography, metrology, and inspection, virtually all EMS sub-sectors (Hunt, Khan, and Peterson 2021).

However, China has both the economic resources and the political will to internalise the advanced chip production process in the long run.

This chapter analysis provides a partial understanding of the impact that US economic sanctions can have on the global economy, specifically on its primary rival. The weaponization of Washington's economic power and its use of economic sanctions as a political tool has created a significant shift in the global economic landscape.

The consequences of this shift, such as non-allied states becoming more cautious about relying on US financial infrastructure and the US dollar, must be taken into consideration by policy makers and researchers alike.

The potential creation of two separate monetary systems, a western and a Chinese one, highlights the possibility of a fragmented and overlapping global economy. This could have serious implications for international trade and financial stability, potentially leading to increased economic competition and tensions between nations.

Moreover, the 5G sanctions highlight the potential for technological decoupling, a term used to describe the process of separating technological systems and standards, due to the significance of technology in great power

rivalries. This could further fuel economic and technological competition between nations and limit the flow of technological advancements and knowledge.

Conclusions

Economic sanctions have proven to be a preferred foreign policy tool of US administrations in recent years. Particularly since the Obama administration, the number of sanctions that are seen as a viable alternative to armed intervention has increased considerably, given the proximity in time to the Afghan and Iraq wars, which have left a major rift in American society.

The United States has often used its hegemonic position in the global economy to advance its foreign policy goals and maintain its influence. This hegemonic position coincided with two major events: the spread of global networks and the increasing use of economic sanctions as a tool of statecraft. The US has weaponized its networks to both advance its foreign policy and to counter perceived threats to its hegemony, such as the rise of China. However, this increasing use of networks for political purposes has awakened a need among states that are not aligned with Washington and its competitors to create alternative networks. China, considered Washington's main competitor, is, as analysed in this thesis, at the forefront of this process.

In the cases studied in this thesis, special emphasis was placed on the role of the dollar in the economy and the infrastructure underlying the global finance system.

The dollar, which has been the basis of the world economy since Bretton Woods, could see the emergence of competitors, given its increased weaponization through economic sanctions for security purposes.

The most likely competitor, according to international analysts, is considered the renminbi. Discussions about a currency ousting the dollar were first made with the German mark in the 1970s, then the Japanese yen in the 1980s, and again with the euro in the 2000s. However, China has not only the economic characteristics necessary to be an international currency but also the ambition to rival the US. The renminbi has been talked about as a rival to the dollar since 2009, when China initiated an active policy of internationalizing it. However, as of today, there has yet to be such a significant presence of the renminbi in international markets, especially when compared to China's weight in global trade. The main reasons that undermine a greater presence of the Chinese currency in the world market have been attributed to the Chinese government's non-adherence to the rule of law, the country's large current account surplus, the non-flexibility of the exchange rate, and the too stringent control to capital flow. However, these shortcomings of the CCP could be perceived as less relevant by those so-called "revisionist" governments or those wishing to contrast with Washington, as the latter applies a kind of capital control of its own through sanctions, which reduces the dollar's appeal.

Another area in which the United States, starting with the Trump administration, has sought weaponization of the global value chains is technology, primarily chips.

As a result, the global economy is becoming increasingly fragmented, with states seeking to reduce their dependence on the US and protect their own interests. The effects of these trends are far-reaching and have the potential to shape the future of international cooperation, stability, and power dynamics.

As highlighted in the study, the United States has succeeded, through its control of chokepoints in the chip production chain for 5g, in significantly altering Huawei's, and thus China's production, in a key field of technological supremacy.

The global economy, in matters that can be weaponized by giving a competitive edge over the adversary, is undergoing a process of fragmentation into competing blocs. This fragmentation could lead to a macroeconomic and market environment that is far more volatile, resulting in a significant challenge to those nations and businesses that operate in sensitive industries. However, this process will probably not result in a large reduction in global money, commodities, and service flows or a general reversal of most advantages of globalization.

The decisions made within these groups will increasingly be influenced by political factors. While globalization was propelled by both governments and businesses acting in concert, fragmentation is solely driven over security concerns by government entities.

The consequences of fracturing will be far-reaching in certain areas, yet in others, predictions of a major overhaul of the world economy and finance system will miss the mark.

For instance, the influence of politics in splintering will have a substantial effect on the working conditions for businesses in the United States and Europe that are highly vulnerable to trade limitations, such as the technology and financial flows. All companies and investors will now operate in a setting where political factors carry more weight in the distribution of resources.

Bibliography

- Ahn, Daniel P., and Rodney D. Ludema. 2020. "The Sword and the Shield: The Economics of Targeted Sanctions." *European Economic Review*, October, 103587. <https://doi.org/10.1016/j.eurocorev.2020.103587>.
- Alexander, Kern. 2009. *Economic Sanctions Law and Public Policy*. Basingstoke, Palgrave Macmillan.
- Arslanalp, Serkan, Chima Simpson-Bell, and Barry Eichengreen. 2022. "The Stealth Erosion of Dollar Dominance: Active Diversifiers and the Rise of Nontraditional Reserve Currencies." *IMF Working Papers 2022* (058): 1. <https://doi.org/10.5089/9798400204746.001>.
- Bacon, Edwin, Bettina Renz, and Julian Cooper. 2013. *Securitising Russia*. Manchester University Press.
- Bansal, Rajesh, and Somya Singh. 2021. "China's Digital Yuan: An Alternative to the Dollar-Dominated Financial System." Carnegie India. August 31, 2021. <https://carnegieindia.org/2021/08/31/china-s-digital-yuan-alternative-to-dollar-dominated-financial-system-pub-85203>.
- Barber, James. 1979. "Economic Sanctions as a Policy Instrument." *International Affairs* 55 (3): 367–84. <https://doi.org/10.2307/2615145>.
- Bartlett, Jason, and Megan Ophel. 2021. "Sanctions by the Numbers: U.S. Secondary Sanctions." *Www.cnas.org*. August 26, 2021. <https://www.cnas.org/publications/reports/sanctions-by-the-numbers-u-s-secondary-sanctions>.
- Bergeijk, Peter A.G. van. 2022. "The Second Sanction Wave." CEPR. January 5, 2022. <https://cepr.org/voxeu/columns/second-sanction-wave>.
- Bertaut, Carol, Bastian von Beschwitz, and Stephanie Curcuru. 2021. "The International Role of the U.S. Dollar." *Www.federalreserve.gov*, October. <https://www.federalreserve.gov/econres/notes/feds-notes/the-international-role-of-the-u-s-dollar-20211006.html#:~:text=In%20part%20because%20of%20its>.
- Bhusari, Mrugank, and Maia Nikoladze. 2022. "Russia and China: Partners in Dedollarization." Atlantic Council. February 18, 2022. <https://www.atlanticcouncil.org/blogs/econographics/russia-and-china-partners-in-dedollarization/>.
- Biersteker, Thomas J., and Zuzana Hudáková. 2021. "UN Targeted Sanctions: Historical Development and Current Challenges." In *Research Handbook on Economic Sanctions*, 107–24. Edward Elgar Publishing Limited.
- Biersteker, Thomas J, Sue E Eckert, Marcos Tourinho, and Zuzana Hudáková. 2018. "UN Targeted Sanctions Datasets (1991–2013)." *Journal of Peace Research* 55 (3): 404–12. <https://doi.org/10.1177/0022343317752539>.
- Bloomberg. 2022. "Russia Coal and Oil Paid for in Yuan Starts Heading to China." *Bloomberg.com*, April 7, 2022. <https://www.bloomberg.com/news/articles/2022-04-07/russian-coal-and-oil-paid-for-in-yuan-to-start-flowing-to-china>.
- BOFIT. 2022. "Growth of China's CIPS Payment System Remained Brisk Last Year." BOFIT. April 8, 2022. https://www.bofit.fi/en/monitoring/weekly/2022/vw202214_3/#:~:text=The%20system%20processes%20on%20average.

- Carter, Barry E. 1997. "Instilling Some Order into the Confusion of U.S. Unilateral Economic Sanctions." *Proceedings of the Annual Meeting (American Society of International Law)* 91 (April 9-12): 334–37.
<https://www.jstor.org/stable/25659143>.
- Central Bank of the Russian Federation. 2015. "Bank of Russia Foreign Exchange and Gold Asset Management Report N1."
- Central Bank of the Russian Federation. 2017. "Bank of Russia Foreign Exchange and Gold Asset Management Report N3."
- Central Bank of the Russian Federation. 2020. "Bank of Russia Foreign Exchange and Gold Asset Management Report."
- Central Bank of the Russian Federation. 2022. "Bank of Russia Foreign Exchange and Gold Asset Management Report."
- Cipriani, Marco, Linda S. Goldberg, and Gabriele La Spada. 2023. "Financial Sanctions, SWIFT, and the Architecture of the International Payment System." *Journal of Economic Perspectives* 37 (1): 31–52.
- Connolly, Richard. 2018. *Russia's Response to Sanctions*. Cambridge University Press.
- Cornish, Chloe, John Reed, and Tom Wilson. 2022. "Russia Becomes India's Top Oil Supplier as Sanctions Deflate Price." *Financial Times*, November 8, 2022. <https://www.ft.com/content/f01161be-189f-4f69-918f-fd2a1f0fa1e3>.
- Demertzis, Maria. 2022. "Central Bank Digital Currencies as Weapons of Finance?" Bruegel | the Brussels-Based Economic Think Tank. December 14, 2022. <https://www.bruegel.org/comment/central-bank-digital-currencies-weapons-finance>.
- Dickinson, Peter. 2022. "Don't Believe Putin's Propaganda. Sanctions Are Hurting Russia." Atlantic Council. January 19, 2022. <https://www.atlanticcouncil.org/blogs/ukrainealert/dont-believe-putins-propaganda-sanctions-are-hurting-russia/>.
- Dobson, Alan P, and Inc Ebrary. 2002. *US Economic Statecraft for Survival, 1933-1991: Of Sanctions, Embargoes, and Economic Warfare*. London; New York: Routledge.
- Dolgin, Dmitry, and Iris Pang. 2020. "Russian De-Dollarization. Public-Private Divergence Persists." ING.
- Drezner, Daniel W. 2015a. "Perspective | Does the Obama Administration Really Understand How Economic Sanctions Work?" *Washington Post*, February 9, 2015.
<https://www.washingtonpost.com/posteverything/wp/2015/02/09/does-the-obama-administration-really-understand-how-economic-sanctions-work/>.
- Drezner, Daniel W. 2015. "Targeted Sanctions in a World of Global Finance." *International Interactions* 41 (4): 755–64. <https://doi.org/10.1080/03050629.2015.1041297>.

- Eichengreen, Barry. 2022. "Sanctions, SWIFT, and China's Cross-Border Interbank Payments System." [Www.csis.org](https://www.csis.org/analysis/sanctions-swift-and-chinas-cross-border-interbank-payments-system). May 20, 2022. <https://www.csis.org/analysis/sanctions-swift-and-chinas-cross-border-interbank-payments-system>.
- Elliott, Kimberly Ann. 2016. "Evidence on the Costs and Benefits of Economic Sanctions." *PIIE*. March 3, 2016. <https://www.piie.com/commentary/testimonies/evidence-costs-and-benefits-economic-sanctions>.
- Ellyatt, Holly. 2015. "Saudi Arabia to Invest \$10B in Russia." *Finance.yahoo.com*. July 7, 2015. <https://finance.yahoo.com/news/saudi-arabia-invest-10b-russia-091021112.html>.
- Erixon, Fredrik, Oscar Guinea, Vanika Sharma, and Renata Zilli. 2022. "Russia Import Dependency Problem |." *Ecipe.org*. March 2022. <https://ecipe.org/blog/russia-import-dependency-problem/>.
- European Council. 2022. "EU Sanctions against Russia Explained." [Www.consilium.europa.eu](https://www.consilium.europa.eu/en/policies/sanctions/restrictive-measures-against-russia-over-ukraine/sanctions-against-russia-explained/#:~:text=In%20June%202022%2C%20the%20Council). 2022. <https://www.consilium.europa.eu/en/policies/sanctions/restrictive-measures-against-russia-over-ukraine/sanctions-against-russia-explained/#:~:text=In%20June%202022%2C%20the%20Council>.
- "Fact Sheet: Sanctions Related to Iran." 2012. [Whitehouse.gov](https://obamawhitehouse.archives.gov/the-press-office/2012/07/31/fact-sheet-sanctions-related-iran). July 31, 2012. <https://obamawhitehouse.archives.gov/the-press-office/2012/07/31/fact-sheet-sanctions-related-iran>.
- Farrell, Henry, and Abraham L. Newman. 2019. "Weaponized Interdependence: How Global Economic Networks Shape State Coercion." *International Security* 44 (1): 42–79. https://doi.org/10.1162/isec_a_00351.
- Foy, Henry. 2022. "EU Reaches Deal to Impose \$60 Cap on Russian Oil Exports." *Financial Times*, December 2, 2022. <https://www.ft.com/content/5b942b07-01cc-4e12-b803-7eb1507f6eec>.
- Foy, Henry, Max Seddon, and Anjali Raval. 2018. "Deripaska Share Plunge Acts as Warning to Russian Tycoons." *Financial Times*, April 6, 2018. <https://www.ft.com/content/49e3b7d4-39af-11e8-8b98-2f31af407cc8>.
- Fuller, Douglas B. 2022. "Weaponizing Interdependence & Global Value Chains: US Export Controls on Huawei." *Preprints.apsanet.org*, September. <https://doi.org/10.33774/apsa-2022-2fc8w>.
- Gaddy, Clifford G., and Barry W. Ickes. 2005. "Resource Rents and the Russian Economy." *Eurasian Geography and Economics* 46 (8): 559–83. <https://doi.org/10.2747/1538-7216.46.8.559>.
- Gordon, Joy. 2011. "Smart Sanctions Revisited." *Ethics & International Affairs* 25 (3): 315–35. <https://doi.org/10.1017/s0892679411000323>.
- Harrell, Peter E. 2019. "Trump's Sanctions Use Is Nothing like Obama's." *Foreign Policy*. Foreign Policy. October 5, 2019. <https://foreignpolicy.com/2019/10/05/trump-sanctions-iran-venezuela-russia-north-korea-different-obamas/>.
- Hersher, Monica, and Joe Murphy. 2022. "Graphic: Russia's Frozen Billions." *NBC News*, March 17, 2022. <https://www.nbcnews.com/data-graphics/russian-bank-foreign-reserve-billions-frozen-sanctions-n1292153>.
- Hoover Institution Press Publication. 2022. "Digital Currencies: The US, China, and the World at a Crossroads." Hoover Institution. March 4, 2022. <https://www.hoover.org/research/digital-currencies-us-china-and-world-crossroads>.

- Hufbauer, Gary. 1998. "Economic Sanctions." *Proceedings of the Annual Meeting (American Society of International Law)* 92 (92): 332–35. <https://www.jstor.org/stable/25659235>.
- Hufbauer, Gary Clyde, and Euijin Jung. 2021. "Economic Sanctions in the Twenty-First Century." In *Research Handbook on Economic Sanctions*, 26–43. Edward Elgar Publishing Limited.
- Hufbauer, Gary Clyde, Jeffrey J. Schott, and Barbara Oegg. 2001. "Using Sanctions to Fight Terrorism." [Www.piie.com. Peterson Institute for International Economics. 2001. https://www.piie.com/publications/policy-briefs/using-sanctions-fight-terrorism#2.](https://www.piie.com/publications/policy-briefs/using-sanctions-fight-terrorism#2)
- Hufbauer, Jeffrey J Schott, Kimberly Ann Elliott, and Barbara Oegg. 2007. *Economic Sanctions Reconsidered*. Washington, Dc Peterson Institute for International Economics.
- Hume, Neil, and David Sheppard. 2015. "Trafigura Becomes Major Exporter of Russian Oil." *Financial Times*, May 27, 2015. <https://www.ft.com/content/93a4a466-048b-11e5-95ad-00144feabdc0>.
- Hunt, Will, Saif Khan, and Dahlia Peterson. 2021. "China's Progress in Semiconductor Manufacturing Equipment." *Center for Security and Emerging Technology*, March. <https://doi.org/10.51593/20190018>.
- IEA 2022, *World Energy Outlook 2022*, IEA, Paris <https://www.iea.org/reports/world-energy-outlook-2022>, License: CC BY 4.0 (report); CC BY NC SA 4.0 (Annex A)
- Katzman, Kenneth, and Library of Congress. Congressional Research Service. 2018. *Iran Sanctions*. Washington, D.C.: Congressional Research Service, [Library of Congress.
- Keating, Joshua. 2022. "Russia's Bright, Shiny Anti-Sanctions Weapon: Inside the Billion-Dollar Business of 'Blood Gold.'" *Grid News*. July 15, 2022. <https://www.grid.news/story/global/2022/07/15/russias-bright-shiny-anti-sanctions-weapon-inside-the-billion-dollar-business-of-blood-gold/>.
- Keohane, Robert O., and Jr Nye Joseph S. 2014. *Transnational Relations and World Politics*. Cambridge, MA: Harvard University Press.
- Kirdina, Svetlana, and Andrei Vernikov. 2013. "Evolution of the Banking System in the Russian Context: An Institutional View." *Journal of Economic Issues* 47 (2): 475–84. <https://doi.org/10.2753/jei0021-3624470221>.
- Kitade, Daisuke. 2016. *Considering the Effects of Japanese Sanctions Against Russia*. Tokyo: Mitsui Global Strategic Studies Institute.
- Lichtblau, Eric, and James Risen. 2006. "Bank Data Is Sifted by U.S. In Secret to Block Terror." *The New York Times*, June 23, 2006. <https://www.nytimes.com/2006/06/23/washington/23intel.html>.
- McDowell, Daniel. 2019. "The (Ineffective) Financial Statecraft of China's Bilateral Swap Agreements." *Development and Change* 50 (1): 122–43. <https://doi.org/10.1111/dech.12474>.
- Monaghan, Andrew. 2012. "The Vertikal: Power and Authority in Russia." *International Affairs* 88 (1): 1–16. <https://doi.org/10.1111/j.1468-2346.2012.01053.x>.
- Mueller, J., and K. Mueller. 1999. "Sanctions of Mass Destruction." *Foreign Affairs* 78 (3): 49–53.

- Mulder, Nicholas. 2021. "Policy Series 2021-53: The Trump Administration and Economic Sanctions." H-Diplo | ISSF. September 23, 2021. <https://issforum.org/to/ps2021-53>.
- Nephew, Richard. 2020. "Evaluating the Trump Administration's Approach to Sanctions. Case: Russia." *Center on Global Energy Policy*. Columbia University, February 2020.
- Norrlöf, Carla. 2022. "Will Economic Statecraft Threaten Western Currency Dominance? Sanctions, Geopolitics, and the Global Monetary Order." Atlantic Council. September 27, 2022. <https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/will-economic-statecraft-threaten-western-currency-dominance-sanctions-geopolitics-and-the-global-monetary-order/>.
- Nye, Joseph S, and Robert Owen Keohane. 2001. *Power and Interdependence*. Longman Publishing Group.
- Pape, Robert A. 1997. "Why Economic Sanctions Do Not Work." *International Security* 22 (2): 90–136. <https://doi.org/10.2307/2539368>.
- Polk, Judd. 1941. "Freezing Dollars against the Axis." www.foreignaffairs.com. October 1941. <https://www.foreignaffairs.com/articles/united-states/1941-10-01/freezing-dollars-against-axis>.
- Posen, Adam S. 2008. "Why the Euro Will Not Rival the Dollar." *International Finance* 11 (1): 75–100. <https://doi.org/10.1111/j.1468-2362.2008.00217.x>.
- Raghuveera, Nikhil. 2020. "Design Choices of Central Bank Digital Currencies Will Transform Digital Payments and Geopolitics." Atlantic Council. April 24, 2020. <https://www.atlanticcouncil.org/blogs/geotech-cues/design-choices-of-central-bank-digital-currencies-will-transform-digital-payments-and-geopolitics/>.
- Razlomalin, Ilya, and Ilya Sushin. 2020. "The Road to China: An Opportunity for Russian Gas." ISPI. February 17, 2020. <https://www.ispionline.it/it/pubblicazione/road-china-opportunity-russian-gas-25096>.
- Reuters. 2022. "Factbox: What Is China's Onshore Yuan Clearing and Settlement System CIPS?" *Reuters*, February 28, 2022, sec. European Markets. <https://www.reuters.com/markets/europe/what-is-chinas-onshore-yuan-clearing-settlement-system-cips-2022-02-28/>.
- Reuters. 2022. "Putin Oversees Launch of Siberian Gas Field Feeding Pipeline to China," December 21, 2022, sec. Europe. <https://www.reuters.com/world/europe/putin-oversees-launch-siberian-gas-field-feeding-pipeline-china-2022-12-21/>
- Seddon, Max, and Polina Ivanova. 2022. "How Putin's Technocrats Saved the Economy to Fight a War They Opposed." *Financial Times*, December 16, 2022. <https://www.ft.com/content/fe5fe0ed-e5d4-474e-bb5a-10c9657285d2#comments-anchor>.
- Shagina, Maria. 2022. "Western Financial Warfare and Russia's De-Dollarization Strategy: How Sanctions on Russia Might Reshape the Global Financial System." Finnish Institute of International Affairs - Briefing paper.
- Sheppard, David, Chris Cook, and Polina Ivanova. 2022. "Russia Assembles 'Shadow Fleet' of Tankers to Help Blunt Oil Sanctions." *Financial Times*, December 2, 2022. <https://www.ft.com/content/cdef936b-852e-43d8-ae55-33bcbbb82eb6#comments-anchor>.

- Staalesen, Atle. 2018. "They Found One of Russia's Biggest Arctic Oil Fields, but Now Abandon It." *The Independent Barents Observer*. March 8, 2018. <https://thebarentsobserver.com/en/industry-and-energy/2018/03/they-found-one-russias-biggest-offshore-arctic-oil-field-now-abandon-it>.
- Sukhankin, Sergey. 2021. "Russia's Pivot to Asia (China) after 2014: The Wrong Turn?" *Jamestown*. June 8, 2021. <https://jamestown.org/program/russias-pivot-to-asia-china-after-2014-the-wrong-turn/>.
- swissinfo.ch. 2022. "NGO Fears Dubai Gold Imports Evading Russia Sanctions." *SWI Swissinfo.ch*. May 17, 2022. <https://www.swissinfo.ch/eng/ngo-fears-dubai-gold-imports-evading-russia-sanctions/47600382>.
- Szakonyi, David. 2017. "Foreign Direct Investment into Russia since the Annexation of Crimea." *Css.ethz.ch*. ETH Zurich. July 24, 2017. <https://css.ethz.ch/en/services/digital-library/articles/article.html/5f9b374a-54d9-4fab-b4ec-eb06e5607f68>.
- TASS. 2022. "СМИ: Россия и Индия обсуждают внедрение альтернативной системы транзакций - ТАСС." *ТАСС*. March 31, 2022. <https://tass.ru/ekonomika/14237363>.
- The Economist. 2019. "Donald Trump Has Shown a Surprising Enthusiasm for Sanctions." *The Economist*. November 28, 2019. <https://www.economist.com/united-states/2019/11/28/donald-trump-has-shown-a-surprising-enthusiasm-for-sanctions>.
- The Economist. 2022. "The Digital Yuan Offers China a Way to Dodge the Dollar." *The Economist*. September 5, 2022. <https://www.economist.com/finance-and-economics/2022/09/05/the-digital-yuan-offers-china-a-way-to-dodge-the-dollar>.
- Triolo, Paul, and Douglas Fuller. 2019. "The Ripple Effects of a Complete Ban on Huawei Access to U.S. Tech Will Be Huge – SupChina." *The China Project*. May 21, 2019. <https://thechinaproject.com/2019/05/21/the-ripple-effects-of-a-complete-ban-on-huawei-access-to-u-s-tech-will-be-huge/>.
- U.S. Department of the Treasury. 2022. "Treasury Prohibits Transactions with Central Bank of Russia and Imposes Sanctions on Key Sources of Russia's Wealth." *U.S. Department of the Treasury*. February 28, 2022. <https://home.treasury.gov/news/press-releases/jy0612>.
- U.S. Energy Information Administration. 2022. "Europe Is a Key Destination for Russia's Energy Exports." *Www.eia.gov*. March 14, 2022. <https://www.eia.gov/todayinenergy/detail.php?id=51618>.
- Wang, Heng, and Simin Gao. 2021. "The Future of the International Financial System: A CBDC Network and Regulatory Outlook." *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3766654>.
- Welt, Cory. 2022. "Russia's War against Ukraine: Overview of U.S. Sanctions and Other Responses." *Congressional Research Service*.
- Wilson, Tom, Chris Cook, and Ian Smith. 2022. "Quarter of Russian Crude Oil Shipments in December Have Used Western Insurance." *Financial Times*, December 28, 2022. <https://www.ft.com/content/7da74e6f-fba6-4129-8153-3c40d23986b9>.

Wolff, Guntram B., and Grégory Claeys. 2020. “For the Euro There Is No Shortcut to Becoming a Dominant Currency.” Bruegel | the Brussels-Based Economic Think Tank. October 13, 2020.

<https://www.bruegel.org/blog-post/euro-there-no-shortcut-becoming-dominant-currency>.

Wolf, Martin. 2022. “A New World of Currency Disorder Looms.” *Financial Times*, March 29, 2022.

<https://www.ft.com/content/f18cf835-02a0-44ff-875f-7de7facba54e>.

Wuester, Lucie, and Deborah Winkler. 2022. “Implications of Russia’s Invasion of Ukraine for Its Value Chains.”

CEPR. May 11, 2022. <https://cepr.org/voxeu/columns/implications-russias-invasion-ukraine-its-value-chains>.

Yotov, Yoto, Erdal Yalcin, Aleksandra Kirilakha, Constantinos Syropoulos, and Gabriel Felbermayr. 2021. “The ‘Global Sanctions Data Base’: Mapping International Sanction Policies from 1950-2019.” CEPR. May 2021.

<https://cepr.org/voxeu/columns/global-sanctions-data-base-mapping-international-sanction-policies-1950-2019>.

Трифонова, Мария. 2021. “Экстренная эвакуация: китайский капитал бежит из России.” Снег.TV. April 8, 2021.

<https://sneg.tv/54708-jekstrennaja-jevakuacija-kitajskij-kapital-bezhit-iz-rossii>.

Summary

Economic sanctions have been a foreign policy tool adopted by the US government since its inception to achieve its goals and address national security concerns. It was after the end of the Cold War, in what became known as the “sanctions’ decade”, that the number of economic sanctions started to increase consistently, eventually skyrocketing in the 2010s. Over time, the use of economic sanctions has evolved to encompass a broader range of targets and objectives, including the fight against terrorism, non-proliferation efforts, and cyber security. The rise of globalisation and the interconnected nature of the world's economies have also influenced the use of economic sanctions, as they now often target individuals, companies, and entire industries, leading to complex and far-reaching effects on the global economy. By using economic sanctions as a tool to exert pressure on other countries, the US has effectively weaponized interdependence and global value chains for political purposes. This has caused significant disruptions in international trade and investment, leading to consequences such as higher costs of goods and services, and complications in global supply chains. As a result, sanctioned countries like Russia, Iran, and China have strived for more independence from the US led financial system and its dominant currency, the US dollar. This has led to the development of new financial institutions, trade agreements, and other economic relationships that bypass traditional US-led channels. Russia has been working to reduce its dependence on the US dollar in international trade since 2014 and Iran has similarly sought to reduce its reliance on the US financial system and has been working to develop alternative financial channels to bypass US sanctions. In this way, the use of economic sanctions by the US has not only had significant impacts on the global economy, but it has also encouraged the development of alternative economic systems and relationships.

This thesis aims to answer the question on how countries, specifically taking as case studies Russia and China, have tried to respond to US economic sanctions by developing alternative systems beyond Washington's reach and if this is leading to an erosion of US global dominance through the creation of a fragmented global economy.

The first chapter gives an historical background of US economic sanction’s history from the birth of the republic until the end of the Trump Presidency. Economic sanctions are defined as the intentional, government-instigated threat or suspension of customary commercial or financial relations, to change the target state’s political behaviour (Hufbauer et al. 2007).

In the early days of US History sanctions were used primarily to advance economic interests, such as through the imposition of tariffs. However, as US foreign policy evolved, so did the use of sanctions, which gradually came to be seen as a way to achieve a range of foreign policy objectives.

Under the Clinton administration, economic sanctions were used to promote human rights and democracy, and to force countries like Iraq to comply with UN weapons inspections. The George W. Bush administration continued to use sanctions, primarily to pressure countries pursuing weapons of mass destruction and to target individuals and entities that supported terrorism. During the Obama administration, there have been two main instances of sanctions being implemented. The first was a successful attempt to pressure Iran to sign the nuclear agreement. The second, which failed, had the objective to punish Russia for its actions in eastern Ukraine. During the Trump administration the US became even more prone in the use of economic sanctions. Trump mainly relied on unilateral sanctions for achieving foreign policy goals, drawing criticism from long standing allies. Notwithstanding international criticism, the Trump administration imposed secondary sanctions as a first-choice option, as part of its policy, towards Iran. The United States administration ceased on any realistic pretence that it was employing sanctions to uphold international law during Trump's tenure. It soon became clear that he was pursuing what he considered US strategic interests without giving much consideration to international norms and allies concerns.

The second chapter presents the case study of Russia. The 2014 sanctions had begun as a response to the Russian annexation of Crimea and the occupation of the Donbas region by Russian paramilitary forces. The use of sanctions was being applied to specific sectors of the Russian economy, mainly the energy, military, and financial sectors, and to individuals within the Russian elite deemed responsible for the events. The sanctions were applied mainly by the United States and the member countries of the European Union. These sanctions did not have the hoped-for effect due to multiple factors, the main ones of which include the Russian government's ability to reallocate resources where it most needed them due to the specific structure of Russian economic policy and the failure of European Union members to implement effective and uniform sanctions. Moscow has continued to accumulate profits from energy sales to Europe, where through new infrastructure, such as Nord Stream 2, it has gained even more leverage. The Russian market, given its size, has continued to be attractive to European companies, which, faced with fewer sanctions than their overseas counterparts, have continued to invest in the country. The Kremlin has not stood idly by and tried to reduce its import dependence on Western markets, especially in sectors considered to be of relevance to national security. However, this has been particularly difficult in high-tech import sectors such as high-end IT equipment, microchips, and finance that have remained heavily dependent on the West.

In energy exports, it accelerated its transition to eastern markets, although this did not diminish the importance of the European market, which continued to be the main importer.

Having experienced the blocking of essential systems for conducting international financial transactions such as SWIFT by US sanctions, Russia promoted the development of an alternative SPFS system and an independent electronic payment system MIR.

Moscow has also reduced its dependence on the US dollar, both in its foreign exchange reserves and in the use of the currency in international trade in preference to the rouble and the euro. Finally, the Russian Central Bank pursued a policy of accumulating foreign currency reserves, decreasing the dollar share in favour of euros and other currencies and more than doubling the amount of gold at its disposal.

All this hinted that Russia was preparing for further sanctions and that if these were to arrive, Moscow would be better prepared than in 2014.

In 2022 then the eleventh largest economy in the world faced comprehensive sanctions on an unprecedented scale.

Russia was not prepared for sanctions of such magnitude, however, thanks to several factors including the spike in the price of fossil fuels and the non-adherence of non-Western nations to sanctions, it managed to get through the first year without an economic meltdown and was able to sustain the war effort economically.

However, as time progresses, it is expected that sanctions will increasingly impact the Russian government's budgets and thus limit its ability to provide economic support to the war effort.

The last chapter is an analysis on the US weaponization of networks and global value chain and the Chinese response to it. In the cases studied in this thesis, special emphasis was placed on the role of the dollar in the economy and the infrastructure underlying the global finance system. The dollar, which has been the basis of the world economy since Bretton Woods, could see the emergence of competitors, given its increased weaponization through economic sanctions for security purposes. The only feasible substitute to the dollar is seen as the Chinese currency (Wolf, 2022). In fact, History indicates that a currency from an economy with similar size, level of development and interconnectivity is likely to become a widely accepted form of payment globally. However, the renminbi has had great difficulty in positioning itself among the top currencies in circulation and its use is still dwarfed by the dollar. This is largely due to capital controls and the absence of rule of law in the mainland.

However, the latest sanctions and Washington's increasing weaponization of finance have increased the need for states to find alternatives to the greenback. Although this may be more of a requirement of the increasingly

protectionist monetary and economic policies adopted by the US than a rejection of Washington's weaponization of finance.

Nevertheless, there are still legitimate reasons for the FED to be concerned about the currency ambitions of the PBOC. China is at the forefront in the implementation of Central Bank Digital Currencies and is already part of multilateral projects, such as m-Bridge, which are aimed at shaping international norms and guidelines for digital finance. Moreover, Beijing is trying to make its CIPS clearing and settlement services system more independent from SWIFT in the transmission of transactions. Oil-producing countries such as Saudi Arabia are considering accepting alternative currencies to the dollar for oil. In December 2022, the first transaction between Riyadh and Beijing was made in renminbi.

Another area of competition between the two geopolitical rivals is chips. Here, the US has an advantage in the chip-specific Global Value Chain, in the two sectors with the highest technology concentration: EDA and EMS. Here the US together with its allies have exploited choke points by cutting off the Chinese giant Huawei from the 5G device production chain. China reacted by trying both to create shell companies to serve as a legal front for EDA licences and to internalise the production of EMS. The chip sector, especially when it comes to EMS, is very difficult to replicate as the Chinese industry lacks in photolithography, metrology, and inspection, virtually all EMS sub-sectors (Hunt, Khan, and Peterson 2021).

However, China has both the economic resources and the political will to internalise the advanced chip production process in the long run.

The global economy, in matters that can be weaponized by giving a competitive edge over the adversary, is undergoing a process of fragmentation into competing blocs. This fragmentation could lead to a macroeconomic and market environment that is far more volatile, resulting in a significant challenge to those nations and businesses that operate in sensitive industries. However, this process will probably not result in a large reduction in global money, commodities, and service flows or a general reversal of most advantages of globalisation.

The decisions made within these groups will increasingly be influenced by political factors. While globalisation was propelled by both governments and businesses acting in concert, fragmentation is solely driven over security concerns by government entities.

The consequences of fracturing will be far-reaching in certain areas, yet in others, predictions of a major overhaul of the world economy and finance system will miss the mark.

For instance, the influence of politics in splintering will have a substantial effect on the working conditions for businesses in the United States and Europe that are highly vulnerable to trade limitations, such as the technology

and financial flows. All companies and investors will now operate in a setting where political factors carry more weight in the distribution of resources.