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The Spectrum

King's Think Tank's Annual Policy Journal

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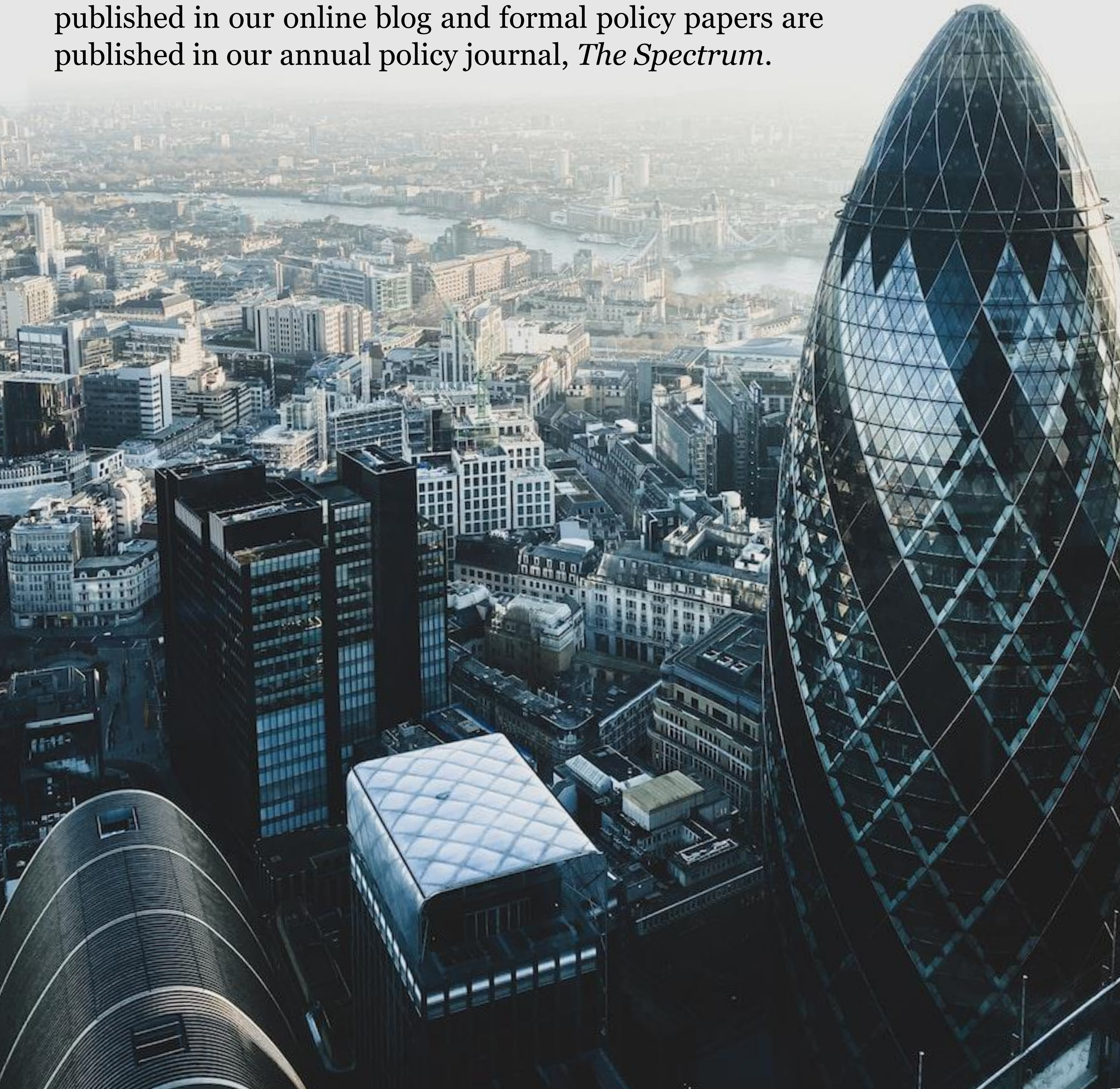
King's Think Tank was created in the wake of the student protests in 2010 as a means of empowering change through student activism without resorting to civil disorder. Our institution aims to provide a platform for students to engage with the world of policy. It is an exceptional opportunity for students to identify and advocate for innovative solutions to complex issues.

Through our seven policy centres, we strive to address the pressing challenges of today's society through organising policy-related events, panel discussions, and thought-provoking podcast interviews. Critical analyses are published in our online blog and formal policy papers are published in our annual policy journal, *The Spectrum*.



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Letter from the Head Editors

Julia Hoffmann

Julia is a final-year International Relations student and the head editor at King's Think Tank this year. In her last year at King's, she has specialized in how a rising China is challenging conventions of the current international system. After graduating, she hopes to move into an editorial position at a political publication or think tank.

Miriam Yakobashvili

Miriam is the deputy head editor and conference lead at King's Think Tank. She is a third-year International Relations student in the Department of War Studies. Her policy interests range from the field of international security to specific issues of occupied territories and quasi-states.

Dear Reader,

We are living through what feels to be pivotal times in the way we perceive the world around us. There are a plethora of pressing issues, the solutions to which used to yield consensus. Yet, in the perspective of our generation, that consensus seems to longer exist. We are experiencing a worldwide change in perspective and attitudes toward how we should address the problems that plague the world. From climate change to economic crisis, to geopolitical struggle, the international system as we know it today is at threat; we are living in a dynamic time, where natural and manmade phenomenon are shifting domestic and international policy priorities. Fundamentally, there is a change in the acceptable ways in which we address the issues of our time, whether that be for better or for worse.

For these reasons, we have chosen the topic for this year's Spectrum to encompass **threats to the 21st Century International System**. The amalgamation of the seven policy centres features issues and possible policy recommendations to address hazards facing today's world order. In doing so, the writers have considered a wide range of issues, taking account the everchanging global landscape, mechanisms to address the problems, as well as possible shortcomings to the solutions available. I hope that heterogeneity of the issue allows the reader to perceive the topic in a more interdisciplinary manner, taking into account how issues presented within, and cross policy centres affect each other, and how a resolution to one can foster change and reform for the other.

As my time at King's Think Tank comes to an end, I would like to thank everyone who has worked on this year's publication. I tremendously commend the time and dedication put forth by all our working group members and editors. Lastly, I want to thank Julia Hoffman, the head editor. It has been a pleasure working with her. Without her thorough organisation and commitment, this issue would not have been possible.

Miriam Yakobashvili
Deputy Head Editor

Dear Reader,

Putting together a publication such as this is hard work: It involves cajoling students burned out from their exams and assignments into doing even more academic work with basically no incentives, formatting and designing policy briefs when you are really not that sure how that works, and spending hours and days past your final assignments worrying about how it is all going to turn out. Every year during the process, all the anxiety and pressure does not seem to be worth it. But then, when it does arrive – that magical moment where it *actually has all come together*, when the publication is finally done – all you can feel is the pride and happiness that drowns out everything you were feeling before. This is how I feel writing this comment at 12pm after getting tipsy at the KCLSU awards ceremony with other beloved members of the King's Think Tank committee. I cannot bring myself to regret a thing because I am so proud of the work our society, our committee, our editors, and our working members have accomplished. So first and foremost, I would like to thank everyone involved in the making of this publication. Thank you to the Policy Centre editors who responded to my millions of messages during their exam season, thank you to the contributors for going above and beyond their degree and turning something out *just* because they are passionate, thank you to Miriam for always being there, and thank you to the rest of the committee for supporting us through this process.

This year, we look at the world after Covid-19 and asks ourselves: What are the great challenges to the international system. These themes are probably recognizable – climate change, challenger states, artificial intelligence – the world rarely changes very quickly. Yet, the solutions offered here are new and refreshing. Our contributors challenge you with their ideas on how to move the world forward and ask you to imagine that change for the better is possible. At King's Think Tank, we seek to nurture and encourage a passion for public policy among students and offer a platform to make heard the voices of the coming generation. You will find those voices in this publication. And all of them have something stimulating and bold to say. I hope you enjoy reading this year's edition of *The Spectrum* – I certainly did.

Julia Hoffmann
Head Editor

Meet the Editors

Inés Werneck Arencibia

Inés is a third-year International Development student and editor of the **Education Policy Centre**. Beyond education, her main policy interests are anything to do with income inequality and gender.

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Aneela is a second-year History and Spanish student. As editor of the **Global Health Policy Centre**, she is focussed on universal health coverage and advocating for those left behind by public health care systems.

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Megan is a third-year BA History student, serving her second year with the **European Affairs Policy Centre**. Her interests within this broad topic are gender equality, refugees, and the idea of a shared European identity.

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Alessia is a third-year BA History and International Relations student and works as editor of the **Defence & Diplomacy Policy Centre**. Her research interests are international security, diplomacy, conflict management and defence strategy.

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Kirey is a second-year Economics BSc student and editor of the **Business & Economics Policy Centre**. She is mainly interested in issues concerning inclusive development and sustainability. You will often find her at the Maughan Library's Round Reading Room or at The Shack with her daily dose of coffee.

Sharanya Seth

Sharanya is a second-year BSc Economics and Management student and serves as the editor of the **Energy and Environmental Policy Centre**. This year, her centre has zeroed in on the role the private sector plays in influencing energy and climate policy and policy instruments that could evolve to accelerate the green transition.

Mehmet Temur

Mehmet is a first-year Politics student and editor of the **Technology & Innovation Policy Centre**. He has a keen interest in the regulation of the tech industry and its wider socio-political implications, particularly on free speech and disinformation.

Business & Economics

Ethanol: The Intermediate Energy Crisis Hero?

By ***Carly Kilgore***

Background

In today's technologically advanced times, only a few points of vulnerability pose major geopolitical threats to the whole world. The chaos and uncertainty brought on by the COVID-19 pandemic and multiple international conflicts in the early years of this decade have underscored many weaknesses of the international system. One common denominator between these faults is the risk of inelastic supply chains which are fundamental for international systems.

One of our most prevalent vulnerabilities is the scarcity of finite natural resources and the global dependence on oil. The Russian invasion of Ukraine brought about bottlenecks in the global energy supply chain and threatens nearly every market and industry as well as health and safety worldwide. The world continues to depend on oil to heat homes, generate electricity, fuel vehicles, and operate the petrochemical industry, which produces plastic, rubber, clothing, fertilizer, and more (International Energy Agency, 2018). In 2022, the world produced an average of 100 million barrels of liquid fuel per day and is projected to produce 101.6 million barrels per day in 2023. Meanwhile, the world population consumed an average of 99.4 million barrels of liquid fuel per day in 2022, and that consumption level is forecasted to increase in 2023 to 100.9 million barrels per day (bpd) (US EIA, 2021). The margin for reserve supply is low: If 2023 forecasts are accurate, there will be merely half a million barrels of oil produced per day that are not necessary for immediate consumption (Russian Crude Oil Tracker, 2023). Various measures have been taken to reduce oil dependence on Russia and weaken its control over the fuel supply chain. However, worldwide oil demand and Russian production levels remain high.

These figures indicate that, in order to continue operating properly, the world cannot afford to lose more than 0.5% of its oil supply. In 2021, Russia produced 13% of the global oil supply (Alternative Fuels Data Center, 2023). Despite the many sanctions and oil bans of Russian oil following Russia's invasion of Ukraine, the data shows that the world needs to continue using Russia's products in order to operate.

How do countries that ban Russian imports supply their oil now? There has been a recent shift in the flow of oil in the global production network: While countries that banned Russian oil have decreased their importation of Russian oil, Russian exports remain unchanged. This is because other countries, such as China, have increased their import levels of Russian oil. The reality is that the same amount of Russian imports and exports are circulating through the global oil supply chain but instead the route of the trade flows have simply changed to work around certain sanctions and other hurdles. Thus, the tactic of sanctioning Russian imports is not effective in weakening Russia's economy and does not reduce the dependence on Russia's oil supply in the international scheme. Instead, sanctions provide soft power to the nations that continue to engage with the aggressor such as China (Vahn, Wei, Zhou, 2023). In order to address the risks in the global oil supply chain, we need short-term and long-term alternatives to oil consumption.

Alternative Energies

The most discussed solution to reducing the global dependence on oil is the shift to electric vehicles. Countries around the world are dedicating legislative efforts, tax incentives, and subsidies to increase the production of electric vehicles for emissions reduction and energy independence (US International Revenue Service, 2023). This, however, is a long-term strategy to reduce dependency on oil and will not have immediate impacts during times of crisis.

When there is a present threat to international systems, such as Russia's aggression, nations need to come together to immediately weaken and destabilize the threat. The most popular attempt to weaken Russia has been via sanctions or oil bans which have resulted in a redirection of the supply chain rather than a reduction in oil consumption. If oil consumption were truly reduced, then trade zones like the United States and European Union could cut off Russian imports without having to source those barrels of oil from another country, creating a shift in oil trade flows. Alternatively, the most effective and immediate options is to integrate more ethanol into the fuel supply and thus decrease the demand for oil.

Ethanol

Ethanol is a biofuel commonly made from corn or sugar and is a renewable fuel alternative used in combustion engines. In fact, certain engines can run entirely on ethanol, while most road-transportation vehicles made after 2005 can run on a blend of petroleum and ethanol. Ethanol is a cleaner alternative to traditional petroleum, emitting 46% fewer greenhouse gas emissions than petroleum. A gallon of ethanol cuts the carbon footprint of a gallon of gas by almost 50% (UN Environment Programme, 2020). However, the most popular and eye-catching clean energy initiatives are those that eliminate the use of liquid fuel and have zero emissions. Thus, governments tend to disregard ethanol and biofuel strategies for fear they will be misperceived as weak attempts to reduce emissions when, in reality, they are the most immediate and practical solutions for reducing carbon emissions in the short-term.

Hence, the European Union and the United Kingdom should create a minimum ethanol requirement during times of emergency when oil supply is strained. While the implementation methods for each entity would look different, the adoption of such practices would have important and immediate impacts on oil supply for the whole of Europe.

Currently, only less than 10% of oil used for ground transportation in the UK is ethanol, and the EU blends even less. These are missed opportunities, as blending ethanol with petroleum allows vehicles to fill up their tanks while using less petroleum. By creating a blend of petroleum and ethanol, a vehicle tank can be filled up and deliver the same amount of energy and mileage as the petroleum that would be necessary otherwise. This has important benefits for multiple reasons. In times of global instability, blending higher amounts of ethanol into ground transportation fuel enables nations to safeguard their oil supply while maintaining or growing the amount of fuel available for transportation needs. When the global fuel supply chain is at risk, having the infrastructure and ability to increase blends of ethanol immediately could have a real-time stabilizing effect.

Current Implementation and Challenges

Currently, the UK has set a target for ethanol to take up 10.1% of its transportation fuel. Likewise, the European Union has ideal targets for its member states to reach, roughly set to 10% as well (Epure.org, 2020). However, there are concerns around land use for ethanol production.

Why is ethanol not in the spotlight for a solution? The UK and EU have not recognized the potential of ethanol and have published a few weak reasons for their hesitancy. The EU is primarily concerned about the negative impacts of land use change from cropland and non-cropland, including the release of carbon dioxide, despite the fact that ethanol is a low-carbon transportation fuel and could reduce carbon emissions through vehicle use. The EU's hesitance to adopt ethanol should not be based on the practical challenges of domestically producing ethanol. Instead, there are options to import ethanol from existing markets that have high levels of production, such as the US.

The United States' capacity for ethanol production is currently higher than its demand. As a result, approximately 30% of US-produced corn-based ethanol is exported to trade partners and such exports are expected to increase (USDA Foreign Agricultural Service, 2020). In the US, the yield per acre has increased significantly with modern technology and conservation farming tools. This indicates that increasing corn production for ethanol does not threaten the nation's food production capacity because that land is not being transitioned from food production to energy production. Still, the by-product from ethanol refining is a pure form of carbon dioxide, inviting concern. However, many players in the ethanol industry have partnered with others in the clean energy community to capture and sequester the carbon dioxide, nullifying any carbon emissions from the ethanol refining process.

Therefore, importing ethanol from the US could be a solution to the EU's hesitations about ethanol production: The US has a surplus of ethanol supply, the production does not sacrifice land necessary for food production, and the industry is working to actually eliminate any carbon emitted.

Policy Recommendations

I. Information Sharing: This solution is not specific to the UK and the EU but could have benefits with widespread adaptation around the world. The first recommendation is to spread awareness of the geopolitical and environmental benefits of such a solution. This can be done by adding the increased importation of bioethanol to the seventeen United Nations Sustainability Goals at the 2023 G7 Summit. It should be noted that ethanol is a short-term solution but a step towards reducing the overall dependence on liquid fuel. The impact of this shift in the short-term would even have the added bonus of a notable overall reduction of carbon emissions.

II. Implementing the new goal: The UK and EU ought to increase their minimum of renewable fuels (including biofuels) to take up more of their annual consumption of transportation fuel. Instead of incorporating vague renewable energy goals into the 2030 plan, the UK and EU need to provide more detailed plans of action. It is important to recognize that increased blends of ethanol with petroleum offer an immediate solution to both the environmental risk of carbon emissions and the geopolitical risks of depending on oil. While other clean energy technologies are currently being developed and adopted, biofuels pose an immediate solution that should be used in addition to other ongoing efforts. To encourage rapid but impactful behavioral change, strict regulations should be enforced. Thus, if the oil industry is required to sell a higher percentage of ethanol blended into each gallon of petroleum (e.g. hiking up the minimum percentage from 10% to 20%), this would automatically decrease the oil demand in that region by 10%. The UK should develop renewable fuel standards for times of energy strain, and the EU should encourage its member states to do the same.

III. Ethanol supply: In the Post-Brexit era, neither the UK nor the EU have standing trade agreements with the US. The US-UK trade agreement is actively in negotiation and has been for years, while the EU and US are currently trading under the World Trade Organization (WTO) Most Favored Nations guidelines. There have been discussions of potential US-EU agreements, but no active discussions on the matter between the two entities. As the UK and EU Member States continue to discuss and work on trade parameters, they should include an Emergency Energy section:

- This energy clause should be a temporary free trade agreement that has predetermined guidelines for the increase of ethanol exports from the US into partner countries when such countries determine that the threat to the international energy system has reached a tate of emergency. This would remove tariffs on the flow of ethanol at times of energy emergencies.
- Based on market history, ethanol tends to be a cheaper fuel choice than petroleum. The tariff exemptions from the energy clause would guarantee that blending ethanol would offer lower prices to consumers. This would encourage adoption and cushion the impact of rising energy prices due to strains in the oil supply.

While this shift to ethanol will be a major change to the EU and UK's biofuel requirements, top oil companies have already begun to focus on biofuels, such as ethanol and biodiesel. World leaders such as BP, Shell, Exxon, Chevron, and others have made significant investments in or partnerships with renewable fuel companies (focusing on ethanol) (Transport and Environment, 2023). They indicate that the market anticipation for ethanol will be important in the years to come. Adding tax or price incentives to oil companies that invest in biofuels, like ethanol, could be an additional step to encourage some of Russia's largest oil buyers to shift their focus to ethanol and continue dismantling Russia's fuel stronghold.

Shortcomings

Logistics present potential barriers to implementing the aforementioned policy. Depending on the type of infrastructure at existing petrol stations, there could be additional fuel storage or pump modernization necessary to administer higher blends of ethanol. Additionally, marketing and communication to consumers could be confusing. At present, there is a misconception that certain car or truck tanks cannot process ethanol, that ethanol damages the cars, or that higher blends of ethanol than E15 have higher Reid Vapor Pressure levels which would mean that they are more detrimental to the ozone (Congressional Research Service, 2017). Though these notions have been falsified, increasing the minimum ethanol requirement could cause slight resistance if not properly communicated (Greenhouse, 2011).

Further, a tracking system would be necessary to determine how much ethanol was sold annually, as well as who takes the blame for any shortcomings. Does the responsibility fall upon the individual oil companies, and if so, how will each government support the planning requirements to integrate ethanol into everyday products sold?

Overall, these questions are not difficult to answer. Instead, they would just need to receive the proper amount of attention from each government. Evidently, the US has been successfully functioning under a Renewable Fuel Standard, embedded in the Clean Air Act, since 2007. Other countries can refer to the US as a resource for best practices.

Another drawback of biofuels as a solution is that they may impede progress on other clean energy development. Ethanol's greatest strength is that it is a realistic, immediate solution: Ethanol blending can be utilized immediately. In particular, it can mitigate the global security risk of depending on global adversaries for liquid fuel. This means that biofuels should be used as a parallel to other ongoing developments in clean energy, not as a substitute for future zero-emission, zero-liquid fuel solutions. Further, the biofuels policy may enable politicians to simply "check the box" in abating emissions, and shift the emphasis away from the need for long-term, emission-free solutions. The solution to this threat is strong leadership that can emphasize the synergy of an operational short-term solution (biofuels) with long-term strategy development (properly sourced electric vehicles, hydrogen energy, biofuels that can be used without petroleum, etc.).

Conclusion

The global dependence on oil is not only a threat to health and the environment – it also creates geopolitical risks and threatens the entire international energy system. Right now, the world is unable to dismantle Russia's power and revenue generation from oil exporting because it depends on Russia for 13% of the global oil supply. If there were a sudden 13% decrease in oil throughout the world, the entire economic, defense, and social system would be in crisis. Policies that aim to slowly shift our current systems to operate on non-oil alternatives will be beneficial for the long-term but such solutions will do nothing in the meantime to bolster the energy supply chain or the global dependence.

The short-term solution is to blend higher amounts of ethanol into petroleum. This is a solution that is readily available and would create an immediate decrease in demand (and therefore dependence) on oil. Further, the biofuel can be used in most existing vehicles (the US Environmental Protection Agency and Department of Energy determined that all cars that have passed a certified emissions test since 2001 can run on higher blends of ethanol), and would significantly eliminate carbon emissions per gallon used.

Should this policy recommendation be adapted, the global oil supply chain would be exponentially less vulnerable. This is especially important in face of the Russia-Ukraine conflict, as well as other future or existing conflicts impacting oil-rich nations or oil supply chains. During such times, oil importers would be more capable to shift fuel sources and dismantle the power of oil-rich countries when they act aggressively.

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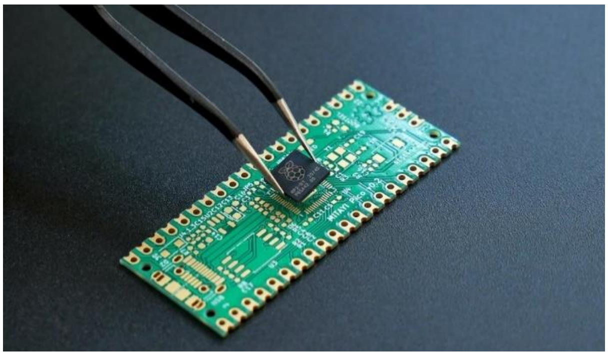
The global reliance on Taiwan's semiconductor industry and the future of US-China relations

By ***Hinano Arai***



Background

The chip shortage during the COVID-19 pandemic demonstrated the vulnerability of the semiconductor industry which the global economy relies on. The supply chain was disrupted as factories shut down, while the demand for chips skyrocketed as people moved to work from home. The costly, complex and time-consuming nature of chip production means that the suppliers are low in number and the demand cannot be immediately met after events like the global pandemic. Consequently, big carmakers, including Toyota and General Motors, lacked the supply of semiconductors necessary for production and were forced to pause production for a while. Moreover, increasing globalisation complicates the global networks and creates "a staggering vulnerability" where partial disruption of the supply chain is felt by the rest of the world. Chris Miller (2022), author of *Chips War: The Fight for the World's Most Critical Technology*, calls it "a perfect image of globalization gone wrong." The situation is particularly catastrophic in the semiconductor industry, as they are used in almost everything today – from computers and microwaves to airplanes and automobiles. By allowing electricity to move through it when heated, a semiconductor can be used to create different kinds of electronic devices and social infrastructures, as well as to improve the precision of military systems, making it a critical part of the global economy and security. While we live in such a chip-dependent world, one company dominates the industry – Taiwan Semiconductor Manufacturing Company, or TSMC. While South Korea's Samsung is famous for producing memory chips, TSMC produces over half of the global logic chips (process information) and 92% of the world's most advanced chips, used to produce high-level technology such as Apple's iPhones (TrendForce 2022). As the tension between the United States and China intensifies over global hegemony, the world's reliance on TSMC is yet another factor increasing the competition between the two. Neither can lose their access to TSMC and Taiwan for economic and military reasons. The next section will introduce the rising tension and the possibility of a direct military conflict between the United States and China, over the control of the semiconductor industry in Taiwan. It is followed by two policy recommendations designed to minimise the damage to the global economy and security in the case of the Chinese invasion of Taiwan.

US-China relations over the Taiwan Strait

While the US tends to focus on maintaining a technological lead over China in general, recent US policies have aimed to block China's growth in cutting-edge sectors, especially in the semiconductor industry. For example, in

October 2022, the Biden administration announced a set of export controls, including an export ban of advanced chip-making equipment to China. The US Department of Commerce's stated objective is to "restrict [China's] ability to obtain advanced computing chips, develop and maintain supercomputers, and manufacture advanced semiconductors"(2022). This policy follows the Trump administration's effort to restrict Chinese companies' access to refined semiconductors, in which they banned Huawei's access to semiconductors that are created using "certain U.S. software and technology" (U.S. Department of Commerce 2020).

The commitment of both the United States and China to keep Taiwan on their side increases the probability that the two major countries may come to a direct military conflict. On the one hand, Beijing considers Taiwan "an inalienable part of China's territory" and holds achieving "rejuvenation" of the Chinese nation as "the dream of the Chinese People"(Ministry of Foreign Affiars of the People's Republic of China 2022). On the other hand, President Biden has repeatedly stated that America will defend the island (Ni 2022). Unlike Silicon Valley's knowledge that can easily be relocated online, TSMC's fabs are more vulnerable to attacks. It is estimated that a single missile strike on TSMC's factory will cause hundreds of billions of dollars of damage, impacting production, consumption and employment around the world. While Taiwan's president Tsai Ing-wen stated that the chip industry is a '"silicon shield" that allows Taiwan to protect itself and others from aggressive attempts by authoritarian regimes to disrupt global supply chains', geopolitics requires a more realistic approach as a "silicon shield" cannot necessarily deter Xi Jinping.

Policy Recommendations

As the competition for supremacy intensifies between the United States and China, it is imperative that countries and businesses place precautionary measures to minimise the potential damage to their homeland and economies in the case of the Chinese invasion of Taiwan. The risk remains even if the world's leaders were able to put off the tensions between the two powers. Taiwan is located at the tectonic boundary between the Eurasian Plate and the Philippine Sea Plate, and the island is vulnerable to earthquakes. In 1999, Taiwan experienced an earthquake of a magnitude of 7.7. Having accounted for 12 to 15% of the world's memory chips, known as RAM, the destruction of machines in Taiwan resulted in a tripled price level for RAM (The Victoria Advocate 1999). Our policy recommendations place priority on changing the system of reliance on Taiwan and on diversifying the production of semiconductors, to minimise the disruption to the global economy. In this regard, we propose two recommendations for action moving forward.

I. TSMC should invest in a fabrication plant abroad: The most plausible option is for TSMC to expand its production abroad. This benefits both TSMC and the world by allowing TSMC to maintain, if not increase, its profit and primacy in the semiconductor industry while reducing the damages to the global economy and security in the case of military conflict over Taiwan. As a company producing 92% of the world's most advanced semiconductors, spreading expertise and knowledge of TSMC abroad is the smoothest transition towards diversification of chip production (Boston Consulting Group 2021). The current stance of TSMC to concentrate the production of the very best semiconductors into just one factory in

Taiwan limits the ability of foreign factories to produce cutting-edge semiconductor chips and increases the risks associated with potential damages to the Taiwanese factory.

TSMC has, in fact, started creating new factories abroad. It aims to start production of N4 process technology in Arizona in 2024 and of 3nm process technology in 2026 while considering its first plant in Dresden, given the growing demand for locally-manufactured chips for Europe's car industry (TSMC 2022). Furthermore, the firm is "considering" setting up in Japan, with sufficient demand and government incentives. Its subsidiary, Japan Advanced Semiconductor Manufacturing, Inc. (JASM), is already building a new plant in Kumamoto, Japan, in partnership with Sony and Denso, aiming to start production of 22/28-nanometer chips by late 2024 (Sony News Releases 2021). While Japan has lost the strong chipmaking industry of its bubble ages, the Japanese government has shown its commitment to reviving its semiconductor market. With the collaboration of Japanese companies like Sony and TSMC, it is one concrete solution to the Taiwan Strait crisis.

While such initiatives are constructive, sufficient investment is not provided, as the formal stance of TSMC is to keep the production of the most advanced chips in Taiwan. In fact, the investment into its plant in Arizona is only half of what is given to the ones in Taiwan (Ting-Fang 2022). TSMC needs to regard its overseas factories as the main production sites, not its periphery, and start moving towards the transition. The key to this policy's success, therefore, is for the leaders of TSMC to see the benefit of making that transition.

<u>II. Develop new semiconductor giants based outside of Taiwan:</u>

TSMC is not the only company existing in the field. In South Korea, Samsung plans an investment of $115 billion by 2030 in its logic chip production. With "its goal of becoming the world leader" in the semiconductor industry, the company shifted its focus to the logic chip market in 2019, as the demand for memory chips declined (The Korea Times 2019). The US semiconductor company Intel's CEO, Pat Gelsinger, also aims to gain more market share and ultimately to overtake Samsung and TSMC. All three companies are committed to building new factories outside their headquarters, such as in Japan, Germany, Ireland, and Israel.

China is also developing its own semiconductor industry. In its "made in China 2025" program, the country hopes to increase self-reliance in the field of technology, aiming to produce 70 percent of chips in China by 2025. Xi Jinping stated in 2016, regardless of the size of the market, if it relies on foreign countries for core components, "the 'vital gate' of the supply chain is grasped in the hands of others" (Miller 2022).

Having different suppliers of advanced chips will not only lower the risks for the economy and security but also reduce the price volatility of semiconductor chips. In order to achieve this policy, a high level of cooperation between companies and governments is crucial. In the time-consuming and expensive field of chip production, catching up with TSMC's expertise cannot be achieved without a committed government that can provide whatever is necessary to help the companies. South Korea, for example, is likely to increase support for the production of the logic chip, after the fall in revenue from memory chips, while the United States, in fierce competition with China, would be inclined to provide whatever is necessary to step ahead of China.

Conclusion

Essential to the two recommendations above is coordination between businesses and governments. Successful examples of such are evident in South Korea and Taiwan – the two technology giants. The Taiwanese government's commitment to promoting the chip industry was key to the advancement of TSMC. Having been educated at prestigious American universities, TSMC's founder, Morris Chang was asked to open factories in Taiwan and offered financial assistance from Taiwan's politicians like Kwoh-ting Li. Even today, Taiwan's government is committed to creating a suitable environment for business expansion, such as by deliberately lowering the New Taiwan dollar to make the exports more competitive. South Korea's former president, Moon Jae-in promised to work with businesses "as one team" in 2021, to maintain Korea's status as "a semiconductor powerhouse. (Jaewon 2022)" As part of the initiatives, the Korean government invested in Pyeongtaek as a city of chipmaking, where companies like Samsung place their major facilities. The US government's CHIPS and Science Act of 2022 is an ambitious project of $52.7 billion intended for "American semiconductor research, development, manufacturing, and workforce development." (White House Fact Sheet 2022) It was welcomed by bipartisan support and is expected to help improve America's competitiveness. Following such examples, countries hoping to advance in the semiconductor industry need to provide sufficient financial incentives and assistance to companies, as the semiconductor industry today is complex and costly.

The geopolitical tension between the two major powers – the United States and China – has aggravated the risks posed to the international economy and security by the predominance of Taiwan Semiconductor Manufacturing Company in the production of advanced chips. In order to avoid the calamitous consequences of the Chinese invasion of Taiwan or other intended or unintended events that disrupt the supply chain of semiconductors, the author recommends two actions to be taken. First, TSMC should invest in new plant fabrications outside Taiwan that can replace TSMC's factories in Taiwan. It means investing as much in overseas factories as ones in Taiwan, if not more, to enable such factories to produce cutting-edge semiconductor chips. Second, non-TSMC firms, such as Samsung and Intel, should cooperate with other firms and nations to stop the geographical concentration of the production of advanced semiconductors in Taiwan. To supplement both policies, governments wanting to promote their domestic chip industries should do so through financial assistance, to incentivise the best minds of their countries to head to the production of cutting-edge semiconductors.

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Sustainable Agricultural Production Initiatives during the Climate Crisis: The Case of Rice Production in Haiti

*By **David Neef** & **Radia Mernissi***

The international food system is currently facing a serious threat. The majority of agricultural commodities are produced in developing countries of the Global South. However, the increasingly prevalent effects of climate change render these countries worryingly vulnerable. While developing countries aim to ensure economic growth, they are currently facing new vulnerabilities that challenge classic paths to growth. Although many developing countries are vulnerable to the effects of climate change, island nations are particularly susceptible due to rising sea levels and their economic dependency on agriculture. This policy brief analyses the effects of climate change on rice using Haiti as a case study. It focuses on how climate change affects Haiti's rice production and how this exacerbates food insecurity in the country. Finally, the policy brief recommends the use of improved rice varieties and natural resource management practices to refine Haiti's agricultural methods to minimise the country's losses in the face of climate change.

Background

Haiti, an island-nation country in the Caribbean, is one of the poorest countries in the region. Moreover, according to the Global Climate Change Vulnerability Index, it is ranked 6th in terms of extreme vulnerability to climate change. Such vulnerabilities could result in the intensification of natural disasters which will impact the production of rice on the island nation.

Figure 1 displays the crop yields per ton/hectare for rice, corn, and sorghum in Haiti from the 2013-2014 market year to the 2022-2023 market year. While corn and sorghum yields have remained fairly steady over the past decade, rice yields have fallen by approximately 27% from just nine years ago. With the reduction in rice crop yields, the country is facing extreme food insecurity that is expected to worsen considerably in the next few years (Integrated Food Phase Classification, 2023). Food insecurity has impacted the Haitian economy through many channels and will continue to do so. Firstly, the reduction of agricultural productivity has had a negative effect on GDP and export earnings (AFD, 2013). Secondly, it has led to food shortages and price increases, directly impacting social issues such as worsening inequality. For instance, it was estimated that in 2022, food prices had increased by 63%. As a result 19,200

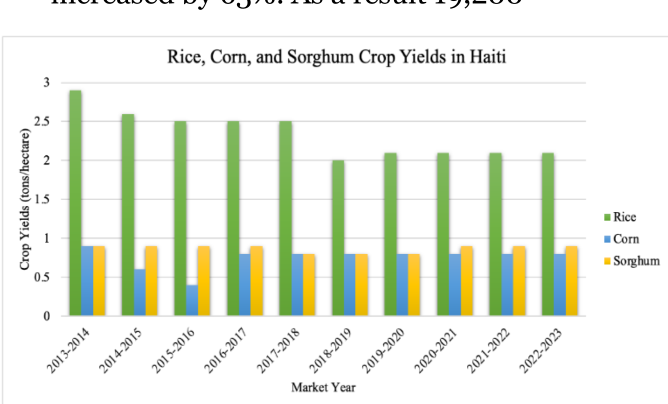

Figure 1. (Source: Foreign Agriculture Service U.S. Department of Agriculture)

people were thought to be just short of starvation. Food insecurity is also responsible for malnutrition which in turn creates new costs for the state to accommodate growing healthcare requirements (GO Humanity, 2023).

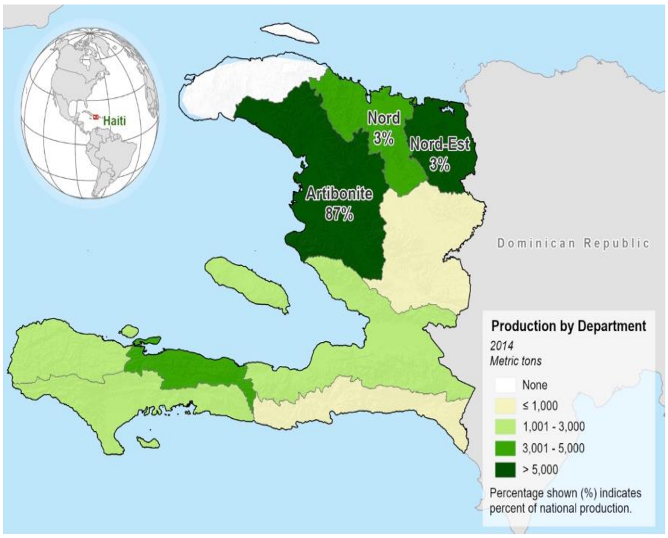

Figure 2. (Source: Foreign Agriculture Service U.S. Department of Agriculture)

In 2014, 87% of rice production in the country occurred in the “rice bowl” region of Artibonite Valley in west Haiti, as shown in Figure 2. This region still continues to be the main area for rice production. The valley is irrigated by a river with the rainy seasons that last from May to October, providing 500 to 1200 mm of rain, while the dry season spans from November to April with 50 to 100 mm of rain per year (Wilcock and Jean-Pierre, 2012). However, these water resources are threatened by climate change. The effects of climate change have also led to a considerable increase in hurricane damage and severe flooding. Haiti's climate has undergone significant transformations, including alterations in rainfall patterns, temperature fluctuations, and more frequent and intense tropical storms – changes that have led to flooding and erosion (Haiti’s U.S. Rice Imports). In the past, four consecutive hurricanes have destroyed 60% of the total country’s harvest (Mclaty, 2008).

Rice is a crucial component of the Haitian diet, accounting for 23% of the average total calories consumed per day, exceeding that of corn by 50% according to the Food and Agricultural Organization (FAO). Haitian agriculture also employs the largest percentage of the active population in the Caribbean region, with almost 60% of the country's workforce involved in this sector (Bargout and Raizada, 2013). In addition to its vulnerability to climate change-induced natural disasters, rice production in Haiti also suffers from poor economic policy that prioritises imports from the US which currently account for the majority of rice supply in the country. To address this issue, the Government of Haiti is taking steps to reduce the country’s dependence on rice imports from the US and increase the domestic rice output. This would not only reduce rice imports but could also potentially increase rice export for Haiti (Haiti’s U.S. Rice Imports).

The significance of rice is that it is a critical food staple for more than half of the global population, particularly in Asia, Sub-Saharan Africa, and South America, which are among the largest rice-consuming regions in the world (USDA, 2022). In developing countries, rice is the source of 27% of dietary energy and 20% of dietary protein. The demand for rice has steadily increased with the growing population in rice-consuming countries. The FAO notes that over 100 million families in Asia and Africa are dependent on rice as a primary source of income and employment (Mohanty et al.,2012). Yet, despite its importance, rice is “expected to be the cultivated crop most vulnerable to future changing climates”, according to the International Rice Research Institute (IRRI). These vulnerabilities include:

- A significant rise in temperatures
- Floods causing complete or partial submergence;

- Salinity which is often associated with sea-water inundation and the reduction of germination rates of rice, hence reducing yield productivity;
- Drought spells that are highly deleterious to rainfed systems.

To ensure international food security, safeguard global human health and nutrition, and sustain the livelihoods of millions of farmers worldwide, it is crucial to prioritize sustainable growth in rice production.

Evaluation

The climate crisis poses a threat to agricultural commodities not only in Haiti but also worldwide. To tackle this challenge, innovative agricultural practices must be implemented in Haiti to increase its rice production, which will in turn reduce the country's dependence on rice imports, boost its rice exports, and mitigate food insecurity.

Several points must be highlighted from a 2022 publication by the Global Food Security titled "*Helping feed the world with rice innovations: CGIAR research adoption and socioeconomic impact on farmers*". The article covers "17 ex-post impact assessment studies" published between 2016 and 2021, making them recent and reliable studies. The publication focused on rice varieties, agronomic practices, institutional arrangements, information and communication technologies, and post-harvest technologies used by rice farmers. While many of these practices can be applied to improve rice production in Haiti, this policy brief will outline a three-step policy recommendation. First, the investment in submergent/flood-tolerant rice varieties, second, the use of information and communication technology (ICT), and third, taking advantage of social networks and social learning methods.

Review of Relevant Case Studies

To motivate our policy recommendations, 3 case studies have been chosen.

Bangladesh. In Bangladesh, where floods annually destroy 4% of the total rice production, the introduction of Sub1 rice varieties has proven to be a plausible solution. A study revealed that these flood-tolerant varieties outperformed traditional ones in the aftermath of floods. Another study demonstrated that Bangladeshi farmers who adopted the Sub1 varieties experienced an increase in farm profits and consumption expenditures.

While numerous flood-tolerant rice seed varieties are available, the majority of rice farmers in northern Bangladesh still relied on their own seeds from the previous season or bought them from other local farmers. It was not until 2013 that they began purchasing seeds from markets and dealers, with this trend gaining momentum in the following years.

Nigeria. A recent study conducted in Nigeria demonstrated that providing farmers with personalised advice on rice nutrient management via a mobile application led to a 7% increase in rice yields and a 10% increase in profits. This highlights the potential of ICT to provide tailored farming practices and agronomic choices, moving policymakers away from one-size-fits-all recommendations.

Africa. In Africa, a successful social learning program called the farmer-to-farmer extension program was implemented. Initially, a group of farmers received training on rice cultivation technologies. In the second stage, these key farmers shared their knowledge with other farmers based on what they had learned. A study found that this program increased crop yields of the trained farmers by 3.1-5.3 tons per hectare and proved to be a cost-effective substitute for traditional extension programs (Mishra et al., 2022). This case study exemplifies how social learning methods can be effective in diffusing knowledge about new technologies, such as stress-tolerant crops.

Policy Recommendations

I. Invest in Submergent/Flood-Tolerant Rice Varieties: To ensure successful adoption of flood-tolerant rice seed varieties in Haiti, it is crucial to adapt them to local conditions. The Bangladesh case study showed that the adoption of such rice varieties took time. To facilitate a smoother transition, the Haitian government, in collaboration with other non-governmental organizations (NGOs), should collaborate on the investment and distribution of submergence-tolerant rice seeds to farmers. For example, a government-led distribution program, spanning 4 years, can be conducted annually. Followig this 4-year period, rice farmers in Haiti gradually transition to purchasing submergence-tolerant rice seeds from markets and shops that collect seeds from their own crops, fostering the development of a private sector for these varieties. As exemplified in the Bangladesh case study, expanding access to these seeds will yield numerous economic benefits, including enhanced rice production, increased profits for farmers, and the creation of more job opportunities in the region. To finance the purchase of submergence-tolerant rice seeds in Haiti for the initial 3-4 years, sovereign green bonds could be issued to attract private investors. Alternatively, funding could be sought from the Inter-American Development Bank's AgroLAC 2025 initiative, which is a multidonor funding platform focused on improving agriculture in Latin America. The initiative aims to gather support from public and private donors worldwide, to promote sustainable agricultural practices and market systems in the region.

II. Utilise Information and Communication Technology: By implementing ICT technologies in Haiti, rice farmers could benefit from personalised advice tailored to their specific location, soil conditions, and other relevant factors. As shown from the Nigerian case study, this targeted guidance can significantly increase yields and profitability. To faciliate this process, the Haitian Government should partner with organisations like Farmers.ng, which offers digital and offline services to farmers, enabling them to access inputs for production and markets for their produce. By facilitating such partnerships and initiatives, the exchange of information and experiences related to rice farming can be effectively facilitated through various ICT projects.

Similar organizations have employed technologies that register farmers' details such as names, contact information, farm size, location, and crop types. These organisations provide training on rice cultivation and notify farmers through text messages when it is time to harvest the crops. By adopting a similar approach to the Nigerian case study, improved harvesting practices can be achieved in Haiti.

III. Take Advantage of Social Networks and Social Learning: As in the African case study, social networks and social learning methods can be utilized to enhance the adoption of submergence-tolerant rice varieties and other sustainable agricultural practices. This can be facilitated through the use of ICTs and collaborative efforts between government agencies, NGOs, and farmer associations. In Haiti, the use of ICTs within the farming sector can effectively facilitate the exchange of information and experiences among farmers, thereby enhancing agricultural practices.

To help build social networks within the rice farming community, the Haitian government can help through a four-step process. Firstly, the Ministry of Agriculture, Natural Resources, and Rural Development should form a small Agricultural Engagement Team from current department members. This team will actively engage with the rice farming community, learning about their cultures, capabilities, and challenges to gain deeper insights into their needs.

Secondly, strategies should be established with input from the rice farming community. This feedback can help identify priorities and establish approaches that are more likely to be successful. It creates a platform for rice farmers to express their perspectives and contribute to strategy discussions.

Thirdly, the government should focus on network-building within the rice farming community. This involves fostering communication channels, facilitating resource exchange, and promoting collaboration through informational and educational events with key community members. The African farmer-to-farmer extension program provides a successful example of this. Building trust and enhancing communication are essential in this phase. Finally, after completing steps one though three, the government must mobilise rice farmers and establish leadership, effective communication, and motivation to sustain community engagement. This will encourage active participation, emphasizing education on flood-tolerant rice varieties, the use of ICT technology, and the establishment of a network for future distribution and procurement of flood-tolerant seed varieties. The mutual learning that emerges from these networks would be a cost-effective way to increase the productivity of rice farmers and increase rice yields, benefiting the entire community.

Conclusion

Without investing in sustainable agricultural growth practices, food insecurity could become a significant global issue. Developing countries, particularly island nations like Haiti, are at the forefront of the climate crisis and are more vulnerable to natural disasters while also relying heavily on agriculture. The situation with rice production in Haiti is just one example of the numerous agricultural commodities in various nations that require more attention. To decrease food insecurity, Haiti must enhance its rice varieties using stress-tolerant rice varieties to increase rice production and potentially, exports. To achieve this goal effectively, Haiti must also improve its natural resource management practices through the use of information and communication technology for decision-making, training, and building social networks with the rice farming community.

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India’s need for self-sufficiency in the new market typology of the energy sector

By ***Arushi Agarwal***

India is one of the world's fastest-growing economies. As of 2021, India's economy has a GDP of $10.207 trillion (at purchasing power parity), accounting for a 7.19% share of world GDP. Considering the economic and geopolitical influence that India commands in international politics (Sharma, 2023), it is crucial to understand the present dynamics in the country’s energy sector, as it has the potential to translate into national security concerns (Chaudhari, 2023).

Following the invasion of Ukraine in 2022, there was a notable shift in the global energy market typology. With the European Union imposing sanctions on energy consumption from Russia, the country became increasingly reliant on its Asian market reach. This resulted in India and China being offered discounted prices, following a dramatic global inflation of prices. In a world where economic and political factors are interdependent, it is essential for India to ensure its economic and political environment is resilient. To achieve this, the country needs to capitalise on the deals that best suit its national and private companies. Expanding on this idea, this policy brief will suggest some methods that could insulate national and private Indian companies from the significant impacts of geopolitical conflicts and their economic repercussions.

Background

India is projected to continue relying on energy imports to meet its large and varied energy demand profile until 2035 (IEA, 2021). Moving forward, India also seeks greater energy efficiency and has a growing market for technology and services to help deliver this. India's efforts to improve energy efficiency are helping to reduce its reliance on energy imports. This is achieved by reducing the amount of energy required to produce goods and services, resulting in decreased overall energy demand and, therefore, reducing the need for imports to meet its energy needs. The energy sector is one of India's most dynamic sectors, and opportunities are evolving rapidly in renewables, energy technologies and power infrastructure. Thus, India ought to take on opportunities to develop its domestic energy sector and grow less reliant on imports whenever possible.

India's demand for energy is set to surpass its domestic supply, and by 2035, the country is expected to be the largest contributor (30%) to global energy demand growth. India's rapidly growing population is the primary driver of this high energy demand which could lead to increased foreign direct investments, market influence, and positive investment growth for India and its suppliers (Varghese, 2018). The energy sector is critical not only for economic growth but also for achieving India's development goals. By improving access to electricity, India can enhance the efficiency of regular households and improve their quality of life. Furthermore, expanding energy infrastructure can positively impact the Indian economy and promote sustainable development. Thus, while India's growing energy demand poses some challenges, it also presents an opportunity for investment and development that could significantly benefit the country and its people.

It is important to note that India will remain reliant on energy imports, particularly fossil fuels, for the foreseeable future. This dependence creates a lucrative market for companies offering services and technologies that can improve energy efficiency and promote the use of renewables. However, the success of these opportunities will depend on India's path of reform. Achieving its aspirations of simultaneously and rapidly transforming its energy mix, attaining energy self-sufficiency, and meeting climate change goals will be challenging due to inadequate investment in renewables, inefficient and unreliable power systems, and a dependence on fossil fuels. Additionally, rapid economic growth and an expanding population further complicate the transition to a cleaner and more sustainable energy mix. Nevertheless, India's energy policy reflects a commitment to achieving its goals, with ambitious renewable energy targets and efforts to address regulatory barriers and infrastructure challenges. However, continued efforts and investments from both public and private sectors will be required to achieve a rapid and complete transition.

India faces significant challenges in achieving its energy goals, as the sector is plagued by a complex web of inefficient policy interventions. Government regulations limit the supply of energy in the market, reducing incentives for private investment and innovation. Further, a lack of transparent price signals makes it difficult for companies to make informed investment decisions. Distribution is also a major bottleneck, exacerbated by a dependence on fossil fuels, inadequate infrastructure, and an inefficient and unreliable power system.

While these political constraints make change incremental rather than extensive, India is taking steps to tackle these challenges. The government has set ambitious targets for renewable energy and implemented policies to promote their adoption, such as subsidies and tax incentives. Investment is being made in energy infrastructure, including expanding transmission and distribution networks to improve grid integration and stability. Despite these efforts, progress has been slow and inefficient, and continued investment from both the public and private sectors will be required to achieve a rapid and complete transition to a cleaner and sustainable energy mix.

Furthermore, India's increased integration into global energy markets will have a profound impacts on the global economy. With India's growing demand for energy, the country will have a greater stake in the efficiency of global energy markets. Thus, it is in India's best interest to invest in renewable energy and improve energy infrastructure to achieve a cleaner and sustainable energy mix while also ensuring energy security and self-sufficiency. This transition will demand significant political will and continued investment from both public and private sectors to overcome the current inefficient policy interventions and bottleneck issues within the energy sector.

Policy Recommendations

I. Diversification: This policy proposal suggests a two-pronged approach to diversify India's energy sector. Firstly, diversification of energy sources such as gas, oil, and coal, and secondly, diversification of the countries from where they are imported. By taking this approach, the policy aims to address the root cause of the inefficient energy policies.

Diversification is crucial for ensuring energy security and independence as countries can reduce their vulnerability to supply disruptions, price fluctuations, and geopolitical tensions by relying on a variety of sources and suppliers. Relying solely on one energy source or supplier can have a significant impact on a country's energy security and economy in case of a supply disruption. On the other hand, diversification of energy mixes and sources can mitigate the impact of any supply disruption from a single source or supplier, enhance competition, lead to better prices and quality of energy services for consumers, and promote innovation and technological advancements in the energy sector. Therefore, the diversification of energy sources and suppliers is a critical strategy for achieving energy security and independence.

In order to make sure that India is secure in terms of national and economic security, it is crucial to consider diversifications of various kinds:

A. **Diversification of energy sources:** India needs to undertake primary diversification in its energy sources to reduce the country's reliance on high-carbon sources. Historically, India has relied heavily on coal, but there has been a recent shift towards pet coke, a by-product of the oil refining process. In 2022, India began importing discounted oil after global price inflation in the oil sector. However, to achieve energy independence and a cleaner energy mix, it is crucial for India to transition to renewable energy sources, particularly in commercial and public areas (IEA 2021).

   India has set an ambitious target of achieving 450 GW of renewable energy capacity by 2030. The government should continue to incentivise the development of renewable energy sources such as solar, wind, and hydropower. This can be done by providing subsidies, tax breaks, and low-interest loans for the installation of renewable energy systems and reinforcing Environment, Social, and Governance values (Rajan & Kumar 2021). However, it is important to understand the challenges that renewables will bring, such as the intermittency of renewable sources. Heavy investment in the storage technology of renewable energies, therefore, may be needed.

B. **Diversification of energy suppliers:** The recent Russian invasion of Ukraine served as a reminder of the importance of energy independence in shielding a country from sudden price changes and inflation. One way to achieve energy independence is through the diversification of energy suppliers which reduces a country's dependence on any one supplier or group of suppliers. If a country heavily relies on a single supplier for its energy needs, that supplier can hold significant leverage over the importing country, potentially causing supply disruptions or price spikes. Diversifying energy suppliers can reduce such vulnerabilities, increase negotiating power in energy markets, and lead to stable and predictable energy prices, as well as enhanced energy security and independence. Furthermore, having access to multiple suppliers enables a country to choose those that align with its political and economic interests.

Before the Russian invasion of Ukraine, India imported oil from Iraq and Saudi Arabia. However, following the increase in global oil prices after the invasion, India decided to buy discounted Russian oil. Doing so, India effectively shaved $27.5 million off its oil import bill daily – or $852 million throughout May 2022. Indian oil refineries enjoyed steep discounts, at $20-30 per barrel. However, in July, prices for India rose to $95-97 per barrel, which remained lower than the global price at $112-120 per barrel.

Implementing a fixed ratio of suppliers from various countries can bring greater stability and security to a country's energy supply. This can be achieved by setting fixed contractual ratios for suppliers based on parameters such as ease of supply and regularity in shipment. By doing so, a country can ensure a diversified supply of energy sources from around the world, reducing its dependence on any one particular supplier or group of suppliers. To ensure compliance with the contractual ratios, checks can be put in place, and concessions can be given to make it easier for suppliers to follow through (Puri, 2017). This strategy can help mitigate the impact of supply disruptions, price fluctuations, and geopolitical tensions, thereby improving energy security and independence.

II. Private investment in the energy sector: Private investment can be a crucial factor in improving energy independence for a country. Offering incentives like tax breaks and subsidies to companies investing in renewable energy and energy-efficient technologies can accelerate the adoption of these technologies, leading to increased domestic energy capacity and reduced dependence on energy imports. In addition to promoting the use of renewable energy, private investment can also help improve the transmission and distribution infrastructure in a country which is often a bottleneck in the energy sector. Private companies are often more efficient than state-owned companies in improving energy transmission as they are profit-driven and operate with fewer bureaucratic constraints. Hence, encouraging private investment in transmission and distribution infrastructure can lead to greater energy efficiency and independence, too. Ultimately, these efforts can help create new jobs and accelerate the adoption of various energy technologies (MENA 2020).
The government can:

- Increase the Renewable Purchase Obligation (RPO): The government can increase the RPO percentage, which mandates power distribution companies to purchase a certain percentage of their power from renewable energy sources. This policy will create a more substantial demand for renewable energy and provide a guaranteed market for producers of renewable energy.
- Simplify the approval process: The approval process for setting up renewable energy projects can be simplified and made more transparent. This step will reduce the time to get approvals and make it easier for private players to invest in the sector.
- Provide subsidies and tax incentives: The government can provide subsidies and tax incentives to private players investing in renewable energy. This step will help offset the higher initial

costs of setting up renewable energy projects and make them more financially viable.

- Increase private funding for transmission and distribution infrastructure: Private investment in transmission and distribution infrastructure needs to be higher due to the dominance of state-owned companies in this sector. Private investments are profit-driven, thus are more efficient than state-owned companies in improving the infrastructure. To this end, the government should create a more competitive market for private players.

III. Introduction of Carbon Pricing:

Carbon pricing is an economic policy tool that puts a price on carbon emissions, encouraging individuals and businesses to reduce their greenhouse gas emissions (Maltby 2023). Carbon pricing can improve self-sufficiency by promoting the adoption of clean energy technologies and reducing the use of fossil fuels. By placing a price on carbon emissions, carbon pricing makes it more expensive for companies to continue using fossil fuels, encouraging them to invest in cleaner and more sustainable energy sources. This can lead to an increase in domestic renewable energy production and a decrease in the country's reliance on imported fossil fuels. Additionally, the revenue generated from carbon pricing can be used to fund investments in renewable energy infrastructure and research and development, further promoting energy self-sufficiency. Some policies can be implemented to introduce carbon pricing in India's energy sector to boost self-sufficiency:

A. **Design a revenue-neutral carbon tax:** A revenue-neutral carbon tax is a policy that taxes carbon emissions but returns the revenue collected back to the economy through rebates or other mechanisms. This policy will incentivise people and companies to reduce carbon footprint while avoiding economic harm. The government can use the revenue collected from the carbon tax to invest in renewable energy and energy efficiency projects. This, in turn, will expand domestic energy capacity and reduce the dependence on energy imports.

B. **Implement a cap-and-trade system:** A cap-and-trade system limits the number of carbon emissions the energy sector can release. Companies are given a certain amount of carbon credits, which they can use to emit a certain amount of greenhouse gases. If a company emits less than the allotted credits, it can sell its unused credits to other companies. This system encourages companies to reduce their carbon emissions and rewards those who do so by allowing them to sell unused credits. In addition, the government can set a cap on emissions, which can be gradually lowered over time.

Challenges of implementing carbon pricing include the high administrative costs and the difficulty of setting an optimal carbon tax/emissions cap. Investment in the private sector will also be hampered by the government if private investment is seen as a devolution of power to private entities. However, these challenges are not insurmountable.

Conclusion

Introducing carbon pricing in the energy sector effectively reduces greenhouse gas emissions and encourages the adoption of clean energy technologies in India. These policy suggestions can help India achieve self-sufficiency while helping India meet its climate targets. A combination of these policies can be implemented in tandem, starting with private investment, the revenue-neutral carbon tax and the diversification of suppliers.

Energy independence will be ensured through private investment, energy diversification, and a transition to a low-carbon energy system. Diversifying energy sources and suppliers can increase energy security and independence by reducing a country's vulnerability to supply disruptions, price fluctuations, and geopolitical tensions. Encouraging private investment in renewable energy and energy-efficient technologies can increase domestic energy capacity, decrease dependence on energy imports, and create new jobs. Carbon pricing can promote energy efficiency and the transition to cleaner sources of energy, reducing dependence on high-carbon energy sources and supporting a more sustainable energy system.

This brief has proposed viable policies for India in the context of the new market typology of the energy sector. Going beyond the policies that are already being implemented, this brief has suggested 1) two-pronged diversification for greater self-sufficiency, 2) suggestions to increase the private investment in the energy sector, and lastly 3) carbon pricing, to ensure energy sustainability and therefore reinforcing the aim of self-sufficiency.

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Defence & Diplomacy

Safeguarding Sovereignty in the Economic Domain: Multilateral and Legal Approaches to Addressing China's Economic Warfare

By ***Caitlin Hayley Suanto*** & ***Sean Woon***

Background

When the US signed an agreement to bring China into the World Trade Organisation (WTO), President Bill Clinton (2000) remarked that it was "ironic [...] so many Americans are concerned about the impact on the world of a strong China in the 21st century" as a weak China posed an arguably greater danger. Yet, in just a little over 20 years, American leaders' opinions on engaging China economically have shifted considerably, chiefly due to China's unrelenting economic warfare on the West: China steals between USD$225-600bn worth of intellectual property from the US every year (Financial Times, 2022), and the trade war it waged with the US has cost the latter 300,000 jobs (US-China Business Council, 2020). Outside America, China also flexes its economic muscle when interacting with smaller powers, strong-arming them to attain a desirable economic, political, or strategic outcome for itself. Today, states must prepare for this new world where the economy, defence, and foreign policy are integrated under a whole-of-government strategy. This paper thus seeks to provide states with policy options to respond to China's economic coercion.

Defining & Scoping Economic Coercion

Economic coercion utilises a government's control over the economy to affect foreign economic actors, thereby seeking to disincentivise or even coerce another state from adopting unfavourable foreign policies (Carter, 2009). China's economic coercion manifests most prominently in three ways:

1. **Export Controls.** China's 2020 Export Control Law restricts the export of a long list of 'controlled items' and technology, services, and data relating to them. The induced shortage in supply triggers price hikes, hurting consumers in export destinations.
2. **Restrictions on the Operations of Foreign Companies.** The wide range of possible restrictions was demonstrated clearly in June 2021, when China established an anti-sanctions list to retaliate against US and EU sanctions. Blacklisted foreign businessmen could (i) be denied entry or expelled into and from China; (ii) have their assets in China seized or frozen; and (iii) face limitations to the economic entities they are allowed to conduct business with. These affect the profits of Western businesses.
3. **Forced Technology Transfers (FTT).** China strong-arms foreign firms into transferring technology to Chinese entities via ownership restrictions, administrative

procedures, etc. For instance, China allegedly forced foreign electric vehicle companies to transfer technology partners in exchange for market access. With pressure imposed on foreign companies, FTTs are a coercive act that undermines the affected country's economic competitiveness.

Notably, economic coercion is distinct from more general forms of economic statecraft, which is the use of the economy using national goals. While statecraft is designed to alter what is typically in the '*domain reserve*' of states (what is under states' right to determine, including their economic policies), coercion does so as a deliberately unfriendly act (Tzanakopoulos, 2015). Economic coercion strikes at the heart of states' independence and sovereignty and must be defended against.

The choice to focus on economic coercion is deliberate. Economic statecraft is largely tied up with economic development – a worthy goal of all states seeking to move up the development ladder and benefit their populace. However, many states have adopted the neoliberal idea of the economy as distinct and free from the government's prying hands, putting faith in the 'invisible hand' of the free market. Regardless of one's stand on free-market economics, neoliberal theory can only possibly hold (i) when all states are similarly committed to the rules-based international order; and (ii) where international trade is left mainly to private actors. These conditions are not always observed today. Some states do not subscribe to the neoliberal paradigm – instead seeing the economic sphere as 'policy by other means' (to paraphrase Clausewitz) – others that fail to acknowledge this new reality of the foreign policy game will be left extremely vulnerable. Defending supply chains, building multilateral partnerships of states willing to act against coercion, and rethinking the international economic order are multi-decade efforts that must start now; otherwise, states with no qualms about engaging in coercion end up getting the first-mover advantage.

Assessing Current Measures

Unilateral Policies. Most existing responses to Chinese coercion have been unilateral in nature. For instance, the measures taken by the Trump administration in response to the perceived unfair trading practices of Beijing were to hit China with around $200bn of tariffs in 2018 (Partington and Rushe, 2018), not to utilise any international or multilateral solutions. Additionally, when China threatened to restrict Australian coal imports to force the dissolution of AUKUS and halt investigations into the origins of COVID-19, the Australian government made the unilateral decision to stand firm with their foreign policy without seeking multilateral channels to punish Chinese coercion (Reuters, 2023).

More recently, two new measures have been strengthening states' protection against potential coercion. The US passed the CHIPS and Science Act, indirectly protecting itself by providing higher investment into semiconductor and high-tech manufacturing and diversifying its reliance on Chinese (or Taiwanese) manufacturing. The Innovation and Competition Act of 2021 is evidence that the US is willing to prove further unilateral means to preserve its economic development. The European Union has been even more explicit, proposing a new Anti-Coercion Instrument currently undergoing final negotiations between the mission, Council, and Parliament (Duchâtel, 2022).

Evidently, there exists a political will to deal with potential coercion. To value-add, the rest of this paper will thus focus on assessing and providing multilateral and international legal solutions for small to middle powers.

Multilateral & International Legal Solutions. International and multilateral regimes refer to 'rules and procedures that regulate the negotiation of bilateral agreements and restrict the use of unilateral national controls' (Aggarwal, 1983, 618). This includes international law which tends to be divided into two primary sources – customary and conventional. Conventional international law draws strength from states willingly entering into binding agreements which ought to be honoured. As international agreements contain clear and explicit terms, it is much easier to establish the scope and extent of legal obligations than custom, which requires a claimant state to first prove that a legal norm exists. There are presently no recognised norms prohibiting the mere act of economic coercion or influence; it is only unlawful if part of a broader strategy to influence a target state includes unlawful actions (e.g. the threat of force or the violation of other existing treaty obligations).

Today, the international organisation most relevant to addressing China's economic statecraft is the WTO, which administers legally-binding trade agreements that all member states have signed and ratified. These include the 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) which provides member states with substantial intellectual property rights. In particular, Article 39 of the TRIPS Agreement states that:

"Natural and legal persons shall have the possibility of preventing information lawfully within their control from being disclosed to, acquired by, or used by others without their consent in a manner contrary to honest commercial practices so long as such information: (a) is secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to persons within the circles that normally deal with the kind of information in question; (b) has commercial value because it is secret; and (c) has been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret."

This criminalises China's FTTs and allows member states to dispute China's violations and compel the latter to abide by their WTO obligations.

Another prominent agreement under WTO is the 1994 Agreement on Tariffs and Trade (GATT). One of the GATT's key clauses, Article XI (1), reads:

"No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or the exportation or sale for export of any product destined for the territory of any other contracting party."

Any tariffs that are introduced – which Article XI (2) restricts to temporary and unusual circumstances – also cannot violate the most-favoured nation principle as the GATT's 1947 Article (1) requires all trading partners of a state to receive the same benefits (and be subjected to the same barriers to trade). To this end, the Chinese tariffs on Australian wine that increased by 200% in 2020 constitute unequal treatment of one state.

However, the GATT and TRIPS Agreement are only relevant if they can be enforced; that is the role of the WTO's dispute settlement process, particularly the Appellate Body (or Dispute Settlement

Body (DSB)). Unfortunately, this body has been in crisis since 2019 when the US refusal to reappoint judges and the three-year terms of existing judges elapsing forced the DSB to shut down as its quorum was not reached. This move has dealt a big blow to the enforcement of a rules-based international trading order, especially severe given China's extensive economic coercion. Moreover, China seems to have little regard for the international norms prescribed in WTO agreements: China consistently flouts trade rules, and although they do seem to comply when made to enforce its trade obligations by the DSB, these are but "paper compliances" (Webster, 2014, 533) where China may comply on specific complaints brought up against them but still keep in effect several regulations that are inconsistent with the spirit of WTO agreements. China's obedience to international norms is thus highly selective and superficial (Webster, 2014). Ultimately, existing WTO mandates were designed with democracies in mind, therefore, inadequate in countering Chinese trade warfare. Notably, the Chinese government's lack of transparency makes it difficult for states to discern whether problematic trade practices were deliberately taken or indirectly brought about, making it difficult for states to know if they can call on WTO agreements in these instances (Bacchus et al., 2018). These reasons have caused the West to have little confidence in the WTO's ability to address Chinese economic coercion and resort to unilateral measures (Bacchus et al., 2018). In fact, despite Article 39 in the TRIPS Agreement directly prohibiting China's FTTs, the US has not once attempted to hold China accountable to it, employing a unilateral 'tit-for-tat' strategy instead.

Besides the WTO, the US has also sought the creation of economic coalitions to contain China's economic influence. A salient example of this is the Indo-Pacific Economic Forum (IPEF). First proposed by the US in 2017, the IPEF promotes liberal democratic values and catalyses economic integration of the US with states in the Indo-Pacific region – China's backyard – thereby subduing China's growing and deepening economic influence.

However, such a containment strategy is ineffective and backfires at worst (Nelson, 2021). To begin with, countries in the Indo-Pacific are largely unwilling to formally commit to an economic alliance with the US as China remains a significant trading partner to them (Harris & Sutton, 2022). Many in Southeast Asia, for example, have adopted a neutrality or limited alignment policy, striving to balance American and Chinese influence over the region. The reluctance of potential allies thus limits the outreach of IPEF and the outcomes of IPEF discussions. Additionally, a policy of containment could be fatal to the US themselves given the superpowers' 'competitive interdependence' (Hass, 2021). China is the world's largest manufacturer, the largest holder of American national debt, and holds trillions in investments from US investors. Even after decoupling, economists predict that China's economic collapse would bring about significant losses in trade revenue (China is a major export destination for the US), high inflation due to the lack of Chinese imports, and a severe weakening of the US dollar should China choose to dump their treasury holdings. Clinton's aforementioned claim in 2001 remains sound: A weak China would immensely endanger the US economy.

Policy Recommendations

While unilateral retaliation is an undoubtedly relevant countermeasure, multilateral regimes have great potential that, if fully exploited, can benefit states in terms of lower transaction costs and more significant pressure on the belligerent. In light of the above weakness, this paper recommends three necessary actions to be taken:

I. Adopting a Principle of Enmeshment, Not Containment:
Where states are inclined to policies guided by the principle of containment, this paper suggests enmeshment as a better alternative. Enmeshment is 'a condition of mutual dependence in which actors are locked into relationships of reciprocity and mutual influence, and in which the policies and actions of each actor must take into account the reactions of others' (Keohane & Nye Jr., 1977, pp. 7). A key strategy for enmeshment is economic interdependence, achieved by trade negotiations, investing in foreign corporations, and developmental aid, among many others. Basically, enmeshment amplifies the already globalised nature of our world today. By promoting greater intertwining of economies (intrinsically being less aggressive than containment), enmeshment uses cooperation as a deterrent, reducing the propensity for conflicts to escalate and thus also being much more palatable to the smaller powers who fear getting caught in between. Moreover, enmeshing policies tie Chinese economic interests to the economic growth of others, thus paving the way for a 'win-win' situation (as opposed to containment, which only allows for a win-lose).

Of course, enmeshment is not completely fool proof either. As states draw closer to China, they are making China more dependent on them and rendering themselves less self-reliant. Therefore, enmeshment must be coupled with real diversification of supply chains and trade links to prevent overreliance. Nevertheless, the benefits accrued in safeguarding the rules-based order are much larger and more sustainable in the long run.

To this end, the principle of enmeshment guides the two other suggestions made in this paper.

II. Strengthening International Agreements: While the easiest solution to this end is the US-led reform of the WTO – especially the unblocking of the Appellate Body – this might not be realistic. International law's limits must be recognised; the principle of state consent makes it difficult to force compliance when there are no credible threats to back it up (due to the aforementioned lack of transparency). The US, the world's largest economy (and a party of 70% of WTO disputes (Schneider-Petsinger, 2020), precludes measures to substantively force a shift in their policy. However, the unequal bargaining power of these economic giants can potentially be mitigated by collective bargaining, this might be the only option smaller nations have. The EU, among other WTO members, has established the Multi-Party Interim Appeal Arbitration Arrangement, but this explicitly incentivises free-ridership by major powers who enjoy the benefits of a rules-based international order without being explicitly bound. Smaller states must follow trading regulations or risk being brought to task via arbitration. In contrast, great powers can operate under the predictability and similar terms of the old rules-based system with the option to stop complying at any moment if it does not serve their interests.

Smaller nations need to devise a mechanism to push back against any coercive action, such as a collective agreement to suspend trading with any state that targets a member of the agreement. This will effectively form an economic 'Article 5'. Naturally, forming such an agreement is unlikely; smaller states have every incentive to profit from the neighbours' spats with the superpowers through diverted trade. A better solution would be to reinforce existing multilateral trading blocs (e.g. the Regional Comprehensive Economic Partnership (RCEP) and the Comprehensive and Progressive Agreement on Trans-Pacific Partnership (CPTPP)) – which are already binding agreements – to ban coercive practices. Small and large states enjoy benefits from being party to these free trade agreements.

Since these multilateral agreements already contain dispute resolution mechanisms frequently relied on to adjudicate less controversial trade disputes, smaller states should capitalise on these institutions' existing legitimacy and weight. The CPTPP currently bans import and export restrictions (Article 2.10) and has a dispute resolution panel mechanism (Article 28.7) that states can rely on to arbitrate the dispute. Non-compliance allows the complaining party to suspend trading benefits. Should more states decide to use this mechanism whenever cases of economic coercion are observed, as well as enable other state parties to respond in the case of violations, this could be a vital weapon against economic coercion. There are currently 11 states party to the CPTPP, with a total trading value of £9 trillion (Department for International Trade 2021). The UK and China, among others, have applied to accede to the CPTPP since, with other states such as South Korea considering applying for accession. Given the rigorous nature of the CPTPP's legal frameworks, this might be a new 'coalition of the willing' for enforcing fair trading measures with buy-in from some of the world's largest economies. While RCEP lags behind in enforcement mechanisms, it is another useful forum to bring the fight against economic coercion, too. This system should hopefully be more sustainable, piggybacking on the natural incentive of all states to secure freer trade while circumventing the issues of scale and unequal commitment the WTO brings.

III. Establishing New Customs of International Law: The other interesting but significantly longer-term option is to enable economic coercion to be directly examined by international law. This process is certainly not easy; international law is currently hamstrung precisely because there are few recognised customary norms – norms which emerge from consistent state practice and *opinio juris* (the belief that the practice was carried out in fulfilment of a legal obligation) (International Law Commission, 2018). While trade was previously seen as an additional source of income, it is the literal lifeblood of almost every state today. There is an argument to be made to recognise economic coercion as interference in the domestic affairs of another state and a violation of Article 2 (7) of the UN Charter. The right to non-interference stems from the basis of sovereign equality that forms the current international order and protects states' ability to choose their 'political, economic, social and cultural systems, without interference in any form by another state' (United Nations General Assembly, 1970). The International Court of Justice (ICJ) mentioned in the Nicaragua case that any coercion that pertains to a restriction on choice in the above methods constitutes an unlawful intervention (Military and Paramilitary Activities in and against Nicaragua [Nicaragua v. United States of America], 1986). However, the ICJ also highlights, in obiter, that the sanctions

imposed upon Nicaragua were not sufficient to constitute a breach of the non-intervention principle.
It has been nearly 40 years since the Nicaragua judgement was handed down, and it is possible to reopen the debate on whether economic coercion can constitute unlawful intervention. It is possible to see economic coercion if it results in, say, massive losses in income that lead to a reversal of an unfavourable policy decision, as preventing the free choice of a state to engage in foreign policy – or potentially to even self-determine. Economic losses undermine a state's ability to exercise other political freedoms.

What would be required to generate this new custom? States would have to, with near unanimity, speak out whenever there is indeed a case of economic coercion. It is best that they use language found in the 2001 Draft Articles on the Responsibility of States for Internationally Wrongful Acts which allow for acts of reprisals against such wrongful acts. States would also have to respond to coercion as an illegal act, utilising bilateral actions (e.g. issuing note verbales, retaliating in kind, or even withdrawing diplomatic representation) as well as convincing multilateral bodies to take a clear stand on condemning such behaviour. This would be all the more effective if this custom is combined with existing measures and mechanisms in trade agreements or regional bodies (e.g. the EU or ASEAN). Eventually, if this leads to a joint declaration in perhaps the General Assembly – regardless of its legal nature – this diplomatic norm might emerge as an expanded interpretation of the principle of non-interference. States can utilise existing channels, such as the non-aligned movement or the new international economic order to further this cause; the passing of the Charter of Economic Rights and Duties of States in 1974 is already a step in the right direction. Article 4 of the Charter states:

"Every State has the right to engage in international trade and other forms of economic cooperation irrespective of any political, economic, and social differences. No State shall be subjected to discrimination of any kind based solely on such differences."

There is, thus, precedent for expanding the scope of non-interference and the economic rights of states. The development of this field of law will depend on whether nations can find the political will and urgency to mobilise to develop an internationally recognized strategy.

The other key aspect of the legality of economic coercion is overstepping into the domain reserve of states. Economic coercion is only illegal if and when states are unable to exercise their sovereign freedoms (e.g. choose their political systems). Almost all international action, however, is directed at inducing states to change their policy in some form. The withholding of Eurozone funding from Greece until it established austerity measures was a pointed push to change its political and economic organisation. To say that economic coercion is a form of interference, first, it is vital to establish what portions of state action should be free from interference. That is a sorely underdeveloped concept in international law and would benefit from codification, such as that typically done by the International Law Commission. States that wish to push for a more expansive interpretation of economic coercion might benefit from commissioning relevant studies and surveys on this subject.

Conclusion

Bertrand Russell once remarked, 'War does not determine who is right, only who is left.' Unfortunately, with the economy increasingly seen as the next legitimate battleground for states, global development, and uplifting living standards are waylaid in favour of the national interest. While preserving the rules-based trading order is ideal, all beneficiaries must commit to preserving its open, free, and fair nature. It is too early to comment on whether the global economy's future is that of bifurcation. Still, states must ready themselves with the means of responding with a view of creating a new international norm, and deterring states from considering the use of economic coercion, removing it from the realm of acceptable state tools.

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“The Beautiful Russia of Tomorrow”: The Role of International Diplomacy in Achieving Lasting Peace by Supporting the Opposition

By ***Sophie Williams-Dunning, Mariola García-Cañada Candela & Sofiya Mayakina***

“Beautiful Russia of Tomorrow” became a slogan that encapsulates all possible political and social transformations in Russia that would build an open and free society with respect for human rights and freedoms and a commitment to democratic values. “Beautiful Russia of Tomorrow” is not just a wish and utopian vision of a better life for Russian citizens but a way to ensure the security of the entire region and the world order. The full-scale invasion of Ukraine was yet another illustration of how the current political regime in Russia can threaten stability in the post-Soviet space and challenge other states’ sovereignty and the effectiveness of international institutions aimed at containing military conflicts.

The protracted conflict in Europe near the borders of NATO member states calls for a change in communication strategy with the Russian regime. The focus needs to shift from consequences to causes. The establishment of sustainable democratic institutions in Russia and the consolidation of civil society is necessary for the restructuring of the regime and the consequent reduction of security threats. The opposition's status quo and limited agency signify the international community's responsibility and diplomacy to provide a platform for articulating demands and advocating further regime transformation.

The causes of the present conflict in Ukraine are inseparable from the shortcomings of Russian democratisation and development since 1991, a history in which the international community has played no small part. Indeed, academics concur that Western “short-termism”, combined with the actions of Russian politicians and oligarchs, stymied the development of the Russian economy and Russian democracy from the early 1990s (Galeotti, 2023). Condemning the current regime and supporting Ukraine against the Russian invasion is insufficient. In terms of collective security and prosperity, the international community can no longer afford not to invest intellectual and material resources into the question of eventual Russian regime transformation and development after Putin. The international community must reflect on these issues and act to support Russian civil society and the opposition to Putin’s regime, paving the way for an eventual regime change for the better and the transformation of Russian society.

Background

“Beautiful Russia of Tomorrow” illustrates the state of opposition to the existing regime, discursively incorporating hope and sarcastic disbelief in this utopia. Thus, for the first time, Alexei Navalny, one of the most popular opposition politicians, used this expression to campaign for establishing the "Russia of the Future" political party in 2018, uniting other opposition currents formed by the "Democratic Coalition" since 2015. However, the party was never able register, and the politician was subsequently the victim of a poisoning attempt and further imprisoned for nine years which was then prolonged by articles on contempt of court and charges of extremist activity that carry a sentence of up to 25 years. Thus, the unifying idea has come to a grinding halt due to an apparent impotence during the politically motivated arrests of opposition figures.

In addition to these arrests, political motivation has also been attributed to the murders and attempted murders of public figures with influence in political discourse. Anna Politkovskaya, a human rights activist who covered events in Chechnya as a journalist, was shot dead in 2006; eight years later, the perpetrators of the murder were jailed but not the person who ordered the assassination who still remains anonymous. Politkovskaya was also prevented from negotiating with terrorists in Beslan in 2004 when more than 1,000 hostages were held in a school in North Ossetia: She was evacuated from a flight unconscious in the intensive care unit with severe poisoning on the way to negotiate. Moreover, all of her tests were destroyed. Two years after Boris Nemtsov's murder, the perpetrators were jailed, but after eight years, the masterminds have never been punished. Experts have put forward various versions of the reasons for Nemtsov's undesirability. The most common version links this to his position on the Ukraine question after the annexation of Crimea when the politician was in every way against the war. A few days after the murder, he was supposed to be the face of the "Vesna" opposition march. During the same period, the first attempt to poison Kara-Murza was made; after treatment in the US, he returned to Russia, not even fully rehabilitated, to continue his political activities, where he was poisoned again. He is now in custody and facing up to 20 years of imprisonment for "spreading false information" for his speech to the Arizona House of Representatives on the situation in Ukraine. These high-profile cases demonstrate the restrictions imposed on any activity promoting the idea of political transformation. Beyond these publicly known cases, political persecution is imposed on ordinary citizens as well, even though this does not always become widely publicised.

Challenges that the current closed and authoritarian Russian regimes poses globally

Putin's regime – and any equally authoritarian or closed regime that might follow it – poses an enormous threat not only to its neighbours, which were formerly part of the Soviet Union (what Russia considers its 'near abroad,' *blizhnee zarubezhe*), but also to international institutions and to states much further afield.

States which border Russia and which were formerly part of the Soviet Union are viewed by Moscow as part of Russia's rightful sphere of interest, an area within which the current regime systematically violates other states' sovereignty. These states can be threatened by Russian intimidation or influence, annexation, and invasion. Ukraine – a state the current regime views as a rightful part of Russia – has been the most prominent victim of this aggressive foreign policy. Another example is Georgia where the current Russian regime uses its "peacekeeper" presence in the "frozen" separatist conflicts in Abkhazia and South Ossetia to gradually expand the territory it has effectively annexed, all the while stalling Georgia's aspirations to join the European Union through its lack of territorial integrity (Seskuria 2021).

The current Russian regime also poses a threat globally through its malign activity in states that are further afield, notably in Africa, and through its stance in multilateral fora. Since the Sochi Summit of 2019, Putin has re-emphasised the importance of Russia's presence in Africa, establishing a range of new security, trade, and diplomatic ties with countries across the continent. The Russian presence in Africa is partly leveraged by Kremlin-tied private military contractors like the Wagner Group, owned by Yevgeniy Prigozhin, a close ally of Putin. The Wagner Group has had a destabilising effect on countries like Mali and the Central African Republic, where it has contributed to setting public opinion against the UN and aimed to increase regional divisions and instability while also propping up authoritarian regimes through the provision of security services in return for a stake in valuable local economies such as cobalt mining (Ramani 2023).

Putin courts military or authoritarian states like Mali and the Central African Republic partly in order to gain their support at the United Nations General Assembly (UNGA) for resolutions on a range of topics, from the Ukraine invasion to national internet sovereignty and "information security". For example, at the UNGA in February 2023, over a third of the countries which abstained from voting to condemn Russia's invasion of Ukraine were located in Africa, and Mali was even amongst the seven countries, including Russia, which voted against the resolution entirely (Al Jazeera 2023). Even without the support of such states, Russia's position in the UN threatens international law and global security as Russia has used its veto power in the UN Security Council (UNSC) to block policies advocated by other members. For example, the Russian delegate at the UNSC has used its veto power seventeen times since 2011 to prevent the UNSC from intervening to protect Syrians (Croker 2022).

Putin's foreign policy has a destabilising effect around the world. Under the logic of the current regime's foreign policy, Russian delegates at the UN act as blockers to liberal democratic values in international relations, reducing the ability of institutions like the UN to protect and advance global development and security.

Policy Recommendations

I. The international community should uphold Ukraine's territorial integrity and punish all war criminals while avoiding economically punitive measures that counter democratisation in Russia:
The Russian invasion and the numerous military attacks committed on Ukrainian grounds that have cost the lives of thousands of civilians have generated strong insecurity towards the latter's territorial integrity. The international community should commit to upholding Ukraine's territorial integrity and punish the criminals responsible for the war. This first policy recommendation demands the international community focus on punishing war criminals while avoiding economically punitive measures that would most likely negatively affect future democratisation efforts in Russia.

First and foremost, the international community should protect the territorial integrity of Ukraine by all means. The Russian Government's territorial annexations of certain territories that belong to its neighbouring country should be publicly categorised as clear violations of international law as leaving such actions unpunished would motivate future conflicts and decrease the power of law in the international arena (United Nations, 2023). Furthermore, upholding the territorial integrity of the Ukrainian territory is also necessary to achieve peace and prosperity in the region.

Secondly, it must be ensured by the international community that war criminals are judged for the atrocities committed. To ensure real justice is served, as the perpetration of unlawful acts is not limited to Russia, both sides should be held accountable for the crimes committed (Baylis, 2022). The International Criminal Court should be the responsible organ leading the prosecution of war crimes committed by all parties during the Ukrainian war. Nevertheless, a key point that should be considered is that punitive measures countering the deterioration of democratisation in Russia, like economic sanctions, should be abstained. Economic sanctions could boost authoritarianism in Russia and polarise the region, creating unintended consequences that would deteriorate the war in the long run (Ambrosio 2013). As the democratisation of the Russian territory should be the first long-term goal the international community should pursue, the imposition of economic sanctions, which could increase tensions within the population, should be limited.

The legal principle of individual responsibility also needs to be considered as charging the Russian population with crimes will not benefit the development of affairs. Those responsible for committing war crimes should be the only individuals punished to eliminate any possible advantage they could achieve from the conflict (Vukovik 2014). Sanctions would be more effective in the long run if only those who support the invasion of Ukraine were targeted by the international community while democratic and peaceful forces in the region were supported.

The international community is responsible for upholding Ukraine's territorial integrity and judging the criminals involved in the Ukrainian War. But as it has been argued, a special focus should be made on avoiding economic measures that could deteriorate the democratisation of Russia in the long run. In this way, the international community should cooperate to restore peace and achieve justice in the region.

II. The international community should invest intellectual and material resources into supporting freedom of information and the development of civil society in Russia: Russian citizens accessing accurate information about Putin, his regime, and the war in Ukraine is a prerequisite for developing a Russian civil society that opposes authoritarianism. Although both freedom of information and freedom of thought are guaranteed in the Russian constitution, Putin's regime has been systematically eroding press freedoms since the mass protests against his regime in 2011-2012. The crushing of independent media in Russia culminated in early 2022, when the regime began an initiative to charge independent journalists as "foreign agents", triggering a mass exodus of independent journalists from the country. Within weeks of the invasion, Putin's regime moved to block access to over 5000 websites from within Russia, including Twitter and Facebook, and introduced a law threatening fifteen years imprisonment for anyone found guilty of spreading "false information" about Russia's "special military operation" in Ukraine (Shahbaz, Funk, and Vesteinsson 2022, 5) Nevertheless, there

are ways in which the international community can support the resurgence of independent media and civil society in Russia in the future. Firstly, international bodies like the UN should amplify efforts of NGOs like Reporters without Borders which helps independent Russian journalists continue producing Russian-language news about the war from their "offshore" bases, for instance in Lithuania (Balakhonova et al. 2022).
Secondly, the international community should consider creative technologically-implemented solutions to Russia's lack of media freedom. With conventional independent media driven out of the country, reports suggest that many Russian citizens have turned to social media to access information. For example, the number of subscribers on Telegram of 16 independent news outlets rose by 219% from February to June 2022 (Balakhonova et al. 2022). Projects such as "Beating Putin using Digital Advertising" have demonstrated what can be achieved by thinking creatively about subverting the regime's digital barriers to freedom of information. The project uses paid advertisements on various internet platforms still available in Russia to show over 450 million "adverts" countering state disinformation about the war in Ukraine to Russian citizens (Blackie 2022).

Thirdly, regional institutions like the European Union should consider developing a joint approach towards independent journalists, opposition leaders, and anti-regime activists fleeing Russia, ensuring they benefit not only from visa access and support but also from the implementation of an international European network of pro-democracy Russian thinkers, building on the efforts of pre-existing groups such as the Russian Democratic Society in the UK to build a movement for democratic transition "in exile".

III. The international community should focus on the de-oligarchisation of Russia by creating a full and holistic sanctions regime and fully and permanently divesting from the industries that support oligarchical power in Russia, such as oil and gas: The war in Ukraine and Russia's aggressiveness serves as a reminder to the international community to act by eradicating the oligarchic system that has boosted corruption and violence in the Russia. This last recommendation of this policy paper will, therefore, advise the international community to prioritise the de-oligarchisation of Russia by developing a sanctions plan committed to despoiling industries, such as gas and oil, that empower the Russian oligarchy. Sanctions posed by the international community on Russia have been unable to address the root causes of the conflict, motivating greater instability in the region due to the fact that the oligarchic system has been strengthening its support among the population in response to the global and general scope of the sanctions imposed (Gurganus 2017). This is why the authors of war crimes should be targeted and held responsible for the war in conjunction with industries that motivate the Russian oligarchy.

The international community has the power to weaken the oligarchy in Russia by divesting the oil and gas industry, as the control of these sectors by the oligarchs has strengthened their wealth and power (Taylor, 2019). The divestment of such industries would generate a moral and economic effect that would accelerate a change in the region (Kuznetsov 2018). Greater investment could be made in renewable energy sources, fostering the development of renewable strategies that would aid in the transition towards a more sustainable planet. In sum, the international community should prioritise the de-oligarchisation of Russia by sanctioning such practices and divesting from industries like oil and gas that empower oligarchy in the region. The international community should collaborate to develop the appropriate sanctions and address the specific industries that most powerfully trigger the oligarchical system in Russia.

Conclusions

The Russian invasion of Ukraine has outlined the need to achieve democratisation in Russia to create a secure and stable international system. The international community must empower the idea that upholding democracy in territories like Russia is necessary to achieve long-lasting peace. Democratic values in Russia would motivate friendly relations with its neighbouring countries and further satisfy the needs of its population, decreasing the current aggressiveness that characterises the region. All in all, democratic countries tend to be less prone to wars and more engaged in peaceful practices.

In order to achieve democracy in Russia, domestic and international actors should collaborate to ensure the process is sustainable in the long term. The international community's power could aid Russia in becoming a democratic country by facilitating assistance and support in the process. In addition, it is important to note that the international community should aid Russia in tailoring the democratisation process to its needs. There is no clear path for all countries; each state's specific characteristics must shape this.

In sum, the war in Ukraine has demonstrated that the democratisation of Russia is vital to achieving peace in the international sphere. The ongoing atrocities committed in the war demonstrate the urgency of the international community's involvement in supporting this transition to democracy in Russia. This is why, to succeed in achieving peace, the international community should cooperate and collaborate between each other and with local actors in the region to seek the most suitable solution to democratise Russia.

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Education

UK universities after Brexit: What comes next for students, research, and exchanges?

*By **Zeki Dolen** &*
Inés Werneck Arencibia

The exit of the UK from the European Union has brought with it many changes for universities and European students in the United Kingdom, particularly in three key areas: fees and access to UK universities, research opportunities for the UK and exchange programs between both regions.

On the first point, a new set of conditions for EU and European Economic Area (EEA) students looking to study in higher education institutions in the UK has been introduced. Since the 2021/2022 academic year, European students have lost their eligibility for home status and became international students, meaning their tuition fees have gone up from £9,250 to anywhere between £10,000 to £30,000 depending on the course and university. Additionally, European students coming to the UK are no longer able to apply for tuition fee loans from the UK Student Loans Company (Bhardwa, 2022).

In terms of changes to immigration regulations, the Brexit has effectively ended free movement into the UK for Europeans and vice versa. European students looking to study at a British university now need to apply for a student visa (UK Government, n.d.-b); its duration will usually be limited to the duration of the course (for courses over 12 months long) and an extra four months (University of Nottingham, n.d.). After graduation, however, most international students are eligible for a graduate visa which allows them to stay in the UK for a further 2 years so they can look for employment and are able to apply for a work visa (UK Government, n.d.-a). Visa application fees and the Immigration Healthcare Surcharge can bring the cost to a student visa to more than £2,000 (University of Cambridge, n.d.).

As for research, the UK is no longer a participant in European research programs which provided funding and opportunities. Additionally, the new and more difficult requirements for EU students seeking to study in Britain has affected the number of EU postgraduate research students coming into the country. Similarly, when it comes to exchange programs, the UK has also abandoned the European Erasmus+ program and substituted it for the Turing scheme. However, as will be discussed in more detail below, this new program has so far failed to successfully replace the European alternative.

These new challenges facing UK higher education, as explored in the following sections, are harming British universities through a loss in diversity, talent attraction and research opportunities; the political and economic break-up caused by Brexit has also led to a cultural and educational separation. Upon analysing these challenges and their implications, we propose three sets of policy recommendations corresponding to the three key areas as a response to these challenges.

The current landscape of higher education in the United Kingdome

Reduction in EU students. The change in conditions for EU students outlined above have led to a 40% drop in EU applicants to UK universities and a reduction of 50% of European students being accepted into UK universities between the years 2020 and 2021 (Forrest, 2022). For context, the reduction in enrolment of EU students is comparable to the drop in enrolment of British students that followed the increase in tuition fees in 2012 (Amuedo-Dorantes & Romiti, 2021a).

The drop in applications from the EU has been most significant in countries with higher unemployment rates and more debilitated labour markets as the possibility of working in the UK after graduation was one of the main deciding factors. The changes in visa requirements have thus disincentivised these students from choosing the UK as a destination because the prospects for staying in the country post-graduation are much less secure. This decrease in EU applicants has also been more noticeable in STEM degrees and for more selective universities (Amuedo-Dorantes & Romiti, 2021b).

There has, however, been an increase in applications and enrolment of US students, while China and India continue being the two biggest exporters of international students to the UK (Forrest, 2022). In this way, the extent of the loss of revenue for universities as a result of Brexit is highly dependent on the university's reliance on EU students and whether they have been able to compensate with higher numbers of students from outside the EU.

This decrease in EU students coming to study and later work in the UK will also have considerable effects on the UK's economy more broadly. As the UK's population ages, EU students coming into the country and staying long-term provided the economy with an inflow of young workers. Now, however, the difficulties for obtaining long-term visas could seriously harm the UK's economy as there are not enough young people entering the workforce to make up for the population's age imbalances (Amuedo-Dorantes & Romiti, 2021b).

The impact of Brexit on the UK's research landscape. The most significant consequence of Brexit for the UK's research landscape has been its impact on the UK's participation in EU research programmes. With a budget of €95.5 billion, Horizon Europe is the EU's most important research funding programme for the funding period 2021-2027 (Fella et al., 2022). The UK was a net recipient of its predecessor, Horizon 2020, from 2014-2020 from which it received 12.1% of the total funding despite contributing only 11.8%, while its association with Horizon Europe, along with the smaller programmes Euratom and Copernicus, was agreed upon in the Trade and Cooperation Agreement in 2020[11]. However, the EU refused to agree to the UK's associate status on the grounds that it failed to ratify the Northern Ireland Protocol. Although the ratification of the Windsor framework in March 2023 has removed the most significant obstacle to the UK's association with the programme, negotiations are ongoing (Brent, 2022). The key issues at stake are the UK's contribution, given its exclusion from the first two years of the programme, and the UK's apparent desire to include only certain pillars of the Horizon Europe programme in its association (Zubașcu, 2023c). The apparent ambivalence of Rishi Sunak towards Horizon Europe association further complicates matters (Zubașcu, 2023a).

In the intervening period, UK researchers have been relegated to third country status in relation to Horizon Europe, enabling them to take part in consortia, but only if they bring their own funding to the project and the consortia features three applicants from EU or associate countries(Fella et al., 2022).. Third country participants are also unable to coordinate consortia, and institutions in third countries cannot host European Research Council and Marie Skłodowska-Curie Actions fellowships (Cavallaro, 2022). The government's Horizon guarantee, extended to the end of June 2023, has ensured that successful applicants to Horizon Europe will receive their funding for the lifetime of their grants from the UK Government (Donelan & Freeman, 2023).

Nonetheless, the uncertainty regarding the UK's relationship to Horizon Europe has damaged its relationships with EU institutions and researchers. The UK's participation in Horizon Europe projects has fallen dramatically: From being home to 9.8% of Horizon 2020 participants to 4.9% of Horizon Europe participants as of February 2023 (Papatsiba, 2023). This risks top UK universities losing their central position in the international scientific network, and has driven some universities to open branch campuses in Europe or organise research partnerships with European universities, in the hopes of retaining access to European Research Council grants for UK researchers (Muzaka, 2020; Kleibert, 2020).

The uncertainty has also contributed to the fall in the number of EU researchers based in the UK. The number of academic staff from the EU declined from a peak of 38,115 in 2019/20 to 37,590 in 2021/22, with the number in biological, mathematical, and physical sciences falling from 7,680 to 7,280 over the same period (Higher Education Statistics Agency, 2023b). This decline in EU postgraduate research students has been even starker, with the number of postgraduate students from the EU in their first year falling steadily from 4,650 in 2017/18 to 2,260 in 2021/22 (Higher Education Statistics Agency, 2023a). This weakens the UK's research pipeline in disciplines at the heart of the UK's research and innovation agenda, such as physical sciences, maths, computer science and engineering, where EU PGR students in 2016/17 represented over 15% of the total research student population (Highman & Marginson, 2018).

Taken together, the failure to associate with Horizon Europe poses a real threat, not just to funding for research in the UK but also to the valuable partnerships and networks UK universities had formed with counterparts in the EU.

Study abroad programs: Erasmus and Turing. The final area in which Brexit has had a significant impact on the UK's higher education landscape relates to the UK's decision not to participate in the Erasmus+ programme which funds international mobilities both within and outside of the EU for higher education, further education, school and youth group students and staff. Although the UK government initially promised to retain the UK's association with Erasmus+, it subsequently went back on this on the grounds of value for money (Lewis, 2022).

In its place, the UK launched the Turing Scheme. The Turing Scheme also provides funding for international mobilities for higher education, further education and school students (though not staff or youth group members) but with a stronger global emphasis than the Erasmus+ scheme. Its core objectives are to promote Global Britain, develop key skills, widen participation and support the levelling up agenda, and provide value for UK taxpayers. In its first two years of operation, the Turing Scheme has had some success, funding 41,024 participants in 2021/22 and 38,146 in 2022/23, with 48% and 52% of those participants, respectively, coming from disadvantaged backgrounds (Lewis, 2022, p.18).

However, a number of the Turing scheme's limitations have come under criticism. Whereas the Erasmus+ scheme funds both inward and outward mobility, the Turing Scheme only funds the mobility of UK students to other countries. Doing so on the grounds of value for money adopts a particularly narrow view of the benefits obtained from student mobility. Moreover, in spite of this, the Turing Scheme provided £22 million less in funding overall in 2022/23 than the UK received in its last grant from Erasmus+ in 2020 (McBride, 2023).

Additionally, while the Turing Scheme helps students going on study or work placements to cover some travel and living costs, it does not fund tuition fees as the expectation under the scheme is for universities to agree on tuition fee waivers bilaterally. This is easier said than done and has resulted in administrative problems for students. Students have to secure places in the foreign institutions they want to study at before they can apply for Turing funding and before it is clear that this funding covers the cost of tuition which leaves many students unsure about whether to pursue a study abroad programme (McBride, 2023). Under Erasmus, by contrast, students were informed of whether they would receive money and how much in advance, giving students much greater confidence in their financial security.

While the Turing scheme is welcome as evidence of the UK's continued commitment to international openness and student mobility, it is also clear that it is not achieving its full potential. Some modifications are, therefore, necessary to limit the negative consequences of these limitations both on British students' opportunities for studying abroad and international students' opportunities for studying in Britain.

Policy Recommendations

I. Alternative funding: EU scholarships and shared funds to allow student mobility between the EU and UK, especially for students of lower socio-economic backgrounds: As we have discussed above, the main hindrance EU students are facing as a result of Brexit is the considerable increase in costs for tuition and visas and the removal of access to Student Finance loans, consequences which disproportionately affect students of lower socio-economic backgrounds. This seriously harms the diversity and talent attraction capacity of UK universities, but also the UK's economy as a whole, as attracting young students who can stay in the UK after graduation helps compensate for the UK's ageing population.

The first option through which UK higher education can offset the reduced number of EU students is the creation of permanent EU scholarships at UK universities. Universities like Lancaster University or UAL (University of the Arts London), among others offered such scholarships for the academic year after Brexit came into full effect in order to mitigate its effects (The Scholarship Hub, n.d.),. Creating more scholarships like these, which can be funded by the universities themselves, donors or alternative sources, can help those institutions which are highly dependent on EU students recover some of the pre-Brexit numbers. While this measure would be costly, an option is to do as Coventry University does, which is to offer EU students a partial scholarship which offsets the fee increase caused by the loss of home status (Coventry University, n.d.). This option, while perhaps not attractive for universities that have managed to make up the loss in EU students through more international enrolments, might be worth it for the more EU-dependent institutions that have lost significant levels of diversity and talent. UK private companies which also rely on European workforce and talent could also consider investing in these scholarships for their own future gain.

The second policy recommendation is the creation of shared funds between the UK and the European Union. Now that EU-UK relations have considerably improved, the creation of public or private shared funds can help the two regions create flows of university students on a more long-term basis (Bergsen et al., 2023). These shared funds can provide scholarships for EU students to study in the UK and vice versa and they can be need-based so as to promote social mobility. This alternative would also be less costly for UK universities than the EU scholarships proposed above, as they would not be paid for by universities, or at least not exclusively.

A combination of both these options, especially if both private and public funding can be obtained, this could be an effective way of attracting more EU students to the UK, especially those who are not able to afford it with the new post-Brexit conditions. As mentioned, this would be beneficial not just for the UK's higher education diversity and talent attraction capacity, but also for the country as a whole.

II. Improving the Turing scheme:

Although we welcome the Turing scheme as an indication of the UK's continuing commitment to student mobility after Brexit, it falls short – of the Erasmus+ scheme that was its predecessor, of the Welsh government's Taith scheme, and of its own core objectives – in a number of important ways. We, therefore, believe that a number of significant improvements can be made.

A. Improved funding

Whereas the UK National Agency's Erasmus+ scheme budget for decentralised activities had been over £200 million for both 2019 and 2020, the Turing scheme provided only £98 million for 2021/22 and £106 million for 2022/23 respectively (Lewis, 2022, p.33). Although Erasmus+ funded activities that the Turing scheme does not cover, such as youth workers and staff mobility, it is nevertheless concerning that the Turing scheme provides less funding than Erasmus+ did in 2019-2020, given that the total budget for the Erasmus+ scheme has increased from €14.7 billion for 2014-2020 to €26 billion for 2021-2027 (Lewis, 2022, p.32). It is also concerning that the funding provided by the Turing scheme to the higher education sector specifically has fallen from £67 million in 2021/22 to £62 million in 2022/23, resulting in participant numbers declining from 28,997 to 23,233.

We, therefore, recommend that the UK reverse this decline, instead increasing the overall budget for the Turing scheme by 78%, in line with the increase in the Erasmus+ scheme's budget, in order to enable the Turing scheme to better achieve its ambition of promoting Global Britain. This would allow the government to address the discrepancy in living cost grants available through the Erasmus+ scheme and the Turing scheme for placements over eight weeks. Whereas the Erasmus+ scheme provides students going to a country with similar living costs between €292 and €606 per month, with an additional €250 available to participants with fewer opportunities, the Turing scheme only offers students travelling to countries with a medium cost of living £335 per month, with an additional £110 available for disadvantaged students (European Commission, 2022, p.70; Turing Scheme, n.d.; p.58). Increasing these grant levels would improve the Turing scheme's ability to widen participation, another of its core objectives, by addressing rising costs of living across the world.

B. Introduce reciprocity

The Turing scheme only supports outward, rather than inward, student mobility. We believe this is a missed opportunity for a number of reasons. First, the Turing scheme does not provide funding for tuition fees, instead relying on higher education institutions to make bilateral tuition fee waiver agreements with their counterparties abroad. Introducing reciprocity would make it easier for HEIs to conduct these agreements, as both parties would have something to gain (Cardwell, 2021; Guibert & Rayón, 2021). Second, as Chatham House has noted, allowing only outward mobility undermines the soft power benefits that the Turing scheme brings to the UK. Students who spend a year on exchange in the UK are likely to feel more positively towards the UK, providing unquantifiable benefits in the long run as these students go on to become researchers, government officials and industry leaders (Horton & Fras, 2021). Finally, the exclusion of inward mobility deprives the UK of the economic stimulus that students spending a year in the UK would provide to local economies (FE NEws, 2020). Therefore, we recommend that the Turing scheme follows the example of Erasmus+ and the Welsh government's Taith scheme and provide funding for inward as well as outward mobility.

C. Change funding timelines

Recent reports indicate that the Turing scheme's adoption of an annual funding cycle has caused issues with students waiting until very late, indeed sometimes after their placements have begun, to receive confirmation that they will receive funding (Staton & Foster, 2023). This creates significant uncertainty despite students having to plan their mobilities well in advance, which has a greater impact on students from disadvantaged backgrounds. We, therefore, recommend that the Turing scheme change to a multi-year funding cycle, to give both universities and students greater certainty that they will have adequate funding for their mobility projects (Stacey, 2022). This would also provide the higher education sector with greater certainty on the future of the Turing scheme, which is currently due to be subject to the 2025 spending review.

D. Rethink value for the taxpayer

The decision to outsource the administration of the Turing scheme to Capita on a 23 month contract in December 2021 was a mistake. Although Capita's bid of £6.2 million was the lowest of all bids tendered, it is questionable whether it represents true value for money. Capita has a chequered history when it comes to public service contracts, with the Ministry of Defence having expressed concerns with its performance on contracts for army recruitment and retention of firefighters, whereas the British Council has experience of running the UK's participation in Erasmus+ since 2007 (Sabbagh, 2022; Lewis, 2022). We, therefore, recommend bringing the administration of the Turing scheme back into the hands of the British Council at the expiration of the present contract, as this is more likely to represent value for the taxpayer.

E. Making the UK a more attractive research partner: Horizon Europe association

The House of Lords Science and Technology Select Committee noted in an August 2022 report on the UK Government's ambitions to become a 'science and technology superpower' that the Government had undermined the UK's 'reputation and scientific capability as its 'actions have made the UK appear unreliable and unwelcoming'. As a result, the 'science and technology superpower' ambition risks being little more than an 'empty slogan' (House of Lords, 2022a). The Education Policy Centre, therefore, recommends a number of changes to translate the Government's lofty rhetoric into reality and make the UK a more attractive research partner and destination.

The UK government has attempted to address the uncertainty caused for researchers and universities by the failure to agree with the Horizon Europe association by providing details on its alternative, known until recently as 'Plan B' and since 6 April 2023 as the 'Pioneer' programme. Pioneer offers UK researchers £14.6 billion in research funding – the same amount that the UK would have contributed to Horizon Europe under the trade and cooperation agreement, but with all the funding going to UK researchers, whereas the UK is not anticipated to be a net recipient of Horizon Europe funding (Pioneer, n.d.). Pioneer would also offer additional funding for UK research infrastructure as well as unlimited funding for third country participation in Horizon Europe projects and opportunities for global collaboration.

Such a commitment to increased research funding from the UK government is valuable on its own terms. As the Nurse review of the UK's R&D landscape shows, the UK lags far behind other OECD countries in terms of government funding of research and development, at 0.46% in 2019, well below the average of 0.6% (UK Government, 2023). This means that UK universities increasingly have to rely on income from international student fees to cross-subsidise research, which undermines the sustainability of funding for research in the UK as this income is by no means guaranteed (UK Government, 2023). Insofar as the Pioneer programme contributes towards the announced increase in public R&D investment to £20 billion by 2024/25 and represents a change in policy when compared to the Treasury's recent clawback of funding earmarked to go towards the UK's contribution to Horizon Europe, it should be welcomed (Morgan, 2022; Morgan 2023).

But as various higher education sector organisations have pointed out in response to the government's announcement of the Pioneer scheme, what is at risk from a failure to associate with Horizon Europe is more than just research funding: It is the UK's centrality as a research hub and its research pipeline (Zubașcu, 2023b). Pioneer's offer of unlimited funding for third country participation in Horizon Europe projects would still leave the UK a peripheral partner, as the UK would remain unable to coordinate consortia. It is therefore no surprise that Sir Paul Nurse, in his review of the UK's R&D landscape, stated that 'it is essential that the UK associates with Horizon Europe', and the Education Policy Centre, therefore, notes with concern the fact that the UK's Science and Technology Framework makes no mention of Horizon Europe association (UK Government, 2023; Department for Science, Innovation & Technology, 2023).

We, therefore, recommend that the UK agree Horizon Europe associate status as soon as possible, to put an end to the ongoing uncertainty around the UK's European research partnerships. While the emphasis on global collaboration in the Pioneer programme and the commitment it represents to increased research funding even outside of the EU is welcome, it cannot act as a substitute for Horizon Europe funding and the maintenance of the UK's well-developed research networks within Europe. Instead, the two programmes should coexist, with a (potentially smaller) Pioneer programme being a key part of the UK's commitment to increased R&D spending by 2024/25 and of its strategy for becoming a 'science and technology superpower' – but alongside continued Horizon Europe association.

However, partnerships are about international mobility just as much as research networks between universities. In this regard, the UK's visa system should be changed to make the UK more welcoming for international research students and academics, as some evidence suggests that the costs of the existing system are putting off international researchers. For example, skilled worker visa applications from international researchers have fallen 18% for the period July-September 2022 and in the same period in 2021, although the existence of alternative routes such as the global talent visa suggests that these numbers do not paint the whole picture (Jack, 2023). Nonetheless, evidence from representatives of higher education institutions and the UK Research and

Innovation at a House of Lords Science and Technology Select Committee Hearing indicates that this trend does reflect reality. Although the global talent visa has helped retain international talent, the upfront nature of many visa costs, particularly the health surcharge, dissuade researchers from coming to the UK, as the costs are lower and spread out over the duration of the visa in other countries (House of Lords, 2022b). We, therefore, recommend that the UK government ensure that the costs of visas and the health surcharge are reduced, and that the payment of these costs should be spread over the period of the visa, rather than all falling upfront.

Conclusion

The UK's exit from the European Union has led to big changes in the requirements and conditions European students need to meet if they wish to pursue higher education in the United Kingdom. As a direct result of this, the number of EU students in the UK has dropped significantly following Brexit, a certainly harmful consequence for not just the country's and its universities' diversity, talent attraction and research capacity, but also for the UK's economy as the inflow of young students and professionals from Europe helped balance the UK's ageing population. Now that UK–EU relations have improved, we consider through our recommendations that it is time for Britain to examine the impacts Brexit had on higher education and bring back a more collaborative approach with the European Union while also taking action internally in order to mitigate the negative effects Brexit has had on the UK's higher education landscape.

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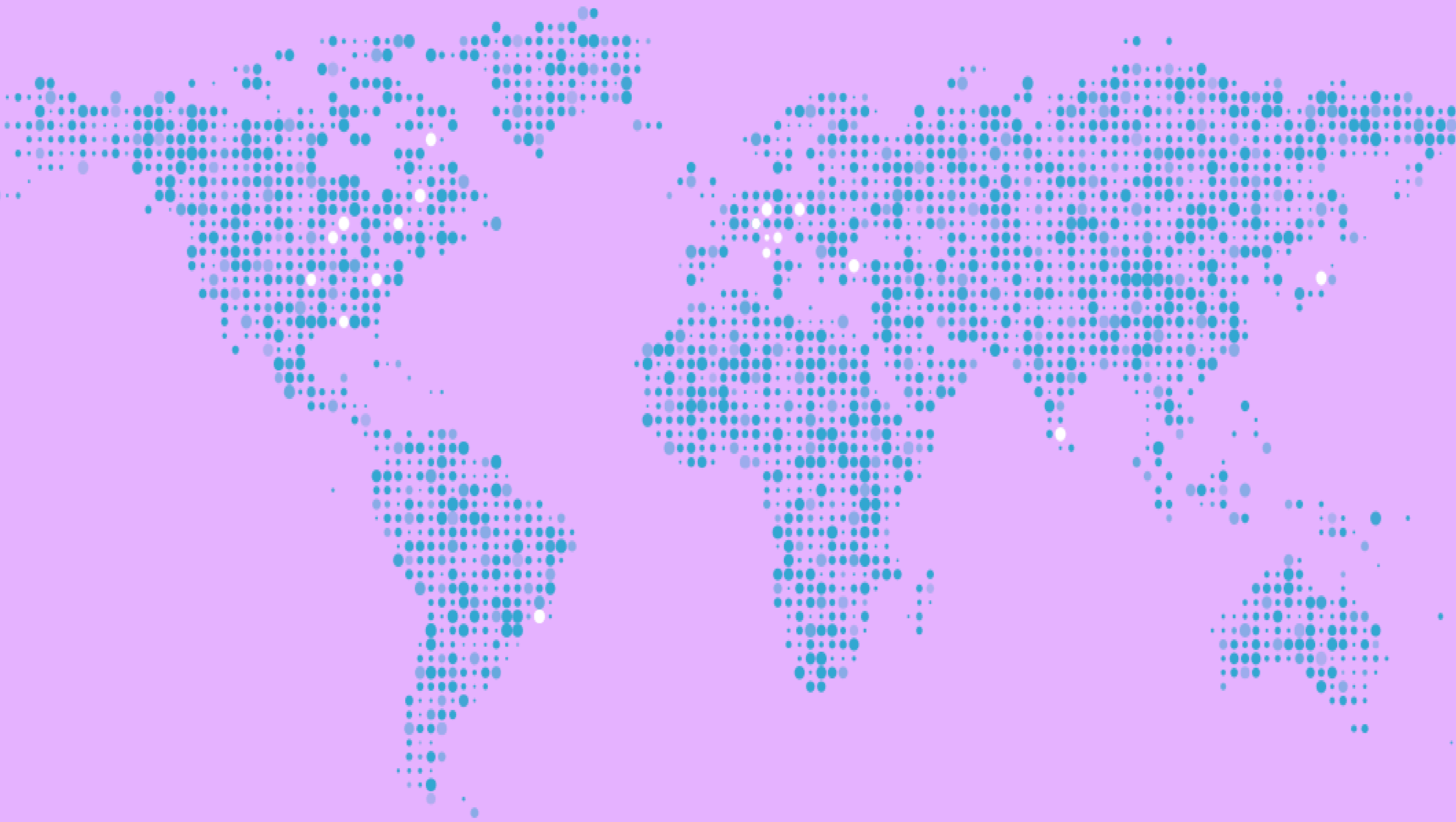
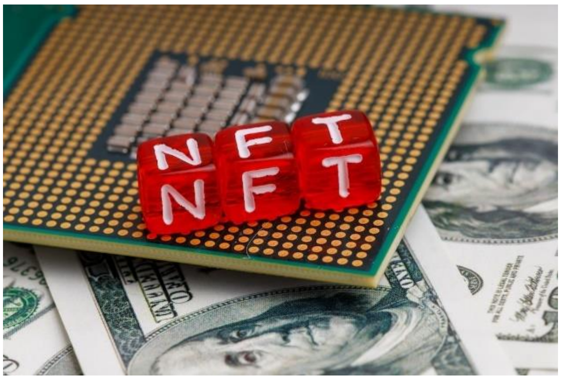
Technology & Innovation



Are NFTs Funding Terrorism?

*By **Astrid de Rohan Willner***



The emerging global Non-Fungible Token (NFT) market is at risk of being used as a terrorism funding and money laundering tool. It is an open, unregulated and decentralised market. This means it could allow fraudulent and terrorist-affiliated users to participate in the trade of NFTs, which could be used as a way to finance terrorism-related activity. NFT transactions are peer-to-peer, pseudonymous, and can be cross-border. This means that no financial institution – such as a bank – is involved in the transaction of an NFT. Instead, NFTs can be bought and sold through private distribution networks also known as online NFT trading platforms where buyers and sellers can connect. During the transaction of an NFT, funds are directly transferred from buyer to seller (peer-to-peer) through cryptocurrency. Individuals involved in the transaction do not need to submit to any form of identity as there is no verification process to access international trading platforms. Funds can therefore be transferred across borders in seconds, allowing terrorist organisations and affiliates to transfer, store and raise funds without facing the scrutiny of a centralised trading platform or regulated market.

To combat this threat, this paper recommends creating specific regulations for NFT trading platforms, to protect individuals involved in the trade of NFTs, as well as mitigate the risks of money laundering and terrorism financing. Firstly, we suggest subjecting NFT trading platforms to Know Your Client (KYC) regulations. This would mean users would have to verify their identity to be able to access these platforms, as well as prove the source of the funds linked to their account (in this case their cryptocurrency wallet) is legitimate. Secondly, we suggest subjecting these trading platforms to Anti Money Laundering (AML) and Combatting the Funding of Terrorism (CFT) regulations. This implies NFT trading platforms would have to keep records of transactions, file reports for any suspicious activity or potential violation of AML/CFT regulations and conduct due diligence. This will mitigate the risk of money laundering, and terrorism financing through the NFT market.

Background

NFTs are one-of-a-kind digital assets which use blockchain technology to establish their legitimacy, ownership, and transferability. They are created through a process known as “minting” in which the NFT’s information is stored on a blockchain and is issued a unique identifier that is directly connected to a blockchain address. Since NFTs are part of a cross-border and pseudonymous market, implementing uniform regulations and transaction tracking is incredibly difficult. There is no governing body which oversees NFT-related transactions, unlike most traditional markets. **The NFT market is currently unregulated** and is not subject to any AML or CFT laws and regulations.

In the United States, the Financial Crimes Enforcement Network (FinCEN), does not currently recognise NFT marketplaces as "financial institutions" and, therefore, does not subject them to the Bank Secrecy Act (BSA), or any AML/CFT laws or regulations. For certain established financial institutions, transactions over $10.000 must be filed through Currency Transaction Reports. This is not the case for NFTs. Approximately 10% of NFT transactions are over $10,000, representing a large part of the market, yet these are not tracked or reported, and cannot be linked to any identified individual. Additionally, there is no protection for individuals who trade, create or invest in NFTs. The 2022 FinCEN Risk Assessment Report fails to mention NFTs once, which shows a lack of focus on this matter and highlights the vacuum of financial oversight in the market.

NFT trading platforms, therefore, are not obligated to follow any AML/CFT regulations. Platforms such as OpenSea run on a Do Your Own Research (DYOR) basis, meaning users are not protected by any security checking or identity protection during their transactions. Users must ensure their own protection and security and verify the users they are interacting with at their own cost. NFT platforms do not take any responsibility for ensuring their services are not accessed and used by sanctioned or fraudulent users. The creation of an account on OpenSea, one of the biggest NFT platforms, only requires the association of a pre-existing blockchain address and a third-party crypto wallet. Hence, once a terrorist organisation gains access to such trading platforms, they could easily partake in the investment, trading and even creation of NFTs.

With a market value of **over $40 billion** by the end of 2021 and an expected annual growth rate of 22.82%, the NFT marketplace could be seen as an attractive investment opportunity for terrorist organisations and their affiliates. With over $8 million in illicit funds laundered through NFTs since 2017, this marketplace has already started to become a hub for money laundering and could potentially open up to terrorism financing. Individuals are able to launder money through the NFT marketplace by using "wash trading". Wash trading is when an individual poses as both the seller and buyer of an NFT, this makes it appear as though the asset is highly valuable and sought after. By doing so, users can create a profit from artificial demand, or transfer funds between accounts without the transaction seeming fraudulent. In most traditional markets, this practice is illegal as it distorts market prices and demand levels and misleads the rest of the market to trade based on fake information. However, in the NFT marketplace, it is a practice that is yet to be prohibited, leaving a large gap for money laundering and terrorism financing.

In August 2022, a pro-ISIS supporter "minted" an NFT, meaning it was created and published on at least one official trading platform. The NFT named "IS-NEWS #01" glorified a terrorist attack led by the Islamic State Khorasan (IS-K) in Afghanistan and bared the ISIS logo. There have been over 100 instances of ISIS-related content appearing on NFT trading platforms. The issue is these images cannot be removed, as they are permanently etched into a near-indestructible blockchain. This is another weakness of the NFT marketplace which could make terrorist-related propaganda nearly impossible to remove from the internet. In June 2022, a sanctioned individual and supporter of the Russian Imperial Movement (RIM), a US-designated white supremacist terrorism group, was also found to have listed a collection of NFTs on OpenSea in an attempt to raise funds to support Russian fighters in Ukraine. While there are limited cases of terrorism-related transactions recorded in the NFT marketplace, the lack of financial oversight it faces could mean we are missing the bigger picture. As the examples listed above show, terrorist organisations are looking into ways of exploiting this emerging market, and even if it may not seem like a current substantial threat, the NFT marketplace's weaknesses make it incredibly vulnerable to potentially larger cases of terrorism financing and money laundering in the future.

The NFT market's nontangible and cross-border aspects mean it could give terrorist organisations and affiliates the ability to store, invest and trade funds without having to physically move any assets, unlike the sale or acquisition of any tangible item, such as in the Fine Art market. The Fine Art market is similar to the NFT marketplace in the fact that it has incredibly limited regulations, and has known cases of money laundering and sanctions evasion, as well as terrorism financing. Two of the main setbacks that bad actors face in the Fine Art market are the physical transfer of items and the presence of a financial institution subject to BSA regulations in the transaction process. The removal of both these aspects in the NFT market creates more fluidity in money flows, blurring the lines between raising, funding and transferring funds. The vulnerabilities we are seeing in the Fine Art market are, therefore, amplified in the NFT marketplace which is of great concern.

Policy Recommendations

To address the terrorism financing and money laundering concerns related to NFTs identified throughout this paper, we recommend:

I. Subjecting NFT trading platforms to KYC standards: Know Your Client standards, also known as identity verification, would oblige NFT trading platforms to verify the identity of their users as they attempt to join. This would mean verifying IP addresses, cross-checking watch and sanctions lists, and requiring customers to submit detailed proof regarding the source of their funding. This would mitigate the risk of sanctioned individuals and terrorist affiliates gaining access to the NFT market.

II. Subjecting NFT trading platforms to AML/CFT laws and regulations: As mentioned throughout the paper, the NFT marketplace is not currently subject to any AML/CFT laws and regulations. Their implementation would make these platforms safer and mitigate the risk of money laundering and terrorism financing. This would mean trading platforms would have to monitor and secure their system. This would include regular data screenings of users, tracking of large transactions (over $10,000), and reporting of suspicious behaviour. Since NFT platforms are cross-border, a single government's regulations will not completely secure the market but could significantly reduce its vulnerabilities. Including the NFT marketplace in multilateral trade agreements could also facilitate the creation of standardised global regulations.

III. Improving private sector information-sharing programs to promote transparency among NFT market participants: This could be established through the creation of a secure and confidential information-sharing platform which would allow stakeholders involved in the NFT market to report suspicious activity, and share information related to specific transactions, buyers or sellers. Through the use of advanced analytics and data mining techniques, suspicious patterns and transactions can be identified. These results could then be shared with law enforcement and international legal entities such as the International Association of Financial Crimes Investigations (IAFCI). This would promote greater transparency and collaboration and could help identify and prevent illicit activities in the NFT market.

Conclusion

The use of NFTs for terrorism financing and money laundering is a clear threat, given the decentralised and unregulated nature of the NFT market. NFT transactions are peer-to-peer, pseudonymous, and cross-border, allowing terrorist organisations and affiliates to possibly transfer and store funds without scrutiny. To combat this threat, KYC, AML, and CFT regulations should be implemented on NFT trading platforms. Currently, there is no governing body that oversees NFT-related transactions, and NFT trading platforms are not subject to any AML or CFT laws and regulations. This lack of oversight and protection for individuals who trade, create, or invest in NFTs makes it easier for terrorist organizations to access and use these platforms. Moreover, wash trading in the NFT marketplace is a common practice for money laundering, which could potentially open up to terrorism financing. Therefore, regulations are essential to mitigate the risks of terrorism funding and money laundering through the NFT market.

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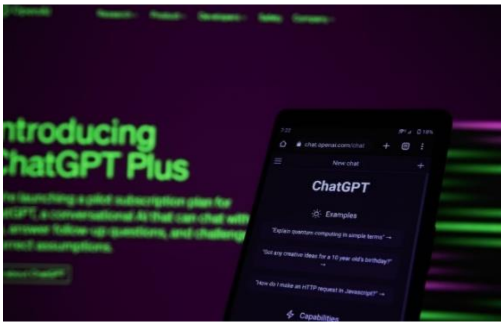
The ChatGPT Paradigm: Exploring Regulatory Frameworks for Ethical AI

*By **Halin Lee***



ChatGPT has been the most discussed subject in modern technology in recent months. It is a sophisticated AI chatbot driven by a large language model, GPT-3.5 and GPT-4. It is programmed to interpret human language and provide responses based on vast volumes of data. It employs deep learning methods to produce human-like responses to text-based prompts and it has been trained by machine learning on a vast corpus of online material, allowing it to provide a wide range of outputs on numerous topics (Brown et al., 2020). Users do not need multiple avenues to seek, compare and verify the information as it can generate a wide range of creative writings with the right prompts. ChatGPT has been increasingly used by many for everyday creative activities in numerous application domains. Yet, ChatGPT-3's language model contains structural and algorithmic limitations and adversarially constructed datasets (Brown et al., 2020). AI scientists explain that our urgency arises from humans' capacity to use AI as a knowledge system to create irrefutable "algorithmic truths" to reinforce domination (ai manifesto, 2023). This article aims to address some of the growing concerns over the use of ChatGPT and ethical concerns related to Algorithms and AI development.

Background

Chatbot–software applications that simulate conversation with human users had become indispensable AI programs across various industries before the release of ChatGPT. A study in 2019 shows that greater than 60% of millennials have used chatbots, 70% of those report positive experiences, and of the millennials who have not used them, more than half say they are interested in using them (Businesswire, 2019). Chatbots are utilised by a range of industries such as manufacturing, healthcare, hospitality, entertainment, education and public services. While ChatGPT and general chatbots differ in their underlying technology and capabilities, the research indicates that AI chatbots meet the expectations of the new generation as a new way of engaging with online services due to their instant feedback, convenience and human-like interactions.

ChatGPT currently has over 100 million global users since its initial release in November 2022, and this number is rapidly growing (Milmo, 2023). What is interesting about this new AI text generator is that it popularised chatbots as a powerful idea-generation tool for everyday creativity and innovation. Its key functions include: language generation, language understanding, translation, summarization, sentiment analysis and conversation management (OpenAI, 2023). With these tools it can astonishingly generate blogs, lyrics, social media posts, program codes, essays and more. ChatGPT is also likely to play a major role in Industry 4.0 which depicts a new phase of production centred on digitization, automation, and the connectivity of industrial systems in real time (Puddu 2023, 4). Among the primary causes of this progress are the increased data processing ability of the language model and the utilisation of machine learning for AI proficiency.

Copyright and Data Protection

ChatGPT faces a number of significant obstacles related to copyright and ownership. First, ChatGPT cannot claim ownership over its output. This is because, under both European and US laws, AI systems are not considered authors and lack the legal status required to own intangible assets like copyrights. Nonetheless, it generates responses by drawing from the information stored in its database, thereby creating new answers, even if they are based on pre-existing information. The copyright protection of these responses depends on whether they qualify as a "work" in the first place which hinges on the expression of the author's creative choices (European Commission, 2023). Therefore, the question of ownership and authorship of AI-generated works needs to be clearly settled by law. Moreover, ChatGPT-3 model has been skilled in a vast amount of online data that might have originated from copyrighted or sensitive sources through website scraping and other digital methods of gathering data (Brown et al., 2020). Learning from all the digitally available outputs created by people, ChatGPT can produce a text similar or identical to the original content or sensitive information which could harm individuals. Artists and writers who find themselves at a disadvantage due to AI are expressing their dismay over the programs and a sense of violation (Thorpe, 2023). From lawsuits to IT hacks, creative industries are deploying a range of tactics to protect their jobs and original work from automation (Thorpe, 2023). ChatGPT is just one of the latest AI products alongside Google's Bard and Microsoft's Bing to have shaken up copyright and data protection legislation. Thus, our goal should be to reduce legal risks on copyright and privacy by regulating AI use of online data in a way that ensures the appreciation of human creativity as well as privacy.

Accuracy Issues

Its accuracy concerns have been also well-documented despite its popularity. At the collegiate level, students have been found plagiarising using ChatGPT and its answers were also proven to be problematic as they contained nonsensical and wrong information (Nolan, 2023). OpenAI acknowledges that the chatbot has "little understanding of world activities after 2021" and is prone to provide inaccurate answers if there is insufficient data on a subject (Agomuoh 2023, 14). If output generated by AI contains inaccurate or biased information, its use may cause various significant societal problems as ChatGTP can be effective in disseminating a massive amount of false materials online. One major contributing factor to the issue is the chatbot's tendency to produce incorrect responses at high confidence levels without proper justification. This is mainly because the current system heavily relies on the users' understanding of how the model operates. Therefore, users should be more clearly aware of these risks to mitigate potential negative consequences. To avoid unintentional misuse of inaccurate information, ChatGPT must implement more effective measures to inform users about the reliability of the model's decision-making process. This highlights the criticality of utilising more carefully validated training datasets, as well as enforcing more stringent criteria for the development of AI algorithms. By doing so, we can enhance the overall quality and reliability of AI systems and reduce the risks associated with erroneous decision-making.

Security and Ethical Concerns in AI

The malicious use of ChatGPT could furthermore be a threat to the digital, physical, cultural and political spheres. AI of this type has no single purpose. Users may learn mechanisms to hack victims in various ways despite ChatGPT's ability to reject inappropriate requests. A British spy agency has warned that artificially intelligent chatbots like ChatGPT pose a security threat because sensitive queries could be hacked or leaked (Bhaimiya and Nolan, 2023). For instance, it can automate unfavourable political campaigns, or deploy privacy-eliminating surveillance programs (Bhowmik, n.d.). This suggests the current AI language model lacks an adequate ethical and moral structure to safeguard against its use in automated military applications, such as information weaponization. ChatGPT is designed to operate within certain ethical boundaries by carefully curating the data it was trained on and implementing safety mitigations by Open AI (Open AI, 2023). To ensure the safe use of ChatGPT, it is imperative to set stringent legal frameworks for ethical guidelines and safety processes of AI. Although ChatGPT has the potential to improve cybersecurity, implementing various security measures external to ChatGPT can be beneficial to detect and stop malicious actors and illegal activities.

AI as a technological artefact reflects certain values created by stakeholders (Mohamed, Png and Isaac, 2020). Chatbots also have instituted values embedded in their data and algorithmic reasoning, and as OpenAI endeavours to define it, the language model of ChatGPT becomes susceptible to biases. ChatGPT-3 was found to produce erroneous comments regarding specific religions as it has learned these prejudices from the training data (Karim 2019, 5-6). This inadvertent prejudice in the training data could result in the algorithm repeating negative preconceptions. AI scientists claim the notion of decolonial governance will emerge from community and situated contexts, questioning what currently constitutes hegemonic narratives because AI has the potential to be misused by people as a reliable knowledge system (ai manifesto, 2023). With the increasing popularity of ChatGPT as an AI tool worldwide, there is a need for the international community to develop new ethical policies to assess and regulate its algorithmic decision systems. This is necessary to ensure that these systems incorporate diverse socio-cultural values and knowledge, and to resist the idea of "algorithmic truths" that AI creates, which may be biased or flawed.

Policy Recommendations

ChatGPT innovation requires empirical and theoretical analysis of the algorithms of AI-generated content and mechanisms of healthy digital data collection and protection. ChatGPT seems to bring both opportunities and risks, yet the full scale of which is not yet clear. In the future, well-considered laws and policies can prevent users from having some of the adverse effects. While studies of new socio-technical relationships ChatGPT has brought cannot be halted, some policy issues and their possible implications have been identified in various areas.

First, steps must be taken to guarantee that, if the AI-generated content is utilised, it does not infringe on a third party's copyrighted work or private information. Expanding the copyright law to definitively address the matter of ownership and authorship concerning AI-generated creations will help manage possible legal and ethical concerns. Revision of data protection would be helpful to ensure the compliance of AI companies and entities working in the ChatGPT with the existing legal framework. Users should be still mindful of this danger and explore ways to reduce the chance of violating a current structure, such as avoiding narrow inquiries where the result is derived from a particular work.

Second, more stringent criteria for the development of AI algorithms and training datasets can be made to mitigate accuracy issues. Establishing legal mandates for the language model to guarantee transparent outcomes would be essential in the current system. This would enhance user awareness about its output credibility, thereby safeguarding them more effectively from risks associated with erroneous decision-making. Additionally, legal and commercial requirements other than ChatGTP may also be considered. When using AI outputs with third parties, companies should be able to evaluate and regulate their use, preventing risks associated with erroneous AI decisions.

Lastly, various security measures are required to detect and stop the malicious use of AI. Establishing a legal framework for ethical guidelines and AI safety processes is necessary to ensure the safe use of ChatGPT. AI developers should continue to optimise their programs to detect harmful queries and outputs that can be misused for military applications and other malicious actors and illegal activities. Decolonial governance is another key concept to consider when developing algorithmic decision systems with AI artefacts as both subject and object. As an AI language model trained on adversarially constructed datasets with distinct values, ChatGPT needs ethical frameworks for algorithmic reasoning and datasets to ensure biases and hegemonic narratives are adequately tackled from an international risk standpoint.

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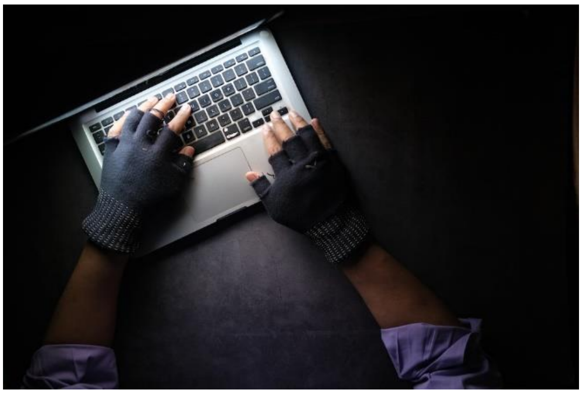
The Digital Shadows of the Russo-Ukrainian Conflict: Cyberwarfare, Strategies and Implications

By ***Inès Parisot***



"The distinctive Russian approach to operations in Ukraine gave rise to an impression among some observers that its military had employed fundamentally new concepts of armed conflict. The widespread adoption of phrases such as 'hybrid warfare' and 'Gerasimov doctrine' reinforced this perception of novelty, and was indicative of a search for ways to conceptualize – and make sense of – a Russian approach to conflict that the West found at first sight unfamiliar" (Giles, 2016). The Russian-Ukrainian conflict since 2014 is a perfect example of the transformation of warfare in the digital age. Cyberwarfare, combining computer attacks and information manipulation, has become a crucial element of this confrontation. This policy paper explores in depth the importance of cyber warfare in the Russian-Ukrainian context and reveals how Ukraine has drawn on Russian tactics to respond to cyber-attacks. By drawing on evocative examples and revealing the underlying stakes, this paper aims to offer an original and captivating perspective on a modern conflict that is played out as much in the digital shadows as on the ground.

The Cyber Battlefield: Issues and Challenges of the Russo-Ukrainian Conflict

The increasing digitalisation of society has made information infrastructures and systems more vulnerable than ever. In the Russian-Ukrainian conflict, which is also being played out in the digital underbelly of both nations, the protagonists seek to destabilise the adversary by attacking the critical workings of its infrastructure (Shackelford, 2017). Cyber warfare is an important weapon in hybrid warfare as it allows belligerents to conduct sophisticated cyber-attacks against key enemy infrastructure and communication networks. Ukraine has been particularly vulnerable to Russian cyber-attacks which have targeted Ukrainian energy infrastructure, banks and media. A prominent example was the Russian attack on the Ukrainian power grid in 2015 which plunged thousands of people into darkness (Futura Sciences, 2022). This demonstrated how devastating this new form of warfare can be.

Ukraine has often been seen as a testing ground for Russian cyber-attacks. For example, in 2015 an attack called “BlackEnergy” disrupted the Ukrainian power grid, and in 2016 another attack, “Industroyer”, left Kyiv without electricity for an hour. The United States and the European Union attributed these attacks to Russian military hackers (BBC, 2022). Similarly, the “NotPetya” cyber-attack, considered to be the most expensive in history, was blamed on a group of Russian military hackers by the US, UK and European authorities. It caused about $10 billion in damage worldwide. In addition, North Korean hackers were also blamed for causing major disruption with a similar attack a month earlier, using the

"WannaCry" ransomware (BBC, 2022). However, these types of uncontrolled attacks also pose risks to Russia as they are comparable to biological warfare because it is difficult to target specific critical infrastructure. Indeed, "WannaCry" and "NotPetya" have also affected victims in Russia (ibid.).

Beyond cyber-attacks targeting infrastructure, this hybrid warfare also encompasses propaganda and disinformation as key weapons to influence public opinion, destabilise the enemy and weaken citizens' trust in their governments and institutions (Shackelford & al., 2017). This tactic is widely used by Russia which uses state-controlled media to disseminate false information and manipulate public opinion by creating fake social media accounts and spreading false information to sow discord (ibid.). Russia has implemented a hybrid warfare strategy that combines conventional and unconventional means to destabilise the US and its allies to discredit US democratic institutions (ibid). The use of cyberwarfare is an aggressive tactic in Russia's efforts to exert influence over global affairs and weaken the United States (Shackelford & al., 2017). In particular, the hacking of Democratic Party emails in 2016 demonstrated the disastrous consequences for US national and economic security. American President Joe Biden urged US companies and organisations to "lock their digital doors" and to strengthen their digital security in the face of intelligence reports that Russia was preparing a cyber-attack on the US (BBC, 2022). Although Russia has dismissed the allegations as "Russophobic", it is recognised as a cyber power with advanced and potentially destructive hacking capabilities (ibid.).

Social networks and digital platforms thus become battlegrounds where "fake news" and partisan narratives are propagated, weaving a web of mistrust and polarisation that hinders a peaceful resolution of the conflict (Golovchenko, Hartmann, & Adler-Nissen, 2018). Ukraine is thus facing an information war waged by Russia which uses propaganda to discredit the Ukrainian government and justify its actions in Crimea and the Donbas. The invisible war in Ukraine is crucial to the outcome of the conflict. Although the bloody fighting in the streets is the focus of attention, cyber fighters promise to continue the struggle (Forbes, 2022). Cyber-attacks include phishing attempts against Ukrainian military personnel, DDoS attacks on government websites and the spread of malware capable of wiping a computer's memory in an instant (ibid.).

The Ukrainian Digital Chessboard: Inspiration, Adaptation and Resilience

Faced with Russian cyber aggression, Ukraine has chosen to respond by developing its own cyber defence capabilities. The country has set up dedicated cybersecurity training and research centres and invested in cutting-edge technologies to strengthen its defences. Ukrainian cyber security consultant Volodymyr Diachenko highlights the unprecedented mobilisation of his peers in response to the Russian invasion of Ukraine (Le Monde, 2022). Inspired by Russian tactics, Ukraine conducted its own cyber warfare operations against Russia. In February 2022, Mykhailo Fedorov, Ukraine's deputy prime minister, announced the creation of an "IT army" and published a list of targets, including Russian government websites and companies (Forbes, 2022). This "IT Army of Ukraine" quickly attracted over 120,000 members in one day, bringing together national and international volunteers (ibid.). The Ukrainian Ministry of Digital Transition has also called on its citizens to join this army which now has over 310,000 members (Liberation, 2023). These attacks include denial-of-service (DDoS) actions to make sites inaccessible, including flagging YouTube channels that spread Russian disinformation but also other more complex offensives that contribute to the fog of war without changing the course of the conflict (ibid.).

Ukrainian cyber attackers such as Yegor Aushev, founder of several cyber security companies in Ukraine including Cyber Unit Technologies, have formed a guerrilla group that vows to continue fighting even if the main battle is lost (Forbes, 2022). This group, with members in Ukraine and abroad, including Russians opposed to Putin's invasion, works on both offence and defence to protect resources and infiltrate Russian systems. Aushev has established direct communication with defence officials in Kyiv to coordinate action (ibid.). Despite DDoS attacks and disinformation, Ukrainian cyber attackers will not give up. If Kyiv succumbs, they will continue to defend Ukrainians and attack the Kremlin. Aushev has brought together people from Russia, Ukraine, the US, the UK and other countries to form his cyber resistance team (ibid.).

As another example, a few months ago, Bohdan Ivashko was working for video game giant Ubisoft where he helped develop the cockfight in Far Cry 6 (Liberation, 2023). Currently employed at a cybersecurity start-up, he has spent the last few weeks developing software called "Death by a 1000 needles", designed to carry out denial of service attacks. This software has recently been integrated by the IT group Army of Ukraine. Sometimes entire companies get involved, such as Cyber Unit Technology which offers rewards for identifying security holes in Russian companies for use in cyber-attacks (Liberation, 2023).

In addition, an article in “Made of Minds”, published in 2022 describes how Jens, a Danish IT professional, spends an hour every morning defending Ukraine in cyberspace by bombarding Russian websites with fake requests. He is one of the thousands of pro-Ukrainian cyber guerrillas around the world who have launched attacks against targets in or connected to Russia (Delcker, 2022). These cyber guerrillas have different motivations and use a variety of cyber weapons, ranging from simple online vandalism tools to sophisticated cyber operations to support a beleaguered Ukraine (Delcker, 2022).

In parallel, cybersecurity professionals in Kyiv continue their work to protect critical infrastructure. Cybersecurity companies in Ukraine remain steadfast in the face of war and warn of massive Russian cyber-attacks aimed at disrupting systems, spreading panic and undermining confidence in Ukrainian state institutions. Despite this, they remain calm and vigilant, knowing that the truth is on their side (Forbes, 2022). On December 31st, the homepage of the Russian city of Losino-Petrovsky was hacked by the IT Army of Ukraine which also targeted other Russian websites (Liberation, 2023). The Ukrainian authorities have launched computer attacks targeting Russian institutions, including banks and government agencies with the aim of disrupting their operations and weakening their support for separatists in eastern Ukraine. In addition, Ukraine has used cyberwarfare to counter Russian propaganda and disseminate information favourable to its cause (Golovchenko, Hartmann, & Adler-Nissen, 2018).

Additionally, Ukraine has turned to international partners such as NATO and the United States for technical and financial assistance and to share information on emerging threats (Politico, 2021). This cooperation has allowed Ukraine to increase its resilience to Russian cyber-attacks and protect its critical infrastructure (NATO, 2022).

The Ukrainian video game industry has also adapted to the upheaval caused by the Russian invasion (Le Monde, 2022). Independent and amateur creators have chosen to represent the war through their works. Vitalii Zubkov, a member of the Ukrainian studio Marevo Collective, tells how they suspended their current project to create a new video game called "Zero Losses" (Le Monde, 2022). Scheduled for release on Steam in 2023, this open-world game depicts the terrifying reality of the Russian-Ukrainian conflict. Many other Ukrainian developers have also undertaken to tell the story of the war through various video game creations (The World, 2022). In "Ukrainian fArmy", a video game created by a collective of developers, players pilot tractors to transport wrecked Russian tanks and armoured vehicles destroyed on the battlefield (Futura Sciences, 2022). The game pays tribute to Ukrainian farmers and collects donations for humanitarian causes. The tractor has become a symbol of resistance in Ukraine following the dissemination on social networks of videos showing agricultural machines pulling the wreckage of Russian tanks (Futura Sciences, 2022). The game was even promoted by the Ukrainian Ministry of Defence on its official Twitter account, highlighting the effectiveness of tractors in the face of slow bureaucratic approvals for the acquisition of weapons and military equipment (Futura Sciences, 2022).

Despite the progress made in cyber defence, Ukraine still faces many challenges in effectively guarding against Russian cyber-attacks. These include the fragmentation of cyber defence efforts within the Ukrainian government, the lack of a coherent national cyber security strategy and the difficulty in recruiting and training cyber security experts (Cherepanyn, 2017). There are also a growing number of what insiders call "script kiddies", volunteers with little experience in cybersecurity who run hacking programmes without fully understanding how they work. However, the article warns of the risks associated with these cyber guerrilla activities, including accidental damage to unintended targets and the unleashing of counterattacks by technically superior nation-state hackers (Delcker, 2022). In addition, Ukraine must address the ethical and legal challenges associated with cyber warfare operations, including issues of accountability and proportionality (Shackelford, 2016).

Policy Recommendations

Several policies can be developed to deal with cyber threats, such as policies on enhancing cyber security, information sharing, regulation, accountability and international cooperation. These policies need to be implemented at different levels, such as national, regional and international and require coordination between governments, business and civil society to be effective.

It is also essential to criminalise cyber-attacks and prosecute the perpetrators. National and international laws exist, such as the Council of Europe's Convention on Cybercrime and the Budapest Convention, which contain provisions for the criminalisation of cyber-attacks and international cooperation in criminal prosecutions. Governments need to develop international standards for the criminalisation and prosecution of such cyber-attacks, as well as to promote public-private collaboration in the fight against cybercrime.

It is also crucial to facilitate the sharing of information on cyber security threats between governments, businesses and individuals. Public-private partnerships for cybersecurity and cybersecurity threat information exchange networks can be set up to achieve this goal. Governments can also set up early warning systems to inform businesses and the public of impending cyber security threats. Finally, it is important to instil a security mindset among employees in companies (Kolbe et al., 2022). Implementing measures such as enabling multi-factor authentication, fixing old vulnerabilities, ensuring passwords are strong and raising awareness of phishing can contribute to better overall security (ibid.).

Conclusion

In order to better understand the dynamics and stakes of the Russian-Ukrainian conflict, it is essential to understand the growing importance of cyber-warfare in the international landscape and to analyse the strategies adopted by the various actors to protect themselves and respond to these new threats. Cyber warfare has become a central element, highlighting the evolution of warfare methods in the digital age. Propaganda, disinformation and cyber warfare are key weapons in hybrid warfare. These tactics are used to weaken the adversary, influence public opinion and cause confusion while avoiding the costs and risks associated with traditional armed conflict. Computer attacks and information manipulation are now formidable weapons with a significant impact on the security, the economy and the politics of nations. Ukraine, while facing many challenges, has been able to adapt and learn from its adversary's tactics to strengthen its cyber defence and conduct its own cyber warfare operations.

The future of the Russian-Ukrainian conflict remains uncertain, but one thing is certain: Cyber warfare will continue to play a crucial role in relations between these two countries and beyond. The study of this conflict provides a better understanding of the challenges and implications of digital warfare, as well as the strategies adopted by the warring parties to adapt to this new reality. The lessons learned from the Ukrainian experience can serve as a model for other nations facing similar threats, highlighting the importance of a resilient and proactive approach to cyber-attacks. Governments and businesses can enhance the security and resilience of their information systems and critical infrastructure against cyber security risks related to the Ukrainian conflict by implementing effective policies, criminalizing cyber-attacks, facilitating information sharing on cyber security threats, and promoting a security-oriented mindset among their employees.

In conclusion, cyber warfare has not only transformed the dynamics of the Russia-Ukraine conflict but has also had wider implications for international security, education, research and innovation in cyber security. Ultimately, the resolution of this conflict and the prevention of similar clashes requires a strong commitment from the international community. It is crucial to strengthen cooperation, establish norms and regulatory mechanisms for cyberspace, invest in cybersecurity education and research, and promote innovation to develop more effective and resilient cybersecurity solutions. The lessons learned from this analysis can be used as a basis for developing policies and strategies to enhance security and stability in an increasingly interconnected world at risk from cyber warfare.

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The Threat of Generative AI

By ***Oliver Tate***

Generative AI is a type of artificial intelligence algorithm that creates outputs based on identifying patterns and structures within information and data that it is trained on to form original content. The most well-known example of this is OpenAI's ChatGPT. As of present, many people have been using generative AI platforms to assist them in their work and boost productivity by using it to write, summarise and synthesise various topics. However, generative AI is a tool that can be used for a wide array of purposes some of which could be highly disruptive to society and order.

Accessible Crime

Generative AI has the ability to create complex social engineering tactics and produce phishing campaigns. Generative AI can analyse large amounts of data and use natural language processing to produce highly convincing and targeted phishing emails and messages to deceive internet users into giving away personal information such as bank account details. Whilst this sort of crime has been around since the advent of modern computing and email, the most significant concern here is that generative AI gives complete amateurs with limited resources the ability to engage in this form of crime. In turn, this opens the door of cybercrime to a wider pool of individuals who may have otherwise lacked the skills and knowledge to create convincing impersonation and phishing campaigns. OpenAI, widely seen as the current market leader in large-language model generative AI, has prohibited its tools, including ChatGPT, from being used for illegal activity; however, their safeguards are easily bypassed. Moreover, generative AI's ability to write code based on natural language prompts will invariably lead to increases in hacking-related crimes as people no longer need advanced knowledge and skills to commit effective hacking and cybercrimes, with some generative AI platforms already capable of producing malware that can be used for offensive cyber purposes. Additionally, generative AI can be a force multiplier for cybercriminals, allowing them to automate various aspects of their activities, from reconnaissance to actual attacks. As a result, the scale, speed, and effectiveness of cyberattacks can be significantly enhanced. For instance, generative AI can be used to create customized malware that can evade traditional security solutions by generating new variants of existing malware or crafting entirely new ones. Furthermore, generative AI can be used to develop convincing deepfake content. Deepfake is an extensive issue in itself, but in the context of generative AI and crime, the recent development of artificial speech is already causing huge disruption. Notable examples of this recently involve mimicking singers' voices to create new music with record labels already taking legal action on this front. However, replicating speech with AI could have more disturbing outcomes. In an incident in 2020, as initially reported by Forbes, a manager working for a Japanese bank in Hong Kong was deceived by deepfake audio that imitated his director's voice. The convincing audio manipulation led him to authorize a transfer of $35 million according to a court document.

Additionally, the manager was convinced that he had received emails corroborating the director's request. Ultimately, the scammers were successful in stealing $400,000 from the bank. This demonstrates the level of impact generative AI can have and it is not unreasonable to predict that this technology has the potential for example to manipulate markets or breach security measures.

Extremism

Moreover, there have been more concerning examples of generative AI's potential uses for crime, most notably for the purposes of engaging in terrorism. Researchers have successfully been able to manipulate chatbots such as ChatGPT into ignoring their own ethical guidelines and providing details on how to build a dirty bomb for example. The instructions detailed how to obtain radioactive material, create a device, and place it. While some of this information is relatively easy to access online, what the chatbot was able to provide in this example is more exact recommendations on measurements and methods which are harder to find. Moreover, considering a generative AI is capable of providing personalised and highly specific information if prompted correctly, it could hypothetically be capable of planning a sophisticated terrorist act. Whilst sophisticated acts of terrorism have occurred in the past, many of them have been conducted with the assistance of a wider terror network or overseas training. In an era where lone-wolf terrorism is greatly prevalent, generative AI software could provide an outlet for extremists to devise violent attacks. Jonathan Hall, who serves as parliament's Independent Reviewer of Terrorism Legislation has argued that AI chatbots could be programmed to, or potentially independently, decide to engage in extremist ideology. It is worth acknowledging that it tends to be isolated and disillusioned individuals that may turn to AI chatbots for comfort, and it is these types of people that are already susceptible to the persuasions of extremism. The most concerning aspect of the potential for generative AI platforms being programmed by extremist groups is that attribution is challenging. Hall argues that "Anti-terrorism laws are already lagging when it comes to the online world": Unable to get at malign overseas actors or tech enablers. But when ChatGPT starts encouraging terrorism, who will there be to prosecute? Moreover, historian and philosopher Yuval Noah Harari argues that generative AI has the potential to create new religions and cults. AI's sophistication paired with its ability to learn about anything in an instant, provides the groundwork for it to use language to influence and manipulate people.

Disinformation Proliferation

Image, audio and video generative AI software provide a platform for groups and individuals to produce disinformation content. Image and video manipulation software has been in existence for some time but what generative AI provides is the ability to produce disinformation very quickly, easily, and with little resources. Moreover, as generative AI can produce entirely original content, it is going to be difficult for fact-checkers to prove misleading content is taken out of context or edited from an original. Additionally, with generative AI image creation platforms such as DALL-E and Midjourney already outputting high-quality images hard to distinguish from reality, we may see a future in which visual content holds no value in expressing the truth as anything is potentially an AI-generated falsification. Take for example

Bellingcat founder Eliot Higgins' tweets which displayed images generated by Midjourney of Trump being arrested. The images swiftly went viral, and he subsequently responded saying that "The thread I posted proves how quickly images that appeal to individuals' interests and biases can become viral," and that "Fact-checking is something that takes a lot more time than a retweet." The implications of this are far-reaching: As more people gain access to these tools, the lines between reality and fiction become even more blurred. This could further increase the erosion of trust in the media and even in the very concept of truth itself in an already volatile information environment. Social media platforms are already struggling to combat the spread of disinformation and misinformation. With the advent of AI-generated content, these challenges will only intensify. Fact-checkers and content moderators will need to adapt to these new technologies and develop innovative ways to distinguish between real and AI-generated content which itself poses a completely different set of threats and challenges regarding censorship and limits on freedom of expression.

Policy Recommendations

International agreements: To address the global challenges posed by generative AI, nations should collaborate to establish international norms and agreements. These agreements should focus on the responsible use of AI, sharing best practices for countering disinformation, and fostering cooperation between law enforcement agencies to combat cybercrime. So long as one nation continues to develop generative AI unrestricted the rest will continue also, as they will not risk the loss in advantage, thus international cooperation is absolutely essential.

Public and private partnerships: Governments and tech companies should work together to strike a balance between content moderation and privacy protection. This involves developing AI-based content filtering systems that are transparent, adaptable, and protect user data while actively identifying and removing harmful content generated by generative AI.

Regulations on developers: Governments should introduce strict regulations on tech companies developing generative AI technologies. These regulations should include mandatory reporting of misuse, adherence to ethical guidelines, and regular audits to ensure compliance. Penalties should be imposed for non-compliance or failure to address misuse of the technology.

Limitations on use and access: To reduce the potential for malicious use of generative AI, policymakers should consider implementing regulations that limit access to advanced AI tools to vetted individuals and organizations. This could involve a licensing system or an access model, where more advanced capabilities are reserved for trusted users. Moreover, there should be independent entities that continually monitor and review how generative AI platforms are utilised.

Educational programs: Governments and educational institutions should invest in public awareness campaigns and educational programs to inform the public about the potential risks and benefits of generative AI. These initiatives should aim to improve digital literacy, promote critical thinking, and teach individuals how to identify AI-generated content and disinformation.

Support for fact-checkers and content moderators: As generative AI poses new challenges for fact-checkers and content moderators; governments and tech companies should provide resources and support to these professionals. This could involve creating specialised training programs, developing AI-assisted tools to aid their work, and establishing dedicated teams to tackle AI-generated disinformation.

Research and development: Governments should invest in research and development aimed at advancing AI technologies that can counter the negative impacts of generative AI. This may include developing AI tools that can identify and mitigate disinformation, as well as creating systems that can authenticate and verify the origin of digital content.

Conclusion

Overall, generative AI is going to pose significant challenges for governments, businesses, and society. As this technology advances at a rapid rate, even understanding the implications of these innovations is going to take time, and it is likely regulators are going to find it difficult to keep up with the ever-changing nature and usages of generative AI. The rapid growth and widespread adoption of generative AI will necessitate a proactive approach to mitigating its negative consequences. Governments, businesses, and individuals will need to collaborate and devise effective strategies to address the risks associated with generative AI, with fostering international cooperation, promoting public-private partnerships, and implementing stringent regulations on AI developers being the most important.

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European Affairs

How should the EU respond to the rise of authoritarianism, far-right extremism, and the erosion of democratic values within its member states?

By ***António Macedo, Pasha Wilson, & Megan Baker***

The European Union (EU) was founded upon the principles of upholding human dignity, freedom, democracy, equality, the rule of law, and human rights. Article 2 of Title I of the Treaty of Lisbon, the agreement which forms the constitutional basis of the EU, states that:

The Union is founded on the values of respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities. These values are common to the Member States in a society in which pluralism, non-discrimination, tolerance, justice, solidarity and equality between women and men prevail (European Union, 2007).

Democratic backsliding can be defined as 'the process by which states become gradually less democratic over time' (Russell et al., 2022). This has been a particular issue in the EU member states of Poland and Hungary. Poland's ruling Law and Justice Party (PiS) has massively reduced judicial independence and has put pressure on the independent media (Cienski & Tamma, 2020). In Hungary, Viktor Orbán has repeatedly taken emergency powers enabling him to bypass the legislature, undermine press freedom and curb judicial independence (Deutsche Welle, 2022).

Some states took advantage of the Covid-19 pandemic to impose tighter control over their citizens. Luke Kemp has coined the term 'Stomp Reflex' to describe when governments curtail the freedoms, voice and agency of citizens during an emergency, such as the pandemic (Kemp, 2021). Viktor Orban, in particular, won the right to rule by decree to fight the virus in March 2020 and refused to put a time frame on the extra powers (Dunai & Than, 2020).

Additionally, first identified by the European Council in 2015 as a threat to EU interests, disinformation campaigns involving the spread of 'false or misleading content with an intention to deceive or secure economic or political gain' have been used as a weapon to undermine core European democratic processes and breed far-right extremism (European Commission, 2018). This has contributed to many of the bloc's recent challenges, including immigration, islamophobia, the anti-vax campaign, Brexit, and the rise of authoritarianism, all of which have harmed the Union as a whole (Meyers, 2022). These campaigns take advantage of basic EU foundations, such as freedom of expression, to spread far-right extremism and ethnic hate and consequently erode the fundamental democratic values on which the bloc is founded.

Current Challenges

Structural limitations. The European Commission states that 'any European country can apply for membership if it respects the EU's democratic values and is committed to promoting them'. To join the EU, states must fulfil the 1993 Accession

Criteria (also known as the Copenhagen criteria), which state that member states must have 'stability of institutions guaranteeing democracy, the rule of law, human rights and respect for and protection of minorities' (EUR-Lex, 1992). The Copenhagen criteria have delayed the accession of numerous states, including Moldova, Serbia and Turkey. Although states must go through a rigorous process in order to join the EU, this does not account for democratic backsliding once states have joined, for example, Poland and Hungary. It is very difficult for the EU to impose sanctions on member states.

The EU's most famous tool to tackle democratic backsliding is Article 7 of the Treaty on European Union (TEU) procedure, whereby the Council of the EU can determine 'serious and persistent' breaches of the EU fundamental values listed in Article 2 TEU (EUR-Lex, 2007). These proceedings were launched against Poland in December 2017 and against Hungary in September 2018 (Oleart, 2022). However, these Article 7 proceedings are highly unlikely to result in sanctions as it requires unanimity at a key stage, and Poland and Hungary support one another. The EU wants the continent to be governed by parties firmly in the political centre or by big coalitions.

Democratic deficit. The transfer of decision-making from the national to the transnational level has relocated political accountability away from the electorate, preventing a coherent democratic response to EU crises, ultimately plaguing the input legitimacy of the Union as negative integration begins to characterise the Commission's decisions. Here, suppressing the nationalist political will of member states only further delegitimises increased Union integration as national agendas grow further from those of the EU. It has been acknowledged that even in the most pro-EU member states, the Union has begun to over-encroach its position, over-imposing an EU agenda upon national politics, regardless of current EU satisfaction. Moreover, this over-encroachment of the EU has been one of the core catalysts of Euroscepticism and the subsequent democratic backslide that underlines national polities. This factor has been significantly exacerbated in Hungary and Poland, where an authoritarian slide makes the future accession of Eastern European nations increasingly unlikely. This rise of far-right populist parties will continue to gain support as national autonomy and sovereignty are eroded by EU membership, as democratic electorates will seek to bring politics back to the people. Consequently, a response to the growing democratic backslide that continues to facilitate the technocratic influence of negative integration rather than majoritarian democratic interests will only worsen the EU's appeal to members, exemplified in France and Greece, where support for the EU has declined to 51% and 54% respectively, in addition to 40% to 42% of the Slovenian and Croatian electorate stating that they totally agree or tend to agree that their country would face a better future outside of the EU, as of 2022 (Pew Research Centre, 2019).

Erosion of media pluralism. Since the spread of misleading or false information is not illegal according to EU law as per a core democratic right to freedom of expression, it is substantially hard to contain the spread of disinformation. Given that banning individual media outlets as the EU has done with Russian broadcast sources is a lengthy process, making it both an unrealistic and undesirable strategy, especially as the rise in accessibility of social media platforms due to globalisation implies these would proliferate with ease at a much faster rate than they could be identified let alone terminated (Meyers, 2022). Reports indicate that more than 30 countries and a variety of individual associations have been recognised as partaking in disinformation campaigns, including actors within member states, a cause for concern regarding the democratic health of the union, given that these campaigns target European institutions and undermine the shared identity and legitimacy of the European project (European Commission, 2018). Since 2010, Hungary has been put in the European spotlight due to disinformation, as Prime Minister Viktor Orbán and his Fidesz-led government have corrupted the freedom of media organisations by establishing a monopoly of control over them and silencing dissent. Hungary has become the first EU member to successfully dissolve public opinion and erode democratic pluralism, as almost no independent media publications remain in the country (Petit, 2022). The EU's failure to address such a situation has encouraged others to follow along, namely the Polish party PiS, attempting to either purchase local media platforms or pull them down. This was observed in the imposition of Strategic Litigation Against Public Participation (SLAPP) lawsuits on important Polish newspapers, such as Gazeta Wyborcza and OKO.press, subjecting them to costly legal proceedings. This primarily aimed to silence them and discourage further resistance from other outlets. This is a major cause for concern, stressing the importance of the situation and the need for the EU to respond (Mortera-Martinez & Tordoir, 2023).

Continued crises further far-right support. The Euro crisis of 2009 has stimulated a wave of populist support as electorates begin to acknowledge that their domestic governments have an ever-reducing influence on domestic politics. Subsequently, the influence of technocratic institutions, such as the EU Commission and Court, begins to dictate key policy areas, including fiscal expenditure. Here the austerity measures and European banking reform negatively affected those most vulnerable and have thus fostered a Eurosceptic agenda in which voters are less convinced that EU membership facilitates the socioeconomic benefits proposed. The increased salience of far-right populist support has come through two mechanisms.

First, a common determinant for the rise of populist support is economic insecurity, as further globalisation and the deeply integrated single market of the EU exacerbates the forces of trade competition and worker migration stimulating growth in economic losers. This growth of economic losers has also been stimulated through the rapid automation of traditional industrial jobs, creating high levels of unemployment across the continent (Margalit, 2019). These developments eroded voters' trust in the political system, and thus, they opted for a change to the status quo via trade protectionism or simply exiting the EU's economics and monetary zone to reduce income disparities and regain some of their lost economic welfare. Here when an economic loser resides as the median voter, it becomes increasingly difficult for governance to justify further economic integration politically; hence a rise in nationalist 'domestic first' responses emerge.

Secondly, whilst immigration does contribute to economic causes of populism among EU member states, immigration has been framed as a sociocultural issue, with the EU's freedom of movement policies impinging upon the cultural norms of many societies. By this account, sociocultural issues pose structural challenges through growing ethnic diversity, urbanisation, and a loss of national tradition. These changes and their perceived displacement of social values have stimulated an 'us' vs 'them' dichotomy in the EU. This social polarisation has been capitalised upon by populist parties through impositions of a social and cultural threat of outsider groups. Here as economic and immigration crises have underlined EU relations post-2009, voter attention has shifted towards the appeal of populism, as, on average doubling public salience of EU integration increases the vote support of far-right populist politics by 1.91% (Vasilopoulou & Zur, 2023). Consequently, populist parties have claimed much of the issue ownership regarding Euroscepticism, providing a comparative advantage over the issue of further EU integration. This has, however, led to centrist parties shifting right as they seek to regain some of their lost support by adopting more populist values, as demonstrated by the Finnish Centre Party and the Christian Democratic and Flemish party in Belgium, indicating that European politics will continue to move further right, potentially jeopardising democratic values, as political parties have no choice but to supply the growing populist demand or face electoral punishment. Moreover, as over 12 EU member states have populist support of over 25%, with members such as Hungry, Greece and Poland sitting comfortably over 50%, the EU will struggle to combat this wave of populism, as further intervening in domestic populism will only further populist support, and ultimately prevent the construction of a unified EU identity, subsequently limiting options for future EU integration (Statista, 2023).

Policy Recommendations

I. Use social media to strengthen democracy: A lot of light has been shed on the EU's attempts to tackle the disruptive effects of digital technology and media disinformation. Despite this, the bloc has arguably not focused enough on the other side of the spectrum: the positive power that these digital platforms can project and diffuse and the potential they have to counter false or misleading information and promote democratic accountability (Youngs et al., 2019).

E-participation measures at the wider EU level are limited, implying that forces of threat to the bloc's core values of democracy have successfully framed their agenda more effectively than the EU has protected its own. For example, e-petitions to the European Parliament are restricted exclusively to existing legislation and EU online public consultations are only designed to receive feedback from experts and stakeholders. This implies a lack of channels for citizens to engage in and co-create policies with their representatives and, therefore, a clear failure to connect the promotion of democratic and liberal causes and facts to underlying values. This creates impersonal and unpersuasive messages which fail to mobilise public opinion.

To address these issues, the European Commission and European Parliament should develop e-participation strategies using online crowdsourcing methods to foster citizen participation and integration with the EU. This could be accomplished by establishing a communications agency which would both serve to inform and receive feedback and therefore counter misinformation. This strategy would take inspiration from individual states within the bloc that have already engaged with their citizens via digital platforms to a degree of success, notably France and Estonia, creating formal online channels where people can participate in the decision-making process and have a say in how funds are being allocated via dedicated websites and online services (e-Estonia, 2019). The Commission should use the Citizens, Equality, Rights and Values Program (CERV) to fund this initiative, including the training of communications staff and supporting communities of practitioners.

On this same note, the EU should look to build on the success of the European Citizens' Consultations (ECCs) on climate change that took place in 2018 and 2019, as these provided valuable insights into the priorities and demands of citizens (Stratulat & Butcher, 2018). The EU could work to expand the scope of these consultations to address a broader range of policy concerns, which would undoubtedly help to erase the myth that policymakers deal with complex ideas that the public could not relate to or grasp.

This would allow for a more comprehensive discussion on issues that matter to citizens, creating a sense of unity and European identity, dissuading the growth of a feeling of marginalisation and, therefore, far-right extremism or authoritarianism.

II. Introduce review systems to ensure commitment to the EU's democratic criteria: When signing EU treaties, member states are committed to adhering to the union's democratic values. If these values are broken, the bloc must adopt a zero-tolerance approach to democratic backsliding and ensure that the offenders are held accountable, fully standing behind the rule of law conditionality mechanism, ensuring uniformity on financial pressure across all EU funding schemes to secure the effectiveness of the measures (Schwartz, 2022). To avoid compromise on this, the EU could create a centralised authority responsible for financial control and management of all EU funds with a mandate to ensure consistency and uniformity in applying financial pressure, working closely with national authorities and inspecting individual government bodies to enforce compliance with EU regulations.

Additionally, this new system could help organise periodic reviews to ensure member states that had previously been under scrutiny do not reverse the progress they have made in upholding the EU's democratic foundation and that the mechanism is triggered as soon as breaches are identified regardless of the state's relationship with the EU or the current political situation. This would prevent situations like the current one in Poland, where frozen recovery funds due to breaches in EU's values were released due to the implications of the war in Ukraine (Rankin, 2022). Furthermore, to discourage further backsliding, the bloc should punish future breaches by having the right to insist on a wider scope of reform areas not addressed by the initial measures, reforming further national institutions in accordance with the EU's own criteria.

Finally, the Commission could also consider bypassing central governments by awarding EU funds directly to municipalities that satisfy the bloc's democratic criteria, breaking the top-down chain of corruption and the misuse of funds by ensuring greater control over how the money is used and by whom. This would prevent the unfair penalisation of citizens, as the measures would be targeted at those directly responsible for democratic backsliding rather than the broader population.

III. Enhance welfare programs: Another mechanism the EU could push to prevent a further rise of right-aligned populism is to implement policies that enhance domestic welfare programs to cater to the 'losers' of deep economic integration. These mechanisms would be important as populism often thrives in societies that are divided and fragmented by socioeconomic inequalities. By investing in public services such as healthcare, education, employment creation and affordable housing, the EU would promote greater social cohesion as income inequalities would reduce.

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European Corporate Governance: Europe's ESG Regulatory Landscape, Global Implications, and Potential for Improvement

By ***Lucas Blasco Argullós, Luca Dzikowski*** *&* ***Nicole Lim***

In recent years, there has been mounting pressure on governments and firms to prioritise environmental, social, and governance (ESG) goals. Along with the resounding success of the 2015 Paris Climate Agreement, many jurisdictions have formulated action plans to achieve sustainable finance goals (United Nations 2015). The European Union (EU) has been at the forefront of these efforts, rolling out a comprehensive Action Plan in 2018 detailing plans for implementing lofty policies on sustainable finance (European Commission 2018). This policy paper evaluates the progress of these roll-outs, their global implications, and suggestions for improvements.

Background

The EU's key pieces of legislation are labelled with a plethora of acronyms which could perplex the indifferent. Nevertheless, one would be glad to know that an overview of the EU's regulatory landscape can simply be distilled into two fundamental "I" objectives – reducing *incomplete information* and *incentivising investments* in ESG. One of the main challenges of ESG investing is incomplete information. Firms do not disclose sufficient information about their ESG performance, making it difficult for investors to make informed decisions. The EU has attempted to address this through policies targeted at improving information transparency in investments. For example, the EU Non-Financial Reporting Directive (NFRD) requires companies to report non-financial information on their impact on ESG, including ESG performance (Anderson 2023). Companies affected are European-listed and large public-interest companies with over 500 employees and balance sheets surpassing €20 million or a net turnover of €40 million (European Commission 2014). The EU also introduced the Sustainable Finance Disclosure Regulation (SFDR), which requires financial advisors (such as asset managers) to disclose their ESG strategies to their clients and report the sustainability risks of undertaking certain investments (European Parliament and Council of the European Union 2019).

To allow investors to better sieve out and classify environmentally sustainable economic activities from the array of information disclosed through the NFRD and SFDR, the EU also introduced a system of a common language for ESG investments in 2020, known as the EU Taxonomy Regulation (European Commission 2023). The Taxonomy creates an EU-wide framework, clearly outlining the categorisation of "sustainable" firm activities, which allows investors to correctly identify companies whose activities are environmentally sustainable. In 2024, the NFRD will also be expanded to the Corporate Sustainability Reporting Directive (CSRD). The CSRD mandates the reporting of obligations in 49,000 companies, over four times the scope of the NFRD (Tower et al 2023). This increase is in part due to a pivotal change in the CSRD – foreign companies operating within the EU are now required to disclose sustainability information as well.

The EU's Sustainable Finance Action Plan also includes a range of measures to promote sustainable investments. For example, the European Fund for Strategic Investments (EFSI) 2.0 increased its focus on sustainable investment, with a minimum of 40% of financing going towards innovating and supporting climate action projects by 2020 (European Commission 2023). More recently, a European Sovereignty Fund was proposed as part of the European Green Deal Industrial Plan 2023 (European Commission 2023). It aims to generate a common EU funding pool, assisting member states with limited financial means in the investment of clean technology. Overall, these measures compel higher levels of sustainable investments both within and across EU nation-states.

Global implications, Brussels effect, and ESG regulations elsewhere

While these measures, policies, and blueprints target investment in the European Union, they may have far-ranging implications that affect corporate governance and ESG finance globally. The European Union has historically been a regulatory pioneer worldwide, shaping global policies on data protection, trade, and antitrust law. Its ability to do so stems from the size of its market and the opportunity cost of not applying EU-mandated regulations. This is what Bradford (2019) calls the "Brussels effect". One of the main examples is the General Data Protection Regulation (GDPR), a "pioneer" regulation in data protection which multinationals have had to adapt to operate within the European Union and that has been standardised across other subsidiaries to reduce costs and promote efficiency and effectiveness (Goldberg, Johnson, and Shriver 2019).

EU's regulatory power is also observed in its ESG regulations. For instance, the Corporate Sustainability Reporting Directive (CSRD) subjects non-EU companies with securities listed in EU markets with over €150 million in turnover to very similar disclosure obligations as those subjected to EU companies, namely reporting these companies' taxonomy alignment of their economic activity (European Commission 2022). Moreover, third-country undertakings that have substantial activities in the European Union will also have to comply with EU sustainability disclosure standards by 2029.

As McGarry, MacLennan, and Connellan (2022) explain, ESG directives and regulations implemented by the European Union represent a "paradigm shift in global ESG regulation" because they affect EU and non-EU companies alike both in terms of obligations to prevent human rights and adverse environmental effects of their activities and in disclosure obligations. This overarching and unprecedented set of policies forces companies who want to operate within the EU single market to adapt to them by reviewing existing strategies, policies, and procedures (McGarry, MacLennan, and Connellan 2022).

As one of the largest financial markets in the world, companies want to ensure that they comply with EU regulations to be able to invest in the single market. Hence, they apply the obligations in terms of ESG reporting and standardise them across their subsidiaries worldwide to reduce costs, which results in EU regulations being applied around the world, even outside of the single market. The regulations have had direct effects on ESG investment. For instance, JPMorgan Asset Management backed an extra 28% in environmental resolutions in 2020 worldwide compared to 2019. In a similar vein, Scottish Widows, a pension fund, pulled out an investment of GBP 500 million from companies that failed to meet ESG standards (Alamillos and Mariz 2022). As Beattie (2020) states, the EU "has set the rules for the world economy" (Beattie 2020).

But the European Union has not only managed to have multinational corporations comply with its standards; it has also inspired other countries and rating agencies to apply similar directives. Regarding the latter, rating agencies have explicitly integrated ESG factors into their holistic credit rating assessments, and failure to comply with them can reduce the credit score of these companies, which can also end in exclusion lists (Janse and Bradford 2021). Moody's Temperature Alignment Data compares companies' emission targets against industry competitors, providing independent opinions on firms' degree of ESG compliance through its tailored ESG scorecard solution. The European Union, through its leadership in ESG regulation, has also led the way for other countries to adopt similar regulations. For instance, the US has begun to follow the EU's initiative in this matter. In 2021, the Securities and Exchange Commission (SEC) chair Allison Herren Lee announced that the Commission was working towards establishing a "comprehensive ESG disclosure framework" regarding non-financial material information, similar to the disclosure obligations under ESG regulation in the EU (Alamillos and Mariz 2022, 291). In this sense, US Climate envoy John Kerry more explicitly said that the US was open to cooperating with the European Union in mandating that financial institutions disclose the climate change risks of their operations, showing that the EU's lead in ESG regulation has motivated the US to join in setting similar standards (Whieldon 2021).

Nevertheless, the main obstacle to US ESG regulation is the internal divisions in its regulation. Republicans in the House of Representatives passed a bill that blocked a rule set by the Department of Labour allowing private retirement plans sponsored by employers to consider ESG and climate factors. Moreover, at the state level, the state of Texas passed a bill preventing entities from conducting business with banks that adopt ESG policies, and Wyoming state passed two anti-ESG bills. As an ING Economic and Financial Analysis (2023) survey of 300 international and wholesale investors (with over $27 trillion in assets) shows, 47% of investors are worried about facing anti-ESG political and legal pressures, with 54% of them expecting more animosity against ESG investment in their domestic markets (Zhang and Schuller 2023). The survey indicates that investors do not necessarily oppose ESG regulation but rather internal divisions that might bring regulatory instability.

Hence, the European Union has demonstrated to be a leader in ESG regulation, which has even inspired the US to introduce similar measures, albeit with domestic pressure. Nevertheless, while the EU has been a leader in regulation, it has fallen behind the US in incentivisation. In 2022, President Biden signed into law the Inflation Reduction Act (IRA), which commits $400 billion in investment and subsidisation to cut greenhouse emissions (Conley and Botwright 2023). This subsidisation has been criticised by the European Union as violating World Trade Organisation (WTO) rules, namely, the requirement for batteries and electric cars to be produced locally. This includes a $7500 tax credit for purchases of electric cars and subsidies for manufacturing batteries and wind turbines. This threatens the relocation of industry in the green sector to the United States, including from Europe, which could potentially put the EU's industrial sector at a disadvantage (Dombrovskis, Timmermans, and Vestager 2023).

Policy Recommendations

ESG goals and profit are often considered to be diverging pursuits. In 2021, an activist campaign successfully removed CEO Emmanuel Faber from Danone, a French consumer goods group whose 'purpose-driven' approach seemingly diminished Danone's competitiveness (Abboud 2021). In 2022, oil and gas companies made record profits, benefiting those still invested and disadvantaging those who were not. This purported divergence has prompted government intervention, resulting in some form of ESG regulatory infrastructure in most developed economies across the globe. The EU's approach has been the most comprehensive and dynamic, inspiring both praise and dissatisfaction.

The EU is a regulatory superpower. Its ESG/sustainable investing framework may be considered a paradigm example of the Brussels effect, demonstrating its capacity to influence third-party regulatory regimes and multinational firms. This framework also illuminates the nature of European regulation more broadly, which is often delivered proactively and comprehensively (e.g. MiCA). This holds true in the case of the European ESG framework. While US regulatory authorities, i.e., the SEC, have given 'significant discretion to the registrant to determine what information to disclose' and focused primarily on the 'Environmental', the EU's approach has been prescriptive and comprehensive concerning all three facets of ESG (Saghir 2022). This broad scope has resulted in a breadth of legislative reform to reporting obligations, disclosure requirements, and risk considerations, in some cases at a great cost to the commercial actors whom these liabilities affect, as well as the integrity of the regulation. We have identified three main issues of concern regarding the EU's ESG regulation and propose measures to improve its effectiveness.

I. Unduly Scrutinous: 'Greenwashing,' a buzzword outlining firms' inclination to capitalise on the emerging market for sustainable products, thereby signalling compliance with regulatory reform, has become a principal consideration for commercial actors. With the recent reveal of Level II of the SFRD in January 2023, funds have to fulfil stricter criteria to be classified under Article 9 as a 100% sustainable investment. Firms' desire to avoid greenwashing accusations has manifested in explicit departures from Article 9 funds due to the level of scrutiny they are subjected to (Bloomberg 2023). This has led to fund managers downgrading approximately 70% of Article 9 funds to Article 8 in a strategic precautionary move (Lai 2023). While firms' cognisance of avoiding greenwashing practices is a step in the right direction, the consequence of the EU's heightened scrutiny heralds a new problem: investors can now hardly differentiate an Article 8 fund that simply scratches the surface of advancing ESG goals from one that was once classified an Article 9 fund. If funds that are 20%, 50% or 99% sustainable are all grouped under the same umbrella of Article 8, clients cannot accurately vary their level of investments based on the fund's degree of sustainability. This defeats the principal aim of the Taxonomy and SFRD altogether. The EU may want to consider opening further dialogue with market participants on how to address these concerns. This may result in the slight easing of aspects of the Article 9 criteria which correspond to greenwashing concerns. Alternatively, possible revisions to the SFRD include creating further subcategories within Article 8 that signal each fund's degree of Taxonomy alignment or making sure that only investments that are reasonably ESG aligned (>60% sustainable, for instance) can be classified as an Article 8 fund.

II. Regulatory Uncertainty: Over the past few years, the EU has continued to update and revise existing regulatory schemes, resulting in a lack of clarity observable in the dialogue held between the European Commission and firms (Naeem 2023). The dynamic nature of the regulation and broader lack of clarity has made it difficult for firms to issue funds under specific classifications. In Q4 2022, asset managers removed the Article 9 classification from 40% of these products due to reformed criteria and have been stalled in their release of new funds classifiable under the Article 9 umbrella (Bloomberg 2023). Furthermore, the EU has failed to address the treatment of derivatives in its funds' taxonomy, resulting in the potential misclassification of portfolios (Bloomberg 2023). The EU should address this in two following ways. First, despite the evolving understanding of how best to regulate these activities, the EU should release a comprehensive harmonised approach rather than incrementally releasing directives. This would prevent firms from having to constantly evolve and comply with ever-changing regulations, reducing compliance costs and facilitating ESG investment. Second, this regulation should be supported by a tool resembling an 'innovation hub' (Dombrovskis, Timmermans, and Vestager 2023). An innovation hub would take the form of a contact point where policymakers and firms can come together to debate proposed regulations. This would have two important benefits. Firstly, it would reduce information barriers by allowing firms to have direct access to the decision-making process, which could facilitate the assimilation of ESG regulation and hence investment. Secondly, it would allow the European Commission to have direct input from those actors who are most affected by the regulations. To clarify, we are not proposing unelected firms to have decision-making power but rather to establish more formal channels of communication so that the EU decision-making bodies ensure that its regulations are as effective as possible. This would also help firms easily identify their level of compliance with either fund criteria or other relevant regulations, minimising costs and facilitating compliance with the dynamic regulatory landscape.

III. Burdensome Reporting Obligations: Reporting obligations and disclosure requirements are burdensome. As the level of disclosure and reporting demanded of commercial actors rises, so too does the cost of compliance. To achieve 'greener' classifications, firms must spend on compliance teams to ensure accurate reporting and disclosure. This, to some extent, acts as a disincentive. The recommendation outlined in '2. Regulatory Uncertainty.' would address some of these concerns. The EU may, however, want to address these burdens further by considering potential redundancy or overlap in reporting obligations. Furthermore, the EU may consider releasing a 'Regtech' tool to further ease the burden on firms. 'Regtech' refers to "technology-enabled innovation for regulatory, compliance and reporting requirements implemented by a regulated institution" (European Banking Authority 2021, 5). Currently, investment firms and banks have developed their own 'RegTech' instruments to measure their level of compliance with the EU Taxonomy and ESG regulation (European Banking Authority 2021). Nevertheless, we consider that this puts companies which do not have the technological and financial means to develop such tools at a disadvantage. Hence, the European Securities and Markets Authority (ESMA), together with the European Banking Authority (EBA), should co-develop, with the input of private investors, a tool to universalise the tracking of ESG compliance and ensure that all companies bound by ESG regulation can understand how their activities might impact ESG. Such a tool would allow for real-time analysis of a firm's compliance with regulation and may even extend to real-time automated reporting. By minimising the cost and complexity of further reporting obligations, the EU would encourage more firms to pursue greener practices.

Conclusion

While the EU has been a pioneer of ESG regulation, the schemes being implemented are not perfect. In some cases, they are highly scrutinous, lack clarity, and impose burdensome reporting obligations. While fears of an 'industry exodus to the US' due to the passing of the IRA are lessening, the EU should reconsider its approach to the ESG/'green' regulatory landscape (Blenkinsop 2023). Rather than incrementally imposing directives, the EU should draft a comprehensive piece of regulation supplemented by digital technologies such as Regtech and innovation hubs. This would ease the burden of disclosure and reporting obligations and enhance clarity.

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Devising a Proactive EU-wide Approach to Supporting Ukraine

*By **René Neumann, Maksim Vassin** & **Baaz Chandwan***

As the Russia-Ukraine war enters its second year, the European Union (EU) is reminded of the importance of adopting a proactive EU-wide approach to supporting Ukraine and Ukrainian refugees seeking safety in EU Member States. The war has posed an extraordinary challenge to the bloc, mobilising support from across its political institutions. However, the European Union's response has been mostly reactive and needs a more coherent long-term strategy. This policy brief outlines three key areas where improvements can be made in order to ensure a proactive approach to supporting Ukraine: enhancing the European Peace Facility, supporting Ukrainian refugees, and promoting the post-war reconstruction of Ukraine.

European Peace Facility

In March 2021, the European Union formally established the European Peace Facility (EPF), an off-budget financial mechanism aimed at maintaining international peace and bolstering global security by providing military equipment and assistance to members whenever they deem necessary (European Commission, n.d.). Thus far, the EPF has worked extensively to provide Ukrainian troops with military assistance to ward off the Russian invasion and, as of February 2023, has supplied them with €3.6 billion in military equipment and support (Bilquin, 2023).

Yet, despite the success of providing Ukraine with arms, problems regarding transparency and oversight are the main issues that inhibit the efficiency of the EPF. As an off-budget instrument, it functions as part of the EU's Common Foreign and Security Policy placed under the jurisdiction of the European External Action Service (EEAS), the High Representative, and the top ministers of Member States (European External Action Service, 2021a). This means that the EPF functions in the absence of direct parliamentary scrutiny, due to which ministers from Member States must also exercise responsibility for overseeing democratic controls. However, many of them struggle when navigating the workings of the EU and require parliamentary guidance (Fotidiasdis and Schmidt, 2022). This poses the first challenge, as experts have noted that so far, the EPF has been marred by "orderly disorientation" and lacks European oversight, which would enable a clear system of control (Fotidiasdis and Schmidt, 2022).

Additionally, the EEAS, which is currently responsible for overseeing the EPF and conducting risk assessments, does not boast a successful track record. Complaints have been made by several NGOs protesting against the neglect of potential human rights violations in their risk assessments during EPF ventures in countries such as Mali (Cantraine, 2023). These demonstrate the group's lack of foresight when drawing up risk assessments or considering the civilian population on the ground.

I. Integrate the European Parliament and provide an oversight role in overseeing the workings of the EPF: As an off-budget instrument, the EPF cannot be subject to formal control by the

European Parliament similar to how its predecessor (the Athena Mechanism) operated (Cîrlig, 2016). However, this option advocates for a stronger form of cooperation between the Parliament and the EPF. It envisions regular meetings between representatives, the European Commission, and Parliament, as well as in-depth briefings regarding the strategic direction of the Peace Facility and risk assessment issues relating to European Security or Human Rights. Parliamentary views should also be considered with regard to the implementation of any strategic policy that the EPF pursues. In addition, relations between the EEAS and Parliament should also be strengthened and further ties built, increasing cooperation and minimising the potential of flawed risk analysis.

Assessment. The European Parliament has long been advocating for participation in the operation of the EPF. Both the 2019 Parliamentary Recommendation to the European Council and the April 2023 European Parliamentary Briefing testify to this (European Parliament, 2019). Under the Athena Mechanism, which the EPF was designed to replace, the Parliament provided the High Representative with numerous recommendations aimed at increasing the efficacy of the EU's Common Security and Defence Policy (Cîrlig, 2016). Thus, the concept of an oversight or integrated role would be highly compatible with the Parliament. An increase in cooperation would accommodate the Parliament's requests, ensure democratic controls, increase the legitimacy of European arms transfers, and help to provide a clear strategic direction for ministers at the national level to follow.

II. Create a complaints forum for the civilian populations affected by arms transfers: The international transfer of weapons carries immense risks relating to potential diversions or transferred weaponry being hijacked and sold on the black market. Although the EU's Integrated Methodological Framework attempts to reduce the likelihood of such events, an independent complaints forum should be created for the EPF through which civilians of affected countries can voice their concerns (European External Action Service, 2021a). Such a forum should be made easily accessible to civilian populations and be independent from the European Ombudsman, thus allowing complaints to be processed quickly and be met with an immediate response from the EEAS.

Assessment. The imposition of an independent complaints forum for civilian populations would allow for greater transparency and bridge the currently large gap between the EPF and affected civilian populations. As such, it also echoes Article 10 of the Treaty on European Union, which places particular focus on the representation of civilians at a European level (Legislation.gov.uk., 2019). However, this measure would work best if the first recommendation was adopted beforehand. Ultimately, the main issue with regard to the transparency and efficiency of the EPF comes with the lack of parliamentary cooperation. Although a complaints mechanism would likely succeed in increasing transparency, it is imperative that it be conducted in conjunction with an integrated parliamentary role in order to tackle the root problem of the EPF: the lack of clear command and oversight.

Ukrainian Refugees

Russia's invasion of Ukraine has resulted in over 8 million Ukrainian refugees seeking shelter abroad. Among these, over 5 million have taken refuge in the European Union by registering for Temporary Protection under the Temporary Protection Directive activated by the Council on 24 February 2022, on the same day of the onset of the invasion (UNHCR, 2022). The Temporary Protection comprises several rights exercisable by its holders for the entire duration of the protection, including the issuance of a residence permit by the Member State to which a refugee flees, the right to move freely in EU countries for 90 days within every 180-day period, and access to employment, housing, social welfare, medical care, education and banking services (UNHCR, 2022).

The European Union was widely praised for its unprecedented activation of the Directive and prompted a broader response to the invasion (UN News, 2022). As early as end-April 2022, nearly 4.5 million Ukrainians had sought refuge in the European Union (Reidy, 2022a). However, the number of refugees welcomed by the Union has been highly uneven across Member States, with Poland, Germany, and Czech Republic having taken nearly 60% of the total Ukrainian refugees alone (UNHCR, 2022). Although the influx has been argued to have benefitted national economies by boosting economic growth, significant drawbacks have also been experienced in recent months as the number of refugees may have exceeded the capacity of the labour, housing, and education markets. For instance, whilst Ukrainian refugees in Poland could add between 0.2 and 3.5 percentage points to its annual GDP growth, the country's housing and education markets have become saturated and local support has begun to wane, thus fomenting anti-refugee sentiment (Deloitte, 2022). In response, Poland has halved its funding for Ukrainian refugees in March 2023, which is likely to strain the country's reception capacity further (Krzysztoszek, 2023). The following policy options aim to partially relieve these Member States' fatigue by promoting a more even reception of Ukrainian refugees across the EU.

I. Adopt a quota system within the broader framework of the EU Temporary Protection Directive currently in place: The quota system would proportionally allocate Ukrainian immigrants to Member States based on a numeric value assigned to each of them according to the relationship between three main variables: territory, population and economic resources. Provided that the refugee has no familial connections to any other refugee who has already been granted a residence permit by a Member State and cannot, therefore, request family reunification, the refugee shall be offered a list of three countries among which they shall select the one in which they wish to file their application for a residence permit under the Temporary Protection Directive.

Assessment. While this option has the potential to be an effective tool for burden-sharing among EU Member States, there is one main challenge associated with it that the EU has failed to overcome in the past. Despite the reportedly greater willingness of Member States to welcome Ukrainian refugees than those of different nationalities, the policy would risk repeating the failure of the previously implemented quota system during the last major refugee influx in 2015 and 2016 (Baczynska, 2022). This failure was caused by prolonged debates on the criteria applied to establish quotas, as well as issues related to their enforcement, as the obligations were largely ignored by Member States. Moreover, the system proved, to some extent, counter-productive as it ultimately encouraged anti-migration rhetoric among nationalistic parties (Hilpold, 2017).

II. Provide special financial incentives to Member States that agree to host and integrate Ukrainian refugees: Incentives would include financial support for housing, education, and healthcare, as well as tax breaks for businesses that hire refugees. Such financial incentives would need to be carefully quantified in order to ensure that they do not generate unintended consequences. For instance, financial incentives should not be overly generous as to induce Member States to take in more refugees than they can realistically support. Concurrently, incentives should be more substantial than those provided for by previously existing schemes that eventually proved insufficient (European Parliament, 2012).

Assessment. Although these measures could encourage Member States to participate in burden-sharing and make it easier for them to accommodate refugees, they may equally exacerbate discourses on the 'racist', exclusionary nature of the EU refugee system, which has already been the subject of widespread criticism for not having activated a Temporary Protection Directive similar to the one currently in place for Ukrainian refugees during the 2015 refugee crisis (Reidy, 2022b). Similarly, the EU could be criticised for not implementing analogous incentives for non-Ukrainian migrants at present.

Post-war reconstruction of Ukraine

With the war in its second year, it is clear that the path to rebuilding Ukraine will be long and costly. Within the first couple of months of fighting, almost 13,000 apartment buildings and more than 100,000 private buildings were destroyed, not including hospitals, schools, kindergartens, and essential infrastructure (National Council for the Recovery of Ukraine from the Consequences of the War, 2022).

The current issue is that the European Union lacks a medium-to-long-term strategy for rebuilding Ukraine, and most of the assistance currently provided is either humanitarian and military or focuses on rebuilding emergency infrastructure (European Investment Bank, 2023). The European Union understands its moral duty to take the lead in rebuilding Ukraine, particularly in light of Ukraine's candidate status to access the Union granted in June 2022 (European Committee of the Regions, 2022b). Additionally, the abundance of financial programmes of different sizes and capacities can increase the EU's bureaucratic burden and slow down necessary aid for the Ukrainian people.

Ukraine's reconstruction consists of two main levels – critical infrastructure necessary to reconnect destroyed regions with the rest of the country and ensure the safety of the population, and long-term governance reform (European Investment Bank, 2023). It is clear that these should be carried out in the order of urgency.

The main focus for reconstruction is the role that the EU and individual Member States should play in it. The policy options below present two approaches – the first is a Member State-based approach where Member States deal with more immediate needs directly with Ukraine, and EU institutions deal with modernisation, whereas the second involves Member States' contribution to a fund that the EU, in cooperation with Ukraine, shall use to deal with all levels of reconstruction.

I. Allocate responsibility for the reconstruction of particular regions of Ukraine to Member States: This policy option involves a Member State-based approach whereby each Member State (or group of Member States) would be responsible for rebuilding and reconstructing a particular area (oblast/district) of Ukraine. The European Union would instead focus on supporting civil initiatives and organisations and government reforms. Infrastructure projects would be handled by the European Investment Bank together with the World Bank. Some similar initiatives are already in place; for instance, Estonia is focusing on reconstructing the town of Ovruch in Zhytomyr Oblast (ESTDEV, 2022). Additionally, the European Committee of the Regions has established the European Alliance of Cities and Regions for Reconstruction of Ukraine in order to provide municipality-to-municipality support in Ukraine (European Committee of the Regions, 2022a). However, an EU-wide and Member State-based approach is currently lacking.

Assessment. This policy option stands out for its inclusion of local governments, which, given Ukraine's current political system, proves essential (Bergmann and Romanyshyn, 2022). The majority of cooperation for the reconstruction would be based on a local government-to-local government or Member State-to-local government level rather than European Union-to-local government. Moreover, this would allow the European Union to be more directly involved with more overarching needs, such as supporting civil society groups and enhancing Ukraine's aptitude for accession to the bloc. It is the civil society groups that often help to complement the Ukrainian government's shortcomings on the local level, and hence require direct support from the EU (Prodaniuk and Koldomasov, 2022). On the other side, given that the need to standardise the reconstruction of the different regions of the country may arise, a centralised approach appears necessary (e.g. some Member States may be unable to keep up with their responsibilities due to financial constraints or change in political direction as a result of political turmoil). In addition to that, several regions of Ukraine have various requirements for rebuilding, as they have been affected by the war differently. For example, Zakarpattia Oblast has experienced virtually no damage from the war, whereas Donetsk Oblast has been the setting of the most intense fighting of the conflict in the past nine years. The complexity of rebuilding heavily damaged regions may deter Member States' support if the EU does not control (or assist Ukraine with) the distribution of funds.

II. Establish a centralised Member State-funded EU fund to coordinate international aid: This policy option entails the creation of a trust fund that all Member States have an obligation to contribute to based on financial capabilities and an additional voluntary contribution. The ownership of projects would be given to the Ukrainian state to best match funds with local priorities. The EU would provide financial and legal oversight and support, as well as training to Ukrainian officials. A similar current initiative is the recently established Multi-Agency Donor Coordination Platform by the European Commission. It brings together EU institutions, private donors, international financial institutions, and G7 countries (European Commission, 2023). However, it serves a co-ordinational role, and an overarching approach to the financial contribution of the European Union has not been established yet. This solution would combine various EU efforts to rebuild Ukraine, draw its financial resources from the Member States, and coordinate donations from international institutions in order to decrease bureaucratic burden.

Assessment. The main benefit of this policy option is that it gives the European Union ownership of the post-war reconstruction of Ukraine, allowing it to organise reconstruction in a way that would solidify Ukraine's position as a Member State, assisting with necessary reforms along the way. This would mean that any critical infrastructure reconstruction projects can be embedded into an overarching goal of integrating Ukraine with Europe's political, cultural, and economic spheres. In such a way, Ukraine would be rebuilt according to EU standards and directives, making accession easier (Mylovanov and Roland, 2022). More so, a centralised EU-based approach would decrease the risk of corruption – a major historic concern with any aid that has been given to Ukraine prior to the war (Becker, Torbjörn et al., 2022). Another positive side effect would be streamlining the process, as this EU fund can coordinate donations from other financial institutions, such as the European Investment Bank, G7, and others. However, the fund's work should be organised meticulously in order not to infringe on Ukrainian sovereignty. Ownership of projects should be given to Ukrainian institutions, as they would be better equipped to decide which projects to prioritise.

Conclusion

Thus far, the EU's response to the war in Ukraine has revealed areas of weaknesses which necessitate improvement. Having assessed six different policy recommendations, this paper concludes that the EU ought to implement the following three.

Firstly, reform of the EPF should consist of efforts to integrate the European Parliament. Whilst a complaints mechanism is beneficial, it fails to solve the EPF's core problems, including its lack of foresight, command and strategy. Prioritising the integration of the European Parliament would thus enable a more proactive and coherent approach to the Russo-Ukrainian war to be undertaken immediately.

Secondly, the idea of providing financial incentives to Member States hosting Ukrainian refugees should be considered. Although this may fuel disputes regarding the exclusionary or biased strategy that the EU pursues when dealing with refugees, such dialogues may be deterred if the EU were to equally pursue a proactive approach with regard to non-Ukrainian migrants. Furthermore, the EU's failure to implement, enforce, and convince Member States to comply with a coherent quota system for refugees in 2015-2016 demonstrates that financial incentives provide a higher probability of success. They do not risk violating Member States' sovereignty and provide economic benefits, thus ensuring higher rates of compliance.

Finally, the establishment of an EU-led and Member State-funded rebuilding fund for supporting Ukraine after the end of the conflict is necessary. Said fund should consist of contributions from the Member States and donations from international entities and should be coordinated by an EU institution. Giving ownership of projects to Ukraine, the institution would provide an additional safeguarding layer and make the approach to rebuilding Ukraine more proactive.

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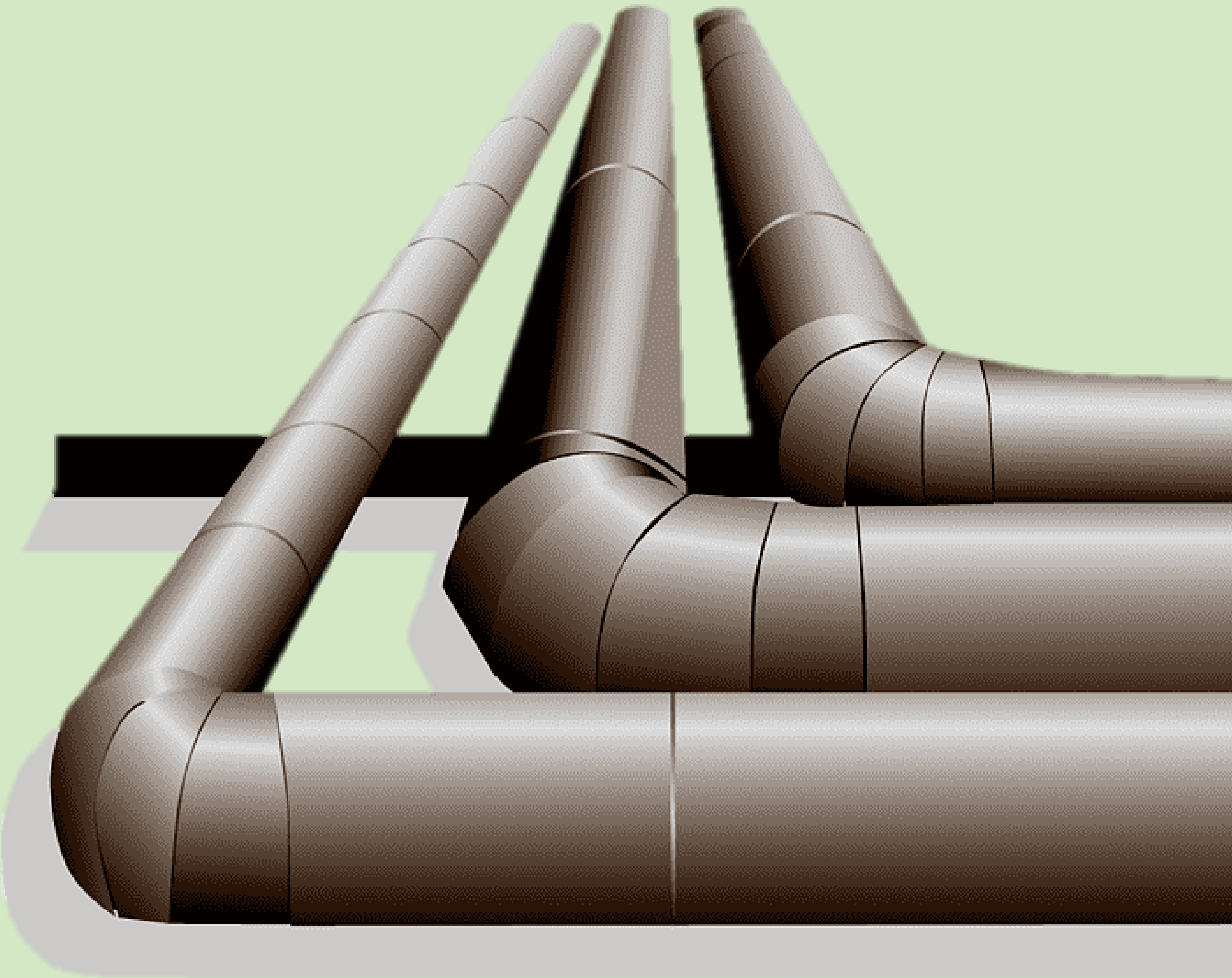

Energy & Environment

The Financialization-Assetization Nexus in the Energy Industry: An Empirical Investigation

By ***Ruoxuan Li***

Financialization, Assetization, and the Energy Industry

In recent years, researchers have shown an increased interest in financialization and assetization. There is a growing body of literature that recognises the increasing role of financial markets and transformation of physical assets into financial assets (French et al., 2011). *In broad terms, financialization* can be defined as any stimulus that increases the dominance of financial markets and financial actors in the economy. The rising importance of financial activities such as trading, speculation and financial engineering and the increasing influence of financial actors such as hedge funds, private equity firms and investment banks characterize this trend (Clapp, 2014; Pike and Pollard, 2010). The aim of this paper is to examine the emerging role of financialization and assetization in the context of energy industry.

The energy industry has increasingly depended on financial markets to finance its operations and investments (Aalbers, 2008). In particular, financialization has been the driving force behind the massive investment by private equity firms and hedge funds in the exploration and production of shale oil and gas in the United States (Sheffield et al., 2017). Nevertheless, it is a widely held view that the increasing use of assetization – the pooling of physical assets such as infrastructure and natural resources and their transformation into tradable financial securities – is driving this trend (Birch and Muniesa, 2020). In the energy industry, there is some evidence to suggest that the assetization of oil and gas reserves into financial instruments such as royalty trusts, master limited partnerships (MLPs) and exchange-traded funds (ETFs) has increased significantly (Wade and Ellis, 2022).

Empirical studies have repeatedly examined the relationship between financialization, assetization and the energy industry in various contexts. For example, Wang et al. (2019) looked at the impact of financialization on US shale gas production. The authors found a tendency for financialization to drive an increase in shale production, with private equity firms and hedge funds providing the capital needed to finance exploration and production activities. Likewise, another study by Janzwood et al. (2023) holds the view that assetization had a role in development of pipelines in Canada, suggesting that the financialization and assetization of the energy industry have had a significant impact on the industry. Both Wang et al. and Janzwood et al.'s studies generally take place in a "safe environment", hence, an implication of this is the possibility that there are significant changes in ownership and control of natural assets.

The Impact of Financialization on Shale Gas Production

Financial actors have provided the capital needed to finance exploration and production activities, driving the rise of shale production (Wang et al., 2014; Sener and Fthenakis, 2014). Consequently, oil and gas companies have turned to the capital markets to raise funds for their operations, thereby increasing their reliance on financial markets to finance energy investments (Arouri and Rault, 2012). The potential for high returns in the energy sector has attracted private equity firms and hedge funds. Due to the significant amounts of natural gas that can be extracted from shale rock formations, shale gas production has been a popular target for financial investors (Sener and Fthenakis, 2014). The development of new drilling technologies, such as hydraulic fracturing, has made shale extraction even more economically viable and has seen production soar over the past decade (Matz and Renfrew, 2015; Ladd, 2013).

Yet, the financialization of shale gas production has also fuelled the volatility of energy markets. As financial investors poured money into shale production, they created a boom-and-bust cycle where production surged with high prices, only to collapse when prices fell (Akyüz, 2020). This has led to large swings in natural gas prices and these swings can have knock-on effects throughout the economy (Asif and Muneer, 2007; Xiuzhen et al., 2022). While financialization has created new risks and challenges for the energy industry, it has also provided the capital needed to finance the development of new energy sources.

Financialization and Corporate Governance in the Energy Industry

Financialization has not only had a significant impact on the financing of energy projects and investments but also on the corporate governance of energy companies. For example, the influence of financial actors on the management and decision-making processes of energy companies has increased due to financialization (Masini and Menichetti, 2012). Private equity firms and hedge funds have invested heavily in the energy sector and, as a result, have been able to exert significant control over the companies in which they have investments (Masini and Menichetti, 2013).

More specifically, the use of debt financing is one of the most critical ways in which financialization has affected corporate governance in the energy industry. To finance their operations, acquisitions and exploration activities, energy companies have increasingly relied on debt financing in recent years. This debt often comes from private equity firms and hedge funds, which provide energy companies with high-yielding debt instruments (Dore, 2008; Jorion, 2000; Corbett and Jenkinson, 1997; Sethi, 2008). This has given these companies significant control over the decision-making process of energy companies. When they feel their interests are being served, they can call in debt or take control of the company (Baird and Rasmussen, 2005).

Increased financialization has also changed how energy companies are managed. Historically, the management of energy companies was in the hands of engineers and geologists who had a deep understanding of the technical aspects of the industry (Bratvold et al., 2009). Until recently, evidence showed that energy companies have become more focused on financial engineering and maximizing shareholder value as the influence of financial actors has increased (Pike and Pollard, 2010; Finnerty, 1988; Bartram, 2000; Dore, 2008; Boyer, 2005). In other words, there has been a shift from long-term planning and investment towards favouring short-term profitability (Lazonick, 2014). What is more, financialization has also increased the pressure on energy companies to deliver high returns to those they invest in. Consequently, companies may prioritize short-term profits over long-term investment in R&D, innovation and environmental sustainability (Lumpkin et al., 2010; Ortiz-de-Mandojana et al., 2019). It may also harm the sustainability of the energy sector, the environment and the local community.

In summary, financialization has significantly impacted corporate governance in the energy industry. The increased focus on short-term profitability, debt financing and maximizing shareholder value has led to an increased influence of financial actors on the decision-making processes of energy companies (Dockey et al., 2000). As such, it is imperative that policymakers and industry stakeholders carefully consider how financialization affects the long-term sustainability and stability of the energy industry.

The Role of Assetization in the Ownership and Control of Energy Assets

The role of assetization in energy asset ownership and control has become a new topic in recent years. Assetization transforms physical assets, such as oil and gas reserves, into financial assets. These financial instruments offer attractive yields and diversification benefits and have become increasingly popular with investors seeking exposure to the energy sector (Kothari, 2006). However, the unbundling of energy assets has also significantly impacted the ownership and control of energy assets. Energy assets traditionally were owned and controlled by vertically integrated energy companies. These companies managed the entire value chain from exploration and production to refining and marketing (Klein et al., 1978). In contrast, the rise of assetization has allowed financial investors to become involved in owning these assets, thereby exerting greater control over how energy companies operate (Birch and Muniesa, 2020; Wu et al., 2020).

One of the most popular forms of assetization in the energy industry is the MLP. MLPs are publicly traded partnerships. They aim to generate steady income from owning oil and gas assets, such as pipelines, storage facilities and gathering systems (Feldman and Settle, 2013). MLPs offer tax advantages and high yields, making them attractive to income-seeking investors. However, the ownership and control of energy assets has changed significantly with the rise of MLPs. MLP investors have limited liability and do not have voting rights, but they can influence management decisions through the shares they own (Gomtsian, 2015; Utke, 2019).

Another popular form of ownership in the energy industry is the royalty trust. Royalty trusts are investment vehicles that allow investors to participate in producing oil and gas. Investors receive regular distributions based on the income generated by the royalty trust (Patatoukas et al., 2015). Like MLPs, royalty trusts offer attractive yields and tax advantages, allowing financial investors to exert greater control over managing energy assets.

In general, therefore, it seems that the ownership and control of energy assets has been significantly affected by the development of energy decentralisation. What is now needed is that policymakers strike a balance between encouraging investment in the energy sector and maintaining fair, transparent and competitive energy markets. Hence, they should consider the introduction of position limits to prevent market manipulation and maintain market integrity. To promote a sustainable and secure energy future for all, it is essential that the energy sector remains open to all market participants.

Implications of Financialization and Assetization for the Energy Industry

As indicated previously, the impact of financialization and assetization on the energy industry has been significant and multi-faceted. On the one hand, these trends have provided much-needed capital for financing investments in the energy sector, which has contributed to energy security and reduced dependence on foreign oil through increased exploration and production activity (Sovacool, 2010). On the other hand, financialization and assetization have also brought significant challenges for the energy industry as there is now no doubt that energy markets have become more volatile and destabilized (Brunetti and Buyuksahin, 2009). The assetization of energy assets has led to a greater focus on short-term profits and financial returns which may undermine long-term investment in renewable energy and other sustainable energy sources (Kern and Smith, 2008).

Thus, a further implication of financialization and assetization for the energy industry is the potential for more significant environmental and social risks to arise. Financial investors may increase the risk of accidents, pollution and other negative externalities by prioritizing short-term financial returns over environmental and social considerations (Richardson, 2009b). In addition, addressing the risks associated with climate change and the transition to a low-carbon economy may become more complex through the securitization of energy assets (Richardson, 2009a). Given these implications, policymakers and industry stakeholders need to take steps to address the challenges posed by financialization and assetization in the energy industry. This may involve the development of new governance structures that prioritize long-term sustainability and environmental and social considerations (Herzig and Moon, 2013). In addition, to mitigate the risks associated with financialization and assetization, it may be necessary to strengthen the regulation of financial markets and actors (Birch, 2017).

Ultimately, it is a complex and evolving issue that requires careful consideration and analysis of the nexus between financialization, assetization and the energy industry. We can work to ensure this critical industry's long-term sustainability and stability by understanding the implications of these trends and developing strategies to address their challenges.

Policy Recommendations

The section below draws together some of the potential strategies and suggestions.

Encouraging sustainable investment: One strategy for ensuring the sustainability of the energy industry is to encourage investment in sustainable energy initiatives. This can be accomplished through a variety of mechanisms, including tax incentives for investments in renewable energy and public-private partnerships to encourage investments in sustainable energy infrastructure (Koppenjan and Enserink, 2009).

Promote transparency and accountability: It is essential to guarantee transparency and accountability in energy sector financial transactions to promote industry stability. This can be accomplished through regulatory supervision, requirements for energy companies to disclose their financial activities and investments, and industry-wide initiatives to promote greater accountability and transparency.

Develop a long-term perspective: One of the challenges posed by financialization and assetization is the tendency to prioritise short-term profits over long-term sustainability. Investors, policymakers, and industry stakeholders must adopt a long-term perspective on energy investments and prioritise sustainability over short-term profits to address this challenge.

Support innovation and research: Another strategy to guarantee the sustainability and stability of the energy industry is to promote innovation and research in sustainable energy technologies. This may involve investing in R&D initiatives, funding start-ups and small businesses that concentrate on sustainable energy, and establishing public-private partnerships that aid in the development of new sustainable energy technologies.

Encouraging collaboration and partnerships: Lastly, fostering collaboration and partnerships among industry participants can be an effective strategy for the sustainability and stability of the energy industry. This can include developing shared objectives and strategies to promote sustainable energy and building coalitions with industry groups, policymakers, and civil society organisations to advocate for sustainable energy policies and initiatives.

Further Suggestions

Transaction Taxes as a Tool for Financial Stability: As observed in France, transaction taxes on financial trades involving energy commodities can be a useful instrument for mitigating some of the adverse effects of financialization. Consequently, it is suggested that additional nations contemplate implementing similar transaction taxes. In addition to contributing to the government's budget, these taxes can discourage short-term speculative trading which can contribute to market volatility and increase the risk of financial crises. Moreover, transaction taxes can encourage companies to prioritise sustainable practises and encourage long-term investment in the energy industry. To promote financial stability and safeguard the energy industry, policymakers should investigate the possibility of instituting transaction taxes on energy-related financial transactions.

Implementing Position Limits to Regulate Energy Markets: Another important practical implication is that policymakers contemplate implementing position limits to regulate financial market participants in the energy sector. Position limits are a crucial policy measure that can prevent market manipulation and preserve market integrity by preventing a single trader or institution from holding a disproportionately large position in a particular commodity. The European Union's implementation of position limits for commodity derivatives trading, which includes energy derivatives, functions as a model for other nations. To guarantee a fair and transparent energy market, policymakers should consider implementing similar position limits. Taken together, a multi-pronged approach involving regulatory oversight, industry-wide initiatives and collaborative partnerships is needed to ensure the stability of the energy industry in the face of financialization and assetization. By prioritizing sustainability and long-term thinking and mitigating financialization/assetization risks, building a more stable energy sector may be possible.

Conclusion

This paper set out to assess the effects of the link between financialization, assetization and the energy industry as a complex and multi-faceted phenomenon with significant implications for long-term sustainability. The most obvious finding to emerge from this study is that financialization and assetization have increased the reliance on financial markets to finance energy investments. Even taking into account the relatively limited case studies, this paper adds to a growing body of literature on significant changes in the ownership and control of energy assets which has resulted in a shift of power and influence from traditional energy companies to financial investors. This can potentially affect the industry's ability to operate in a sustainable and responsible manner.

To ensure the long-term sustainability and stability of the energy industry, more work is needed for policymakers, investors and industry stakeholders to take a proactive approach to addressing the challenges posed by financialization and asset stripping. It would be wise of policymakers to develop strategies to promote transparency, accountability and responsible investment in the energy sector, and foster greater collaboration between traditional energy companies and financial investors.

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Climate Finance as a Reparation Tool in Addressing the Inequality

By ***Sreejesh Neelanath***

“We cannot wait for speeches when the sea is rising around us all the time,” Simon Kofe, Tuvalu’s Minister of Foreign Affairs famously said at the Glasgow COP 26 conference in November 2021. Tuvalu, a Polynesian microstate in the Pacific Ocean with around 26 sq. km area and 12,000 inhabitants, is one of the Small Island Developing States (SIDS) which is expected to lose its territory due to impending climate change. A sea level rise of less than half a meter would be enough to wipe this country off the Earth’s surface. Yet, Tuvalu’s per capita CO_2 emissions in 2021 stands at a mere 0.71 ton in comparison to 8.05 ton from China and 14.86 ton from the United States (Ritchie, Roser & Rosado, 2020).

Territorial threats faced by countries like Tuvalu are clear evidence of how climate change effects are felt disproportionately in the areas that barely contribute to global emissions. The unequal contributions to ecological degradation and climate change, and the actions we take to counter this market failure exacerbate socio-economic inequalities. We need a very effective reparation mechanisms to reduce the effects of climate-change fueled. We shall try to comprehend how climate finance, through global climate funds could help bridge the equality gap and work as an effective reparation mechanism.

We will analyze the co-impacts and equitability that global climate funds such as Green Climate Fund (GCF) may provide, through the lens of four equality paradigms, health equality, economic equality, gender equality and ethnic equality. The “polycentric governance” systems of GCF will not only help finance the requirements of the “particularly vulnerable” states but also bring the equitable distribution of funds through mitigation, adaptation and overlap.

Climate Change accelerating inequality and vice-versa

Only with the adoption of Sustainable Development Goal 10, the “reduction of inequality among and within the countries”, did policymakers start to look at inequality in unison with the challenges faced by humanity because of climate change (Islam, S. N., 2015, 24). Not only does climate change pose a threat to the socioeconomic development of the Global South but without proper reparations and transition plan, the demand to adopt climate mitigation policies further pushes these economies to retard their late development (Markkanen & Anger-Kraavi, 2019, 827-8).

There are three basic pathways through which climate change affects socioeconomic realms (Smith, K.R. et al., 2014, 716). The first one is through “direct impacts” which relate primarily to changes in the frequency of extreme weather including heat, drought, and heavy rain. Hurricane season in the Atlantic Ocean in 2017 devastated SIDS’ economies in the Caribbean, the aftermaths of which are still evident in the socioeconomic divide and security disaster that it created. Hurricane Irma and Maria in that season created a loss of more than $5 bn to five SIDS economies including Barbuda, Sint Maarten, with almost 95% of the properties destroyed (Perry, Keston K., 2021, 366). The economies struggled to generate profits, fell deeper into debt and spiraled further into extreme poverty. As they fought to get back on their feet, they had no capacity to spare funds for climate action or a "just transition".

Second are the effects mediated through "natural systems"; for example, disease vectors, water-borne diseases, and air pollution. The southern state of India, Kerala, experienced an unprecedented amount of rain during the 2018 monsoon season in a very short span of time. The state received rainfall of 2347 mm as against a normal of 1650 mm in the period spanning June 1, 2018 to August 19, 2018 (CWC, 2018, 1). The region saw a significant departure – in the range of 250% – from the normal rainfall in just two weeks from August 8 to August 22, 2018 (CWC, 2018, 32). The ecological disaster due to cloud bursts and abnormal rains combined with the sudden opening of 35 out of 57 dams in the state led to a significant flood crisis affecting almost one-third of the population of 35 million (CWC, 2018, 33). The state of Kerala, otherwise ranking significantly higher in standards of health compared to the rest of South Asia, observed a significant increase in the disease outbreaks such as leptospirosis with a run-up to 2598 suspected cases with 95 suspected deaths in the following month, primarily in the economically backward northern parts of the state. The cases of death due to leptospirosis were incidentally only 43, 35 and 80 for the entire years of 2015, 2016 and 2017, respectively (James S, Sathian B, van Teijlingen E, Asim M., 2018, 746).

Effects heavily mediated by "human systems", for example by occupational impacts, undernutrition, and mental stress are the third pathway. Disaster-related trauma ends up in the human manifestation of psychiatric diseases such as anxiety disorders, resulting in an inability to work and loss of livelihood (Smith, K.R., et al., 2014, 732). The same can further result in societal impact by way of violence and conflict, as seen in Haiti, which was pushed to a state in the hands of anti-social elements after the 2010 earthquake.

Colonialism and unequal development: A case for dependency theorists. While discussing this subject, it is imperative to pull in the historical context of exploitation, accumulation by dispossession and continuous impoverishment through colonialism and imperialism. Post the Second World War, the US emerged as the least-scarred nation and took the lead in rebuilding Europe and supporting the Japanese economy (Michael P. Gerace, 1991, 348). The huge financial outlay forced the advanced economies to hastily transfer the political powers to their previous colonies, devoid of technology transfers or "proper" capital reallocations, (read as colonial reparations). Hence, economic nationalism adopted by Europe after the Second World War (Getachew, A., 2019, 160), ultimately left developing countries with no means to enhance their capabilities, improve efficiencies or create comparative advantages, thereby exacerbating economic inequalities.

When globalization picked up, developed nations once again effectively utilized the Global South to trade crucial natural resources and outsource manufacturing processes to developing nations in the name of trade liberalization and open markets. This modern rent-seeking practice helped the Global North maximize its profits by acquiring assets cheaply from developing nations and fueled industrial and technological development through neo-colonialist Trans National Corporations (TNCs). These property rights and monopolies killed the Global South's chances of catching up with the Global North. Furthermore, dependency theorists also argue that the cost of environmental degradation that the Global South had to carry is leading to a socioeconomic imbalance in the future.

The effects of shifting the manufacturing base to the Global South accelerated late industrialization, however, "shareholder primacy" also drove TNCs to cut corners and turn a blind eye towards the socio-economic and environmental effects. In Latin America and South East Asia, this led to widespread deforestation (Green, F., & Healy, N., 2022, 638). The outsourcing and offshoring of production thus helped in exporting climate change and its effects to the Global South while wealthier nations remained the beneficiaries of carbon-centric production. The economic advancements that could have been achieved did not occur die to two reasons: First, due to late industrialization and associated inflationary pressures and second, profit repatriation to Global North and absence of reinvestment in adaptation technologies in the South. This could be the reason for counter-mobilization movements in the Global South where climate policies and carbon-centric discussion invoke fear of job loss and a rise in poverty levels (Green, F., & Healy, N., 2022, 639).

The Evolution of "Just Transition" and "Equitability". The politics of economic insecurity has thus led to dialogues of "just transition" which acknowledge the distributional impacts of climate change policy and equity in the distribution. Outcome-based aspects of equity as defined by Diana Reckien et al. (2018), is the equitability in the distribution of costs and benefits of policies between individuals from different social groups or income categories, between households within a community or communities in a given area (Sanna Markkanen & Annela Anger-Kraavi, 2019, 829).

The international channel that discusses how the unequal distribution of power in the international realm results in inequalities in finding priorities on Global Public Goods (GPGs) such as environment and health, deserves prime importance. The matters of loss and damages reparation are repeatedly relegated by the historically high emitters of greenhouse gasses mainly due to low death tolls and relatively low per capita GDP losses when compared to the other extremes felt in the smaller economies like in SIDS (Perry, Keston K., 2021, 365). This leads to demands from marginalized societies for their voices to be heard and the current governance mechanism is not suitable for redressing their issues.

Policy Recommendations

Climate action and adaptation have fundamentally two dimensions. One – a fair way of transition and adaptation to a low-carbon economy and second – reparation by the benefitted communities to less privileged through equitable distribution. An effective tool like climate finance will be able to meet the two-dimensional needs of climate action, but cannot guarantee equitable distribution. By enacting polycentric governance architecture through global climate funds, this gap could be filled.

I. A global pooling system that operates in a democratic, distributive way will pave the way for the "particularly vulnerable" to catch up with the Global North, thus reducing the pressure of migration and social and economic unrest. Funds allocated will help find the resources for mitigating threats created by climate change and enable adaptation. The Green New Deals (GNDs) which also focus on sustainable social provisioning (Green, F., & Healy, N., 2022, 640), if financed through global climate funds, will not only serve as a global redistribution platform but technological transfer channels and enablers of new age industries and foster innovation and collaboration between different countries.

II. As the per capita consumption and per capita emission of greenhouse gasses tend to be higher in rich countries, global climate funds become an effective tool to mandatorily carve out contributions from rich countries for the conservation of GPGs. It also serves as an incentive to reduce carbon footprints by reducing carbon-intensive consumption in the Global North.

III. More equitable, rich countries such as Germany, Japan and South Korea tend to have less consumption and less ecological footprint compared to highly inequitable, rich countries such as the USA, the UK and Canada (Hetal Jani, 2017). The contributions from more unequal countries on a higher scale will result in incentives to their community to focus on the reduction of these inequalities through national policies and GNDs.

The impediments due to power weights in the current multilateral framework are to an extent solved in the GCF under the ambit of the United Nations Framework Convention on Climate Change (UNFCCC) through the one country, one vote rules (Islam, S. N., 2015, 21). This polycentric governance system of the GCF helps in two ways:

- Raising funds from the developed countries as part of their Nationally Determined Contributions (NDCs),
- Allocating the funds in equitable ways to reach vulnerable nations.

Co-impacts and Equitability

Health Equality. Most of the climate mitigation policies have positive co-impacts due to increased air quality and better living conditions which indirectly improves household financial circumstances. Reduced health and social inequalities improve educational performance as well. As of August 2018, 74 GCF projects were calculated to benefit 217 million people and reduce an equivalent of 1.3 billion tons of CO_2 (Green Climate Fund 2018; Bracking, S, 2019, 716).

Economic Equality. If we take the example of public transport, more opportunity and accessibility helps in reducing economic inequality. But quite often these infrastructural upgrades forces the displacement of populations from urbanized areas. If they are not provided with alternative jobs or economic living conditions, this can exacerbate inequality and resentment. These issues can be effectively tackled through investments in alternate sectors. Renewables, retrofitting existing buildings and the development and production of energy-efficient technologies are all alternate job sectors which the GCF focuses on. These activities can be achieved through reskilling a labour force that was once dependent on carbon-intensive activities. Schemes like subsidies, interest-free loans, and grants to equip such “just transitions” could be mobilized through the GCF.

Gender Equality. The betterment of households will also free up domestic work and thus lead to greater gender equality in labour participation. Blended financing elements provided by the GCF support the technical assistance and grants the fund allocates to vulnerable nations in Sub-Saharan Africa and SIDS to enable adaptability and reskilling (Bracking, S & Leffel, B. 2021, 6).

Ethnic Equality. When it comes to relocating populations from vulnerable zones, indigenous people are the worst affected. If we do not have the right mechanisms to provide basic amenities for the relocated population, the situation will result in mental issues, community breakdown, environmental degradation and ecological destruction, in-migration, social problems and loss of land and livelihood. A project that began by admitting that the full financialization envisaged for results-based payments (RBPs) for forest conservation in Ecuador became stalled over issues of "price, volumes of emissions reduction, availability of RBP funds and conditions of access" (Green Climate Fund 2016, Bracking, S, 2019, 717). Hence, GCF's effectiveness in bringing ethnic equality is still uncertain (Green Climate Fund 2016, Bracking, S, 2019, 717).

The GCF has emerged as an example of a centralized repository of climate finance that accumulates funds from the Global North and distributes these in an arguably equitable fashion. Some of its early projects were recycled iterations of prior projects sponsored by financial development institutions (Bracking, S, 2019, 716), thus leaving the structure as a refinancing institution. Through the effective correlation with SDGs and strong disclosure and reporting norms, the GCF could bring in marked changes as governance can be made resilient only by disclosures which are also required for performance measurement and course correction (Bracking, S & Leffel, B, 2021, 5-8).

Conclusion

It is clearly evident that the accumulation which started with the advent of colonialism before the world wars fueled the industrial growth of the Global North but left most of the colonies in despair for similar growth at home. While the argument for the reparation of such colonial processes should continue, the ecological degradation that has spruced up on these unequal consumption patterns cannot be ignored. The effects of such unequal growth are now more evident in that the Global South is nowhere near catching up with the similar advancement which has been achieved by counterparts in the North. Climate change and the actions it calls for are a threat for the Global South to once again relegate its development agenda. Hence, reparations can find a renewed strength through global climate funds such as Green Climate Fund (GCF) which not only has a polycentric governance structure which underpins not only "equitability" and "just transition" but also very strong disclosure and monitoring norms.

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Global Health

Correcting the Decline in Women's Healthcare in the United Kingdom

By ***Ethan Curley***

Women's healthcare outcomes in the United Kingdom have reached an alarming new low that requires an end to the long history of ignorance and mere lip service paid to women's health, to be replaced with immediate corrective action. In statistics published in early 2023, the UK toppled 18 places from the previous year to rank 30th out of 122 countries included in the 2021 Hologic Global Women's Health Index ("The Hologic Global Women's Health Index Pathways to a Healthy Future for Women" 2022). The report placed women's healthcare provision in the UK on par with countries such as Kazakhstan, Slovenia, Kosovo, and Poland; and worse than that of China and Saudi Arabia. We, in the UK, take great pride in our National Health Service and rightly expect better outcomes for women's health. To achieve this, we need both improved understanding and additional resources to inform and empower public policy.

A history of good intentions and lacklustre results

The UK's accelerating backslide in standards comes despite a multitude of warnings that well pre-date the collection of statistics for the report in 2021. *"The Health of the 51%: Women"* – the 2014 Annual Report of the UK's first female Chief Medical Officer, Sally Davies – for example, was dedicated solely to addressing women's health issues, advocating for measures that could prevent predictable morbidity and mortality as well as empower women to take positive steps towards health (Mullins and Davies 2015). However, many of these issues have suffered from social taboo and prejudice which have choked both public and political discourse, directly contributing to the regression we see today. Since that report, women's healthcare has been mired by scandals such as failures in the care of mothers and babies at Shrewsbury and Telford Hospital NHS Trust, (Ockenden, 2022) as well as the harm to women caused by a rogue consultant breast surgeon illuminated in the Paterson Inquiry report (Department of Health & Social Care, 2020).

There have been initiatives to seemingly address the regression in women's health. The Women's Health Strategy for England, published in summer 2022, was hailed as the first government-led women's health strategy, signalling fresh impetus for women's health and wellbeing at the height of government following the recent litany of scandals. Laying out an ambitious prospectus for the next ten years, the strategy promised "transformational change" in health outcomes for women (Department of Health and Social Care, 2022). Following this, the government has been working towards attaining its eight priorities for the first year of the Women's Health Strategy. Initially appointing its first ever

Women's Health Ambassador, Professor Dame Lesley Regan, to champion women's causes and support with the strategy's implementation. Then, more recently, announcing £25 million in funding for the creation of several women's health hubs across England to serve as "one-stop shops" for women to access the care and advice they need in one convenient location (Department of Health and Social Care, 2023).

The publication of Hologic's report, however, serves as a stark reminder that while this indicates a step in the right direction from government, questions remain over whether the response has been sufficient. This brief proposes a series of policy recommendations, the urgent implementation of which can help to provide women with the quality of healthcare they need and deserve.

Policy Recommendations

I. Educating early to tackle stigma and resisting the politicisation of the classroom: A pivotal step in improving women's healthcare outcomes is empowering women with the information they need to have confidence in managing their own health, as well as knowing when and where to seek necessary assistance. This is not an evasive transfer of responsibility but an acknowledgement that better education can provide more autonomy and self-assurance for women when confronting, for example, foreseeable reproductive healthcare needs.

Sex Education (RSE) in schools is a necessary first step to promoting healthy behaviours and tackling taboos with the youth. Survey data in 2019 found that 50% of Britons could not identify or describe the function of the urethra, labia or vagina (Waldersee, 2019). Such a widespread lack of understanding about basic features of the female anatomy is shocking evidence of inadequate education. It indicates the presence of taboo at even the most entry-level aspects of discourse on RSE. Yet, young people engaging in conversations about sex is a controversial subject and can often become a political battleground amongst parents and politicians. In turn, the political discourse surrounding sex education can often be harmful, reinforcing taboo sand supressing open dialogue. The negative impact is amplified for young women, who are exposed to the risk of greater physical and emotional complications than their male counterparts.

Despite this, in March 2023, the government announced its decision to bring forward an urgent review of RSE in schools following pressure from backbench MPs over concerns on the inappropriateness of content young people are being exposed to. Teaching unions have described the decision as "politically motivated" and stated, "the vast majority of schools are incredibly cautious and sensible about the teaching of RSE." (Adams and Adu, 2023) Dragging RSE into the national spotlight as the latest front in the toxic 'culture wars' will be inimical to the future health and wellbeing of the UK's young women and should be avoided at all costs. If this review is to go ahead, it should be seized as an opportunity to unequivocally clarify guidelines that allow for an open and taboo-tackling discourse to take place in the classroom. These conditions would lay the foundations for women to learn the key information required to make decisions regarding their own health in the future.

II. Promoting diverse female voices in healthcare settings and beyond: Strategies such as the 2020/21 NHS People Plan have actively encouraged greater representation for women and other underrepresented groups in the NHS in recent years. Indeed, a report from the NHS Confederation revealed that women's representation on NHS trust boards in England was up by nearly 5 per cent to 44.7 per cent total between 2017 and 2020 (Sealy, 2020). Within a workforce that is 77 per cent female, however, there is still a disparity in representation. Statistics also revealed an overall representation of only 8.9 per cent Black and Minority Ethnic (BME) directors and no data was collected in regard to other dimensions of diversity (Sealy, 2020). Whilst representativeness is not a guarantee of progress in healthcare outcomes, it is undeniable that authentic health and care leadership, based on breadth of thought, expertise and experience from a range of perspectives, is of the utmost importance in a modern society. A continued push for greater parity for women, including those from diverse backgrounds, as NHS leaders is thus welcome and should be pursued.

A ground-breaking multidisciplinary 2019 study has revealed how BME women have seen poor healthcare outcomes due to exclusion from applied health research (Andrews et al. 2019). The study sought to explore how issues related to weight management can be initiated and explored in a culturally sensitive and appropriate manner with African Caribbean women by primary care healthcare professionals. Using an intersectional approach combined with the concept of "liminal spaces," African Caribbean women were accessed in spaces located between public and private settings where they felt more comfortable in revealing understandings of health, body shape and size that ran counter to mainstream and biomedical positions (Andrews et al. 2019). An unwillingness, or lack of intuition, to access African Caribbean women in such spaces had led them to be labelled as "hard-to reach" for applied health research in this domain and likely contributed to their experience of poorer health outcomes than the general population post-diagnosis (Andrews et al. 2019). The real-world consequences of the neglect of diversity and cultural nuance across healthcare that can lead to inequality are clearly visible here.

Looking ahead, better healthcare for women of all backgrounds in the UK should be built from the bottom-up, as well as being supplemented with top-down action. Greater diversity of knowledge, opinion and experience is required at all levels in order to continue to foster an atmosphere of inclusivity. This must amount to more than a so-called 'add women and stir' approach by internalising the mediations between multiple cultural identities and ongoing group politics of wider society into our healthcare system to improve accessibility as well as outcomes.

III. Addressing the gender pain gap to tackle poor mental health and start rebuilding trust: Awareness of the importance of mental health has spread increasingly across society in recent years and rightfully so. Yet, the UK was among the five fastest-declining countries for women's emotional health in Hologic's 2021 report ("The Hologic Global Women's Health Index Pathways to a Healthy Future for Women" 2022). These counterintuitive trends are taking place because, despite greater societal recognition of the importance of mental health, women are routinely witnessing deprioritisation of their healthcare needs and dismissal of their concerns by healthcare professionals. Of over 100,000 women who responded to a call for evidence for the 2022 Women's Health Strategy, 84 per cent of respondents said that there were times when they had not been listened to by a healthcare professional (Bagenal, Khanna, and Hawkes 2022). Women interviewed for the "First Do No Harm" report into decades-long medical malpractice affecting pregnant women and children described the “constant battle to get the help and treatment (they) needed,” as well as indicating that “’Gaslighting’ and a ‘fobbing off’ culture appears to be rife.”(“First Do No Harm The Report of the Independent Medicines and Medical Devices Safety Review”, 2020). It is no surprise in these circumstances that women’s emotional wellbeing is plummeting.

Women across the UK are enduring unnecessary levels of pain and are having their voices dismissed when attempting to speak up. Clinical studies have found that women are not only at greater risk of developing chronic pain than men but demonstrate increased engagement in activities despite pain, in what has been termed “pain acceptance” from women (Pester et al. 2022). It is time that the ‘gender pain gap’ is acknowledged and prioritised in the national conversation. Demonstrating to women that their voices are being heard and their experiences recognised can help to usher in progress and rebuild trust. As an example, a reticence to offer any form of pain relief when fitting contraceptive intrauterine devices (IUD), despite upwards of 90 per cent of women surveyed reporting pain during the procedure, has been linked to less women wanting to have the device fitted (Cleghorn, 2021). Simply offering some form of pain relief would encourage more women to use a safe, convenient and effective form of contraceptive by validating their concerns over the pain they are expected to tolerate.

Addressing the gender pain gap, an issue that has plagued women for countless years and exposed them to the insidious psychological impact of their own health system dismissing them, can begin the process of rebuilding trust.

Conclusion

There has been a renewed focus upon women’s healthcare issues in the UK in recent years but more is required. Indeed, some commentators have criticised the 2022 Women’s Health Strategy as a “missed opportunity,” due to its nature as “not a strategy for promoting women’s health, but a strategy for women’s health services.”(Bagenal, Khanna, and Hawkes 2022). This brief has sought to suggest a series of policy recommendations that go further than a purely technocratic approach to achieve a more engaging and empowering outlook on women’s health in the UK.

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Health Workforce Brain Drain: Who is Responsible?

By ***Sheila Mwathi***

The role that the health workforce play in the health system cannot be overstated. Given this criticality together with the time and resources invested to educate and develop skilled health workers, it is crucial to plan now for the future of the health workforce. Crucial problem faced by the healthcare sector worldwide is the shortage of healthcare workers.

A report by the World Health Organization (WHO 2016) estimates that by 2030 there will be a shortage of 14.5 million workers across the globe with the low- and middle-income countries facing the greatest deficits. The reasons for this could be attributed to an aging population and insufficient workforce within high income countries. For developing countries however, the inability of governments to employ all trained health workers as well as issues of low wages and poor working conditions have contributed to the shortages.

While developing countries have long struggled with health worker shortages, the issue is now also severely affecting developed countries, with potential implications for the global labour supply. According to the Migration Observatory, while non-EU born workers make up 10% of the overall UK labour workforce, they represent 21% of health professionals and 19% of nurses and midwives (Fernández-Reino and McNeil 2020) . The outflows of health workers from low- and middle-income countries, particularly in Africa, to high income countries that are able to offer better compensation has been identified as one of the biggest threats to their health systems(Vujicic and Zurn 2006)

As of 2020, the density of health workers per 10 000 population reveals a striking inequity, with high-income countries having a health workers density that is 6.5 times that of low-income countries. This is shown in the figure below:

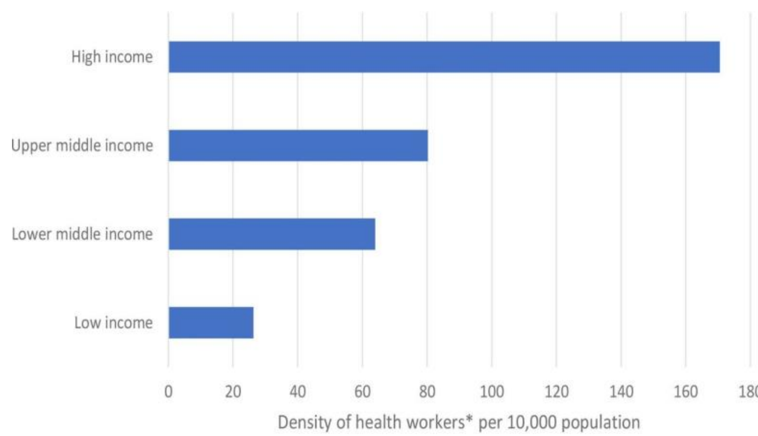

Figure 1. Adapted from: BMJ Global Health (Boniol et al. 2022)

This brief will explore the impact of health worker shortages in developed countries on the labour supply of developing countries.

The Situation in Developed Countries

Even before the COVID-19 pandemic, several countries were facing healthcare worker shortages which prompted various recruitment and retention strategies to mitigate the challenges. Emotional distress and burnouts among the existing workers during the pandemic only exacerbated the shortages.

A survey by the Commonwealth Fund (Fields et al. 2022) finds that across the 10 high income countries studied, most physicians reported increases in their workload since the beginning of the pandemic. The increased workload was causing emotional stress and burnout, especially in younger physicians. Moreover, half or more of older physicians reported that they would retire within the next three years, the implication of which is leaving behind a workforce that is burned-out and more stressed. These factors have ultimately resulted in declining quality of care within these countries. The increased job unsatisfaction along with limited pay and disincentives (i.e. the amendment to the NHS pension scheme tax rules in the UK) are forcing some of the most experienced doctors to retire and abandon their leadership positions for fear of incurring significant charges. Thus, high income countries are left with shortages of healthcare workers.

To mitigate this challenge, several countries have implemented favourable immigration policies that entice professionals from low- and middle-income countries. However, the incoming healthcare workers continue to face problems such as; antisocial working hours, shift patterns that are unsupportive to a meaningful family life and high levels of stress. Additionally, workers are burdened with slow and bureaucratic systems and a limited sense of community due to working daily in an unfamiliar environment (Rivlin and Lumley Tara 2023)

Impacts on Labour Supply

Workers from developing countries have filed the gap of shortages of healthcare professionals in developed countries, resulting in a brain drain in origin states. It is important to note that in most OECD countries, the proportion of health workers trained abroad is lower than those born abroad which reflects the fact that destination countries provide part of the education and training to migrants. In terms of training abroad, overall, 16% of all doctors working in 26 OECD countries in 2016 had obtained at the minimum their first medical degree in another country, up from 14% of all doctors in 2006 and 15% in 2011. The number and share of foreign-trained nurses had also increased in most OECD countries over the same period (OECD 2019)

It can be seen therefore that as health workers are able to find higher wages and better working conditions in developed countries, they are increasingly leaving their home countries in search of better opportunities. The literature indicates that unusually high health worker migration rates are more likely than most instances of high-skilled migration to lead to brain drain (Antwi and Phillips 2013)

However, the fault is not entirely on developed countries as developing countries' health systems face a myriad of health challenges including:

Financial constraints. They lack the fiscal space to absorb all the professionals that are trained within their countries, resulting in heightened rate of unemployed professionals. Thus, the countries are investing in education, without reaping the benefits of the investment, as professionals opt to seek employment in higher income countries.

Unequal distribution of resources. There is unequal distribution of resources within the countries causing medical professionals to have preference to working in urban areas as opposed to rural areas where there are fewer and widely dispersed professionals. The poor working conditions and excessive workloads can cause stress, burnout, and absenteeism among healthcare professionals and can be a significant barrier to hiring and retaining workers in particular positions and locations. These elements are particularly evident in rural and remote places, where workers may be alone, confronted by a wide range of unforeseen demands, and with little to no backup.

Policy Recommendations

Equal distribution of resources: Governments should strive to develop infrastructure in rural areas to minimize clustering of medical professionals in urban areas. Well-equipped social amenities would be crucial to incentivize individuals to remain in rural areas. Additionally, fiscally sustainable hardship allowances could be used for personnel in extremely marginalized areas.

Investments in education: Within developed countries there is need to implement policies that encourage young people to pursue careers in the medical field. These could include policies such as scholarships, bursaries and other educational subsidies as degrees in the field are often extremely expensive and out of reach for potential trainees. Public-private partnerships could be employed to facilitate this sustainably.

To retain health workers especially within underserved areas, developing countries could target recruitment into the medical field from those with a rural background who are more likely to 'return home' after their studies. Additionally, within their training, students should be exposed to rotations within both rural and urban areas in equal measure to alleviate shortages.

Policies to attract and retain health workers: There is need for policies that attract and retain health workers within both developed and developing countries. These would require a holistic approach within input from other sectors to bring about both financial and non-financial incentives. For example, professionals could be offered affordable housing that is within proximity of the hospital or medical centre or rent and transport subsidies.

Moreover, family friendly policies, such as time off for childcare and elderly care, would improve the ability to retain female health workers. These policies would aid in alleviating stress and overall burnout amongst staff, likely enhancing their overall productivity.

Responsible recruitment: Developed countries should be held accountable to the World Health Organisation's guidelines on recruitment of international personnel to avoid contributing to workforce gaps in developing countries.

Conclusion

Health worker shortages are a threat to the international health system as the consequences are borne by both developing and developed countries. The shortage in developed countries is having a growing impact on the labour supply of developing countries. Developing countries are facing the challenge of providing adequate health care while simultaneously dealing with the health worker brain drain. The health worker shortage, coupled with the unequal distribution of resources, has created a challenging situation for developing countries, highlighting the need for improved policies and increased investment in the health sector in order to attract and retain health workers; the policies would improve health workers wages and working conditions, disincentivising relocation. On the other hand, developed countries need to implement programs which entice the youth to the medical field. Overall, the responsibility to find innovative and sustainable solutions to health care worker retention lies on developed *and* developing countries alike.

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