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REVIEW OF European & Transatlantic Affairs

Introductory Remarks

Letter from the Editor-in-Chief

Domonkos D. Kovacs
Editor-in-Chief

It gives me great pleasure to introduce the Spring 2023 issue of the Review of European & Transatlantic Affairs.

European Horizons seeks to give young people a voice in shaping the future of Europe and transatlantic relations, incubating innovative policy ideas through our publications, conferences, and cooperation with our university chapters. Since 2015, RETA has been providing a platform for students to connect to each other, our partner organizations, academics, and policy makers, enabling them to develop ambitious suggestions for improving the transatlantic relationship and European policy, and generate novel insight.

The shockwaves of the unprecedented disruption 2022 witnessed have deep repercussions in 2023. The effects of the COVID-19 pandemic are still with us, extending deep into not only our socioeconomic realities, but political systems as well. Subreena Bibi's article in the present issue explores the pandemic's ramification on democracy in the Western Balkans, and investigates how the European Union can help bolster democratic governance in the region. As war in Ukraine rages on, anxieties about proliferating conflicts persist. Caroline Bouisse's piece sets out to compare and contrast the situation of Ukraine and Taiwan, whilst Henry Liu offers a comprehensive assessment of the 2014 sanctions on Russia. As a backdrop to all this calamity, the Climate Crisis continues to pose an existential risk to all of humanity. The current issue explores potential avenues and

best practices in climate policymaking on both sides of the Atlantic. Erik Farkas explores the EU's Carbon Border Adjustment Mechanism, Lara Breitmoser discusses the external security dimensions of the EU's climate policymaking, Anna Gyürösi, Hao David Zhang, and Yahya Shaker delves into Carbon Pricing Policies, and James Balzer offers an insight into the Socio-Political Institutionalism of Climate Change Policymaking in the US Government. Finally, the rapid advent of AI raised urgent questions about the necessity of new regulation – Daniel Josef Lindegger investigates an underresearched aspect of AI regulation, discussing AI and Digital Health.

In 2022, we decided to take our journal to the next level by moving forward from being an exclusively student-edited publication, and became a peer-reviewed journal – in 2023 we moved yet another step forward, by designing and implementing a central application and guidance system. Via allocating editors, the system helped our writers develop and refine their articles. Furthermore, bringing back a tried and tested system, the current issue includes selected policy memos from European Horizon's two recent events: the European Horizons Policy Competition, and the European Student Conference.

The first, 'journal articles' section of this issue of the Review of European & Transatlantic Affairs is divided into four thematic sections, organised along the lines of our 2022/2023 policy priorities: Energy and Environment, Defending Democracy, NATO and Transatlantic Security, and our newest policy priority: AI and the Digital Sphere. The second section showcases the top three memos from European Horizons Policy Competition, whilst the fourth section offers six selected memos from the European Student Conference.

On behalf of the entire organisation, I would like to extend my gratitude to the peer-reviewers of the 'journal articles' section, Jose M. Martinez-Sierra (Harvard University), Timothy Less (University of Cambridge), Raluca Csernatonu (Central European University), Leah Rea (Ulster University), Talia Weiss (Yale University), Achim Ladwig (Secretariat-General of the European Committee of the Regions), and two anonymous peer reviewers. Your contribution made the elevation of RETA to the next level possible! Thank you! Furthermore, I would like to thank the Policy Portfolio, especially Amelia Hacon and Lorenzo Donatelli, and the North American, as well as the European & Asian Conferences portfolios for organising such high-quality flagship events.

I: JOURNAL ARTICLES

ENVIRONMENT

1.1.1 Appraising the Socio-Political Institutionalism of Climate Change Policy Making in the United States Government: Trends and Prospects

SUBMITTED BY

James Balzer

Australia; Department of Climate Change, Energy, the Environment and Water

I: INTRODUCTION

American institutional norms, practices, and beliefs both capacitate and incapacitate coherent climate change action in the American federal government. This is through instruments of traditional and new institutionalism. On one hand, the historical and sociological institutionalism underpinning contemporary American conservatism has undermined trust in institutions, corroding the institutional capacity and will to combat climate change.¹ The degradation of working-class living standards and economic conditions has provided a pretext for the rise of populist conservatism in America. Often coined ‘Make America Great Again’ (MAGA) conservatives, or adherents to ‘Trumponomics’, this strain of conservatism emphasises traditional and localised values over notions of big government or paternalistic institutions.²

1 Matthew Lockwood, “Right-wing populism and the climate change agenda: exploring the linkages,” *Environmental Politics* 27, no. 4 (2018): 712-732, <https://doi.org/10.1080/09644016.2018.1458411>.

2 Robert Huber, Esther Greussing and Jakob Moritz Eberl, “From Populism to Climate Scepticism: the Role of Institutional Trust and Attitudes Towards Science.” *Environmental Politics* 30, no. 1 (2021): 1-22. <https://doi.org/10.1080/09644016.2021.1978200>.

While such concepts are a hallmark of traditional conservatism, literature examines how the damaging consequences of globalisation has promoted a hostile sentiment to institutions and mainstream politics, often decrying ideas of the ‘deep state’ and ‘global elites’.³ This sentiment scapegoats international and government institutions, including those addressing climate change. Amongst the conservative polity, there is the perception of climate policy being detached and impositional upon conservative, working class communities, motivating conservative politicians to oppose climate policy on those grounds. In practice, examples include President Trump’s withdrawal of President Obama’s climate change policies under the guise of energy independence and job creation.⁴ Additionally, media bias from conservative leaning media has accentuated these sentiments amongst the conservative polity, facilitating ideological entrenchment amongst the political authorising environment.⁵

Conversely, progressives are increasingly advocating for stronger climate action, which has been reciprocated by progressive political actors.⁶ This is demonstrated by the salience of politicians such as Senator Bernie Sanders, Congresswoman Alexandria Ocasio-Cortez, and Senator Elizabeth Warren. In turn, this has motivated President Biden to develop and push a strong climate agenda; responding to a broader left leaning polity demanding progressive climate action.⁷ This demonstrates the impact of the broader socio-political shift to progressive environmentalism in influencing climate policy in the Biden administration, and hence, a demonstration of new institutionalist processes. Despite this, recent decisions such as approving the ConocoPhillips’ Willow Oil Project⁸ demonstrate some deviation from progressive climate policy. This displays the compromises the Biden

3 Matthew Hornsey, Emily Harris, and Kelly Fielding, “Relationships among Conspiratorial Beliefs, Conservatism and Climate Scepticism across Nations.” *Nature Climate Change* 8, no. 3 (2018): 614-620

4 Federal Register. “Promoting Energy Independence and Economic Growth.” March 31, 2017. Accessed October 28, 2022. <https://www.federalregister.gov/documents/2017/03/31/2017-06576/promoting-energy-independence-and-economic-growth>.

5 Art Silverblatt, “Media as a Social Institution,” *American Behavioral Scientist* 48, no. 1 (2004): 35-41.

6 Gary Dorrien. “Breaking the Oligarchy: Bernie Sanders, Alexandria Ocasio-Cortez, and the Next Left.” In *American Democratic Socialism: History, Politics, Religion, and Theory*, 542–94. Yale University Press, 2021. <https://doi.org/10.2307/j.ctv1vbd123.12>.

7 Gary Dorrien, “Breaking the Oligarchy”, 2021

8 Timothy Puko, “What is Willow? How an Alaska Oil Project Could Affect the Environment”, *Washington Post* April 22, 2023, accessed 14 May 2023, <https://www.washingtonpost.com/climate-environment/2023/03/17/willow-project-alaska-oil-drilling-explained/>

administration is still willing to make despite its progressive slant towards climate change.

In addition to the aforementioned new institutionalist dynamics, there are also instruments of traditional institutionalism that capacitate and incapacitate climate policy capacity in American federal institutions. This includes the role of special interest groups and lobbyists in influencing ‘upstream’ democratic processes, especially upon the legislature.⁹ Such actors work in tandem with the conservative political ideologues stifling climate action, impacting the point of political ‘will formation’.¹⁰ Additionally, a hostile House of Representatives and a conservative majority Supreme Court arguably increase resistance to the development of progressive climate policy. Alternatively, President Biden’s ability to exercise executive powers is a possible institutional lever to combat climate change. However, as will be explored in the article, this has limitations, especially when restricted by the legislature and judiciary, including Republican opposition to presidential executive orders. However, President Biden has used executive powers to facilitate climate action at the federal level, including the invocation of the Defense Production Act or Emergency Powers Act.¹¹

Therefore, the following article assesses the role of new and traditional institutionalism in American federal climate policy. It explores how there are opportunities and limitations in leveraging new and traditional institutionalist methods to enable or disable climate policy agendas in the American government. This includes the ideological agenda and platforms through which new institutionalism is enacted, in addition to the norms and practices of traditional institutionalist levers. This includes the executive, legislature, and the judiciary. It concludes that institutionalism, as it pertains to climate policy, is multifaceted and complex. There are benefits and difficulties, on both sides of politics, to leveraging institutionalism to achieve their desired outcomes for climate change policy, and the future of institutionalism in this context is largely unknown - a result of its complexity.

9 John Boswell, “Deliberating downstream: countering democratic distortions in the policy process,” *Perspectives on Politics* 14, no. 3 (2016): 724–737.

10 Boswell, “Deliberating Downstream”, 2016

11 Hilary Beaumont, “Biden could unlock new powers by declaring a ‘climate emergency,’” *Al Jazeera*, July 27, 2022, accessed October 14, 2022, <https://www.aljazeera.com/news/2022/7/27/biden-could-unlock-new-powers-by-declaring-a-climate>.

II: INSTITUTIONALISM - WHAT IS IT AND WHY DOES IT MATTER?

Institutionalism is the discipline exploring and explaining the practices, beliefs, and decisions of political institutions and how these influence policy outcomes.¹² It examines and explains the behaviours and choices of political actors; demonstrating they are not necessarily guided by rationality and evidence, but often by ideology and the political structures within which they operate. These include the pressures of political parties, demands from voter bases, influences from lobbyists and how their decisions are framed in the media, among other influences.¹³ In analysing political choices and policy positions, institutionalism offers a unique perspective, enabling political scientists to rationalise, predict and even influence the political behaviours of individuals and the institutions they operate within.¹⁴ This contrasts with the ideal or rational policymaking model, which assumes there is a major role for empiricism and rationality in policymaking and minimal influence from politics.¹⁵ Such a policymaking model is deemed unrealistic and even naïve,¹⁶ meaning institutionalism plays an important role in interpreting policy and political decision making.

The heavy impact of political division in America has led to the politicisation of major policy issues, including climate change.¹⁷ The legislature, executive and judiciary have been accused of enacting through political motives, rather than empirical evidence, when determining the future of the country's climate ambitions.¹⁸ Furthermore, division across American society-at-large, including a divided polity and media, promotes political acrimony, bias and parochialism. One consequence of this is the politicisation of climate change¹⁹ - the reasons and characteristics of which will be explored in this article through an institutionalist lens. In this context, institutionalism plays a key role in understanding and explaining climate change policymaking in the American government.

12 Rober Leach, *The Politics Companion*, (University of Toronto Press, 2008).

13 Leach, *The Politics Companion*, 2008

14 Leach, *The Politics Companion*, 2008

15 Rachel Meltzer and Alex Schwartz, *Policy Analysis as Problem Solving: A Flexible and Evidence-Based Framework* (Routledge, 2018).

16 Rachel Meltzer and Alex Schwartz, *Policy Analysis as Problem Solving*, 2018

17 Fiorino, Daniel. "Climate Change and Right-wing Populism in the United States." *Environmental Politics* 31, no. 5 (2022): 801-819. <https://doi.org/10.1080/09644016.2021.2018854>.

18 Dorrien, Gary. "Breaking the Oligarchy: Bernie Sanders, Alexandria Ocasio-Cortez, and the Next Left." In *American Democratic Socialism: History, Politics, Religion, and Theory*, 542-94. Yale University Press, 2021. <https://doi.org/10.2307/j.ctv1vbd123.12>.

19 Fiorino, Daniel "Climate Change and Right Wing Populism", 2022

Institutionalism has two schools of thought - new institutionalism and traditional institutionalism.²⁰ New institutionalism explores the influence of the broader socio-political authorising environment on political institutions and actors.²¹ This includes the broader social and cultural influences of society-at-large, as well as historical patterns of political behaviour that create an ideological ‘path dependency’.²² New institutionalism therefore defines ‘institutions’ as both the materially tangible branches of government and the broader social spheres of influence from the polity - the culture and sentiments of which influence electoral outcomes and therefore, political discourse and decision making.²³ This can create a hostile ‘authorising environment’²⁴ towards policy agendas, driven through the lens of ideological appraisal and decision making.²⁵ As a result, new institutionalists reject the idea that political actors make rational decisions in an ideological vacuum, but rather, are the product of broader socio-political influences.²⁶

New institutionalism has several ‘strands’, including sociological and historical institutionalism.²⁷ Historical institutionalism asserts the historical sentiments and decision-making patterns of political actors have “path dependency”²⁸ - promoting ideological inertia and a “logic of appropriateness”.²⁹ This explains the difficulty in changing political patterns of decision making and behaviour, and the implications of such for policy making.³⁰ Such a phenomenon can facilitate short-term and parochial thinking at the expense of addressing long-term phenomena and risks.³¹ Sociological institutionalism believes broader social trends and sentiments amongst the polity influence the beliefs, decisions and behaviours of political institutions.³² This includes the ideological leaning and discourse of political actors in the legislature, executive and judiciary, including the

20 Brainard Peters, *Institutional Theory: Problems and Prospects*, in *Institutional Theory: Problems and Prospects*, ed. J. Pierre, G. Peters, and G. Stoker (Manchester University Press, 2008), 3-20.

21 Leach, *The Politics Companion*, 2008.

22 Andre Lecours. “New Institutionalism”, 2005.

23 Paul Cairney, *Understanding Public Policy: Theories and Issues*. (Palgrave Macmillan, 2011).

24 Janine O’Flynn, “Where to From Here for Public Value? Taking Stock and Moving On”, *International Journal of Public Administration*, 44, no. 10: DOI: 10.1080/01900692.2021.1884696.

25 Cairney, *Public Policy* (2011)

26 Andre Lecours. *New Institutionalism*, 2005.

27 Leach, *Politics Companion*, 2008.

28 Cairney, *Public Policy*, 2011.

29 Peters, *Institutional Theory*, 2008.

30 Andre Lecours. *New Institutionalism*, 2005.

31 Leigh, A. *What’s the Worst That Could Happen?* (MIT Press, 2021).

32 Andre Lecours. *New Institutionalism*, 2005.

“the interplay of societal and institutional values”.³³ In part, sociological institutionalism reflects the intimations of Birkland, who communicates the flow-on relationship between the ‘systemic agenda’ of society-at-large through to the ‘institutional agenda’ and ‘decision agenda’ in politics³⁴. Hence, Birkland highlights the role of policy framing in shaping the perception of public policies, and such framing is influenced by the existing social, political and ideological structures of the polity³⁵

Alternatively, traditional institutionalism assesses the political practices, beliefs, and decisions of institutions through the lens of materially tangible branches of government - the legislature, the executive, and the judiciary.³⁶ It explores how the formal procedures and practices of these branches of government influence outcomes and decisions. This includes the interaction of political parties, congressional houses, congressional committees, lobbyists, politicians, and the judiciary.³⁷

In America, institutionalism greatly influences socio-political discourse and debate across society and politics. This is a result of the interplay between social and institutional values in politics - influencing political decision making.³⁸ These institutionalist processes have promoted the politicisation of climate change, which has impacted climate change policymaking.³⁹ As stated earlier, there are numerous social and historical factors that interplay with the American political spheres to explain their position on climate change. This article will analyse and explain these factors through an institutionalist lens - exploring the influence of new and traditional institutionalism. An analysis of such gleans strong institutionalist influences on enabling and disabling coherent, effective and long-term climate change policymaking in the American government.

33 Leach, *Politics Companion*, 2008

34 Thomas Birkland, “Chapter 5: Agenda setting in public policy,” in *Handbook of public policy analysis: theory, politics, and methods*, ed. F. Fischer, G. J. Miller, and M. S. Sidney (Routledge, 2019).

35 Birkland, “Agenda Setting”, (2019)

36 Andre Lecours. *New Institutionalism: Theory and Practice*. (University of Toronto Press, 2005).

37 Peters, *Institutional Theory*, 2008.

38 Leach, *Politics Companion*, 2008

39 Scott Bremer et al., “Beyond rules: How Institutional Cultures and Climate Governance Interact,” *WIREs Climate Change* 12, no. 6 (2021): 1-20.

III: THE ROLE OF INSTITUTIONALISM IN CLIMATE CHANGE POLICY MAKING

III/A: NEW INSTITUTIONALISM'S ROLE - EXPLORING SOCIAL AND HISTORICAL FACTORS

Contemporary American conservatism exists within ideologically entrenched American institutions. This ideological entrenchment has translated into an acrimonious relationship between the American executive, legislature, and judiciary; stifling the Biden administration's climate change agenda. Such acrimony and entrenchment underpin the role of historical and sociological institutionalism in the partisanship and politicisation of climate change in American institutional architecture⁴⁰ - a key focus of this article.

From the perspective of historical institutionalism, there are theoretical, practical, and political philosophies in the conservative ideology that produce an anti-science and anti-institutionalist agenda.⁴¹ This includes an emphasis on preserving individual and community rights and liberties, and the primacy of such over top-down government regulation or action. Likewise, the ideological affinity to free markets and deregulatory agendas guides this sentiment.⁴² This is augmented by an inclination of those possessing individualist ideologies to eschew collective and impositional climate action.⁴³ In turn, this promotes an aversion and mistrust of institutions and technocratic experts, especially when impositional policies, such as emissions trading schemes and carbon taxes, are proposed as avenues for decarbonisation.⁴⁴

The contemporary translation of conservative historical ideologies, emphasising small government and local values, into populist discourse has exacerbated anti-institutional and anti-globalist sentiments hostile to climate policy.⁴⁵ This change has occurred since the early 1990s, when inequality and

40 Scott Bremer et al., "Beyond rules" (2021)

41 Matthew Hornsey, Emily Harris and Kelly Fielding, "Relationships among Conspiratorial Beliefs, Conservatism and Climate Scepticism across Nations." *Nature Climate Change* 8, no. 3 (2018): 614-620.

42 Steven Hayward, "Conservatism and Climate Science." *Issues in Science and Technology* 30, no. 3 (2014): 52-57.

43 Hayward, "Conservatism and Climate Science", 2014

44 Hayward, "Conservatism and Climate Science", 2014

45 Daniel Fiorino, "Climate Change and Right-wing Populism in the United States." *Environmental Politics* 31, no. 5 (2022): 801-819. <https://doi.org/10.1080/09644016.2021.2018854>.

the effects of deindustrialisation began to manifest in politically conservative jurisdictions.⁴⁶ Such a shift was exacerbated by increased media division, the rise of disinformation networks and the exacerbation of political divisions in American government institutions. Since 2009, at the formation of the Tea Party movement, and from 2016, with the election of President Trump, this brand of conservatism has grown more prominent and influential.⁴⁷ This has exacerbated, but also derived from, the conservative polity's narrative of the dichotomy between the coastal elites and the deprived, local, American working class.⁴⁸ Narratives of this nature have especially gained traction in 'rust-belt' jurisdictions, with limited manufacturing and agricultural jobs remaining, and whose employment opportunities are at threat from climate policies.⁴⁹ These include West Virginia, Texas, Louisiana, Mississippi and Alabama, among others. This is a demonstration of "policy by narrative".⁵⁰

From the perspective of sociological institutionalism, anti-institutional cultures in contemporary conservatism play a notable role in shaping the social interpretation of climate change.⁵¹ Moreover, from a sociological perspective, climate change discourse is not simply a scientific debate, but discourse ingrained in a distrust of large institutions and a preference for small government. This is also embedded in a mistrust of experts and top-down authority, which can be seen as detached and paternalistic.⁵² Communities where these sentiments exist typically have limited economic opportunities, and combined with the neglect and divestment they've experienced, make them sceptical of government institutions and political agendas. This includes perceptions of 'elite capture' - that the so-called 'bi-coastal' elites comprise and influence politics, and are indifferent to the needs of working class communities.⁵³ Conservative political actors, including media, have leveraged this narrative - promulgating an alleged detachment of climate change policy and its adverse impacts on jurisdictions dependent

46 Joel Aberbach, *Understanding Contemporary American Conservatism*. (Routledge, 2017).

47 Joel Aberbach, *Contemporary American Conservatism*, 2017.

48 Huber et al., "From Populism to Climate Scepticism", 2021.

49 Olve Krang, Bjorn Kaltenborn and Martin Hultman, "Don't Confuse Me with Facts" – How Right Wing Populism Affects Trust in Agencies Advocating Anthropogenic Climate Change as a Reality." *Humanities and Social Sciences Communications* 8, no. 255 (2021): 1-9. <https://doi.org/10.1057/s41599-021-00930-7>.

50 Catherine Althaus, Peter Bridgman and Glynn Davis, "Chapter 6: Policy Instruments", in *The Australian Policy Handbook*. (Allen & Unwin, 2018).

51 Bremer et al., "Beyond Rules", 2021

52 Huber et al. "From Populism to Climate Scepticism" 2021.

53 Michael Oswald, *The Tea Party: How the Republican Party and the US-American Conservatism Were Changed by a Strategically Developed Movement*. (Wiesbaden, 2017).

on carbon intensive industries for employment and social wellbeing.⁵⁴ This works in tandem with narratives of small, hands-off government - at the heart of conservative political discourse. This “policy by narrative” frames a “symbolic hierarchy”⁵⁵ between the conservative polity and government institutions, including international climate agendas. Lockwood further explains this sociological phenomenon as ‘structural’ and ‘ideological’; communicating the relationship between economic declinism and neglect by institutions and the development of anti-institutionalism sentiments that stymie climate policies.⁵⁶ These sentiments translate into institutional practices amongst policy makers and legislators, stifling climate change policy in response to their constituents’ perspectives.

In the context of climate change discourse, American conservatism has adapted these narratives to oppose progressive policy. Hermwille and Sanderink discuss the overarching narratives promulgated in this discourse.⁵⁷ These include the “story of decline” and the “story of stymied progress”, often used in President Trump’s campaigning of Republican political communications.⁵⁸ This develops a narrative that scapegoats political actors and institutions as responsible for their socio-economic conditions. In American federal institutions, this has manifested in several blockages of progressive climate change action. For example, in March 2017 President Trump signed an executive order rolling back a variety of President Obama’s climate change policies.⁵⁹ This was done under the guise of “promoting energy independence and economic growth” and diminishing climate policies that “prevent job creation”. This required a review of the Clean Power Plan and greenhouse gas regulations.⁶⁰ The use of such language, referring to “independence” and “economic growth” aligns with the anti-globalist and anti-institutionalist slant of contemporary American conservatism. Additional measures taken by the Trump administration included cancelling Phase II of the Corporate Average Fuel Economy Standards, loosened methane controls and reopening federal land to coal

54 Olve Krang et al. “Don’t Confuse me with facts”, 2021

55 Robert Asen, “Reflections on the Role of Rhetoric in Public Policy.” *Rhetoric and Public Affairs*, 13, no.1 (2010): 121-143.

56 Lockwood, *Right Wing Populism*, 2018

57 Lukas Hermwille and Lisa Sanderink, “Make Fossil Fuels Great Again? The Paris Agreement, Trump and the US Fossil Fuel Industry.” *Global Environmental Politics* 19, no. 4 (2019): 45-62.

58 Hermwille and Sanderink “Make Fossil Fuels Great Again? 2019

59 Federal Register. “Promoting Energy Independence and Economic Growth.” March 31, 2017. Accessed October 28, 2022. <https://www.federalregister.gov/documents/2017/03/31/2017-06576/promoting-energy-independence-and-economic-growth>.

60 Federal Register, “Promoting Energy Independence”, 2017

mining, further demonstrating a political appeal towards the working class, fossil fuel employment-oriented polity.⁶¹ Likewise, Senator Ted Cruz has referenced the need to combat President Biden’s climate agenda on the grounds of resisting “big business” and preserving “millions of blue-collar jobs”.⁶² This type of sentiment was also demonstrated in President Trump withdrawing from the Paris Agreement, and on a more domestic level, defunding the Environment Protection Agency (EPA) and conducting substantial environmental deregulations.⁶³

Additionally, rulings from the Supreme Court of the United States (SCOTUS), such as *West Virginia v EPA*, and the legislature blocking the Build Back Better Bill demonstrate the manifestation of this worldview in judicial and legislative processes.⁶⁴ Other anti-institutionalist activities included replacing the technocratic and empirical authority of the EPA with political appointees who possess sentiments more aligned with President Trump’s agenda.⁶⁵ This demonstrates the role of anti-institutionalism and anti-science in guiding political decision making for climate policy amongst conservative populist politicians.

For example, in President Trump withdrawing from the Paris Climate Accord, he remarked “we’ve ended the war on American energy, and we’ve ended the war on beautiful, clean coal.”⁶⁶ Additionally, regarding political appointees to the EPA, Trump appointed numerous leaders, including the chief administrator and the scientific advisory board. This included individuals with links to petrochemical and fossil fuel connections, incentivising regulatory rollbacks and budget cuts to the EPA’s climate and environment functions.⁶⁷ In this context, President Trump remarked “we will be environmentally friendly, but we’re not going to put our businesses

61 Fiorino, *Climate Change*, 2022.

62 Ted Cruz, “Energy, Water and the Environment,” accessed October 13, 2022, <https://www.cruz.senate.gov/about/issues/energy-environment>

63 Ann Carlson, “Climate Change, Trump and Populism” (University of Pennsylvania, 2017), accessed October 15, 2022, <https://global.upenn.edu/sites/default/files/go-climate-change-carlson.original.pdf>.

64 Joanna Walters and Edward Helmore. “Joe Manchin hails expansive bill he finally agrees to as ‘great for America,’” *The Guardian*, July 31, 2022, accessed October 21, 2022, <https://www.theguardian.com/us-news/2022/jul/31/joe-manchin-hails-deal-inflation-reduction-act>.

65 Fiorino, “Climate Change”, 2022

66 Politico, “President Trump’s State of the Union Address: Fact Check and Analysis,” 30 January, 2018, accessed May 16, 2023, <https://www.politico.com/interactives/2018/trump-state-of-the-union-2018-transcript-analysis/>

67 Ann Carlson, “Climate Change, Trump”, 2017.

out of work, and we're not going to lose our jobs. We're going to grow."⁶⁸ Words such as "war" and claiming "we're not going to lose our jobs" is a display of "policy by narrative",⁶⁹ with such framing creating a "symbolic hierarchy"⁷⁰ and dichotomy between different parts of society.

Likewise, in the case of blocking the Build Back Better Bill, Republicans cited government overreach and imposition, including conservative Democrats such as Joe Manchin. These politicians consistently cited threats to mining, manufacturing and energy jobs and increased energy costs for working class communities.⁷¹ Republican Senator Mitch McConnell stated "This \$3.5 trillion spending spree is a reckless tax-and-spend boondoggle that will crush jobs and leave Americans with higher costs and less freedom."⁷² Furthermore, Republican Senator John Barrasso stated "the proposed climate measures in this bill will destroy jobs in the energy sector and hurt American workers."⁷³ Evidently, these narratives interplay with the anti-institutional worldview of conservative jurisdictions in America, enabling a hostile agenda towards climate change policy.

Therefore, the exaggerated anti-institutionalist and anti-globalist worldview synonymous with contemporary conservatism demonstrably resists institutional and global efforts to address climate action. This has politicised discussions of climate policy, often emerging under the auspices of 'political ecology' - the intersection of political ideology with environmental policy making.⁷⁴ Therefore, in America, climate policy can often be appraised through socio-political values and subjective worldviews as opposed to empirical, scientific consensus and advice.⁷⁵ This leads to typologies of 'ideological inaction' and 'imposed inaction', driven by ideological

68 The White House, "Statement by President Trump on the Paris Climate Accord", June 1, 2017, accessed 9 May 2023, <https://trumpwhitehouse.archives.gov/briefings-statements/statement-president-trump-paris-climate-accord/>

69 Catherine Althaus et al., "Policy Instruments", 2018

70 Robert Asen, "Rhetoric", 2010

71 Aron Buzogany and Christoph Mohamad-Klotzbach, "Populism and nature—the nature of populism: New perspectives on the relationship between populism, climate change, and nature protection," *German Journal of Comparative Politics* 15, no. 2 (2021), DOI: 1007/s12286-021-00492-7.

72 Jason Lemon, "Mitch McConnell Predicts Democrats \$1.7T Build Back Better Bill Will Never Become Law", *Newsweek*, November 19, 2021, <https://www.newsweek.com/mitch-mcconnell-predicts-democrats-17t-build-back-better-bill-will-never-become-law-1651225>

73 Senator John Barrasso, "Barrosso: Biden's Proposal Builds Back Worse", accessed 15 May 2023, <https://www.barrasso.senate.gov/public/index.cfm/2021/3/barrasso-biden-s-proposal-builds-back-worse>

74 Aron Buzogany and Christoph Mohamad-Klotzbach, "Populism and nature", 2021.

75 Fiorino, "Climate Change and Right-wing Populism", 2022

inertia.⁷⁶ Ideological and imposed inaction is exaggerated by the necessary imposition of short-term costs on constituents sometimes required by climate policies - even if there are environmental, social and economic benefits that will eventually manifest. This is particularly apparent when the manifestation of future benefits is uncertain, making challenges from cost-bearing stakeholders difficult to overcome.⁷⁷ Instead, the three necessary conditions for long-term policy investments - electoral safety, confidence in longer term benefits and the ability to challenge opposition by cost-bearing stakeholders - are made much more difficult by ideological entrenchment.⁷⁸ Therefore, sociological institutionalism combined with electoral short-termism make long term climate action significantly more difficult.

While the institutions of government are beholden to these new institutionalists sentiments, media bias accentuate these political sentiments and ideological inertia regarding climate policy. This especially includes politically right leaning media such as Fox News and News Corp owned entities.⁷⁹ Silverblatt explores this, labelling media a “social institution” which further entrenches sociological division and parochialism.⁸⁰ Social media accentuates this phenomenon, given the rapid distribution and access to information the general populace has, including misinformation and disinformation.

An example includes Fox News’ dissemination of climate change denialism in the last decade.

In the first half of 2019, Public Citizen found Fox News devoted 247 segments to climate change, with 86% of them being dismissive of the issue.⁸¹ Public Citizen also discovered that ‘Tucker Carlson Tonight’ ran the highest number of climate denial segments (41, meaning approximately

76 Allan McConnell and Paul t’Hart, “Inaction and Public Policy: Understanding Why Policy-makers Do Nothing,” *Policy Sciences* 52, no. 4 (2019): 645-661.

77 Jared Finnegan, “Institutions, Climate Change, and the Foundations of Long-term Policymaking,” Grantham Research Institute on Climate Change and the Environment, April 2019. Accessed October 15, 2022. <https://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2019/04/working-paper-321-Finnegan-1.pdf>.

78 Allan Jacobs, *Governing for the Long Term: Democracy and the Politics of Investment* (Cambridge University Press, 2011).

79 Shaun Elsasser and Riley Dunlap. “Leading Voices in the Denier Choir: Conservative Columnists’ Dismissal of Global Warming and Denigration of Climate Science”, *American Behavioral Scientist* 57, no. 6 (2013): 754-776.

80 Silverblatt, “Media as a Social Institution,” 2004.

81 Public Citizen, “Foxic: Fox News Network’s Dangerous Climate Denial 2019”, August 13, 2019, accessed 12 May 2023, <https://www.citizen.org/article/foxic-fox-news-networks-dangerous-climate-denial-2019/?eType=EmailBlastContent&eId=52dbcd4f-2756-4284-973a-7fe06c039cd5>.

seven per month).⁸² ‘Hannity’ aired 32 segments of this nature and ‘The Five’ ran 29.⁸³ Two programs, ‘Special Report With Bret Baier’ and ‘Fox News @ Night’ accounted for 24 of the 35 segments that were neutral when mentioning climate change or discussion of climate solutions.⁸⁴

Media also exacerbates ideological selection bias,⁸⁵ further emphasised by the role of algorithms and data harvesting; selectively displaying the ideological preferences of end-users, further entrenching their political affiliation and worldview.⁸⁶ A consequence is further ideological parochialism in the social authorising environment.⁸⁷ Examples include conservative social media outlets such as Breitbart and The Daily Wire, who have a history of promoting climate change disinformation and denialism via social media. These agencies appeal to similar demographics as conservative broadcast media, trying to promote a similar message and similar outcomes.⁸⁸ Accordingly, the role of traditional and social media corrodes the authorising environment for coherent, long term climate action amongst American conservatives, contributing to the role of sociological institutionalism in stymying climate policy.

However, there is also a resurgence of progressive, politically left leaning politicians responding to an underlying desire to combat climate change amongst the American populace.⁸⁹ This is largely a result of the broader resurgence of progressivism amongst certain demographics, such as youth, demonstrated by the rise of politicians such as Senator Bernie Sanders and Congresswoman Alexandria Ocasio-Cortez. Such a phenomenon demonstrates the role of an ‘Advocacy Coalition Framework’ or polity ‘subsystem’⁹⁰ promoting the salience of progressive climate politics. Specifically, this began in the period 2018-19, with Congresswoman Alexandria Ocasio Cortez gaining prominence in the media and winning a seat in the mid-term elections, and a growing youth movement, including

82 Public Citizen, “Fox News”, 2019.

83 Public Citizen, “Fox News”, 2019.

84 Public Citizen, “Fox News”, 2019.

85 Isobel Gladston and Trevelyan Wing, “Social Media and Public Polarization over Climate Change in the United States”, (The Climate Institute, August 2019).

86 Gladston and Wing, “Social Media and Public Polarization”, 2019.

87 Victor Bekkers and Arthur. Edwards, “The Role of Social Media in the Policy Process,” in Handbook on Policy, Process and Governing, ed. H. Colebatch and R. Hoppe (Edward Elgar Publishing, 2018).

88 Gladston and Wing, “Social Media”, 2019.

89 Gary Dorrien, Breaking the Oligarchy, 2021.

90 Kevin Smith and Christopher Larimer. “Chapter 5: Where does policy come from? The policy process”, in The Public Policy Theory Primer. (Westview Press, 2009).

in the United States, for climate action.⁹¹ This included the rise of Greta Thunberg and the Friday Climate Strike movement. Additionally, groupings of progressive politicians, such as Ilhan Omar and Rashida Tlaib, pushed the Green New Deal Resolution, promoting climate change as a policy issue.⁹² The salience of climate change amongst younger generations and progressive politicians was also promoted by a string of natural disasters in America in 2018-19, leading to greater public awareness of climate change amongst the general populace.⁹³ This incentivised the Democratic party to prioritise climate policy in response to their voting base, shifting the party's policies in a more progressive direction than previously. Such an occurrence reflects a new institutionalist outcome - whereby political institutions have succumbed to broader ideological values, norms and beliefs from their aligned polity.

The 'punctuated equilibrium theory',⁹⁴ which emphasises the sudden prominence of a previously underrepresented policy issue, is also displayed through the rise of such political sentiments and actors. As progressive polity subsystem gradually grew in their progressive sentiments over time, which was punctuated by a sudden rise of politicians aligned to this polity's collective worldview.⁹⁵ This also arose out of the 2016 Presidential election onwards, where the rise of right-wing populism promoted a counter movement questioning the status quo of American institutions, including in regard to climate change policy making.⁹⁶ This also demonstrates Birkland's discourse of transitioning systemic agendas through to institutional and decision agendas,⁹⁷ therefore reflecting principles of new institutionalism.

The sudden salience of climate change amongst progressive political actors was also underscored by the rise of congressional resolutions such the Build Back Better Bill (2021) and the Inflation Reduction Act (2022).⁹⁸ President

91 Gary Dorrien, *Breaking the Oligarchy*, 2021.

92 Gary Dorrien, *Breaking the Oligarchy*, 2021.

93 Gary Dorrien, *Breaking the Oligarchy*, 2021.

94 Andrea Migone and Michael Howlett, 'Charles E Lindblom "The science of muddling through"', in M Lodge, EC Page & SJ Balla (eds), *The Oxford handbook of classics in public policy and administration* (Oxford University Press 2015).

95 Gary Dorrien, *Breaking the Oligarchy*, 2021.

96 Gary Dorrien, *Breaking the Oligarchy*, 2021.

97 Thomas Birkland, "Chapter 5: Agenda setting in public policy," in *Handbook of public policy analysis: theory, politics, and methods*, ed. F. Fischer, G. J. Miller, and M. S. Sidney (Routledge, 2019).

98 Walters, Joanna and Edward Helmore. "Joe Manchin hails expansive bill he finally agrees to as 'great for America'" *The Guardian*, July 31, 2022, accessed October 21, 2022, <https://www.theguardian.com/us-news/2022/jul/31/joe-manchin-hails-deal-inflation-reduction-act>.

Biden's emphatic engagement with climate policy is notably driven by the growing popularity of progressivism and climate action amongst the left leaning polity.⁹⁹ This has created a "policy window"¹⁰⁰ for Biden, further demonstrating the role of polity subsystems in upscaling political sentiments and undercurrents amongst the citizenry.

Therefore, despite conservative stifling of climate change policy making, there have been notable progressive polity members and politicians countering the stifling of climate action. This largely derives from advocacy coalitions of progressive demographics, creating a political opening for Biden and the democrats to emphasise climate action, in spite of aggressive opposition.¹⁰¹ Occurrences such as these demonstrate the principles of new institutionalism in promoting climate action in the American federal government. Therefore, new institutionalist influences can enable and stifle Biden's progressive climate change agenda. While the conservative polity have strong ideological entrenchment, opposing climate policy on grounds of perceived threats to their jurisdictions' economic future, there is a strong progressive movement operating through new institutionalist avenues to enable Biden's climate change agenda. However, this is a heavily contested domain, accentuated by media bias and political division in American society-at-large. Therefore, it is difficult to project the short to medium term future of this contention.

III/B: TRADITIONAL INSTITUTIONALISM'S ROLE - THE EXECUTIVE, THE LEGISLATURE AND THE JUDICIARY

From the perspective of traditional institutionalism, there are concerns regarding the 'upstream' democratic processes undermining climate change action.¹⁰² This includes the role that special interest groups and lobbyists can have in tandem with conservative ideologues in the legislature and executive, advocating on behalf of the fossil fuel industry. For example, between 2011 and 2021, ExxonMobil, Chevron, BP, and the American Petroleum Institute (API) provided \$452.6 million in the form of federal

99 Gary Dorrien, *Breaking the Oligarchy*, 2021

100 Andrea Migone and Michael Howlett, "The Science of Muddling Through", 2015.

101 Gary Dorrien, *Breaking the Oligarchy*, 2021

102 Boswell, "Deliberating downstream," 2016

lobbying.¹⁰³ ExxonMobil, Chevron, Shell, and BP employed 40 lobbyists a year on average and provided an aggregate of \$374.7 million to federal lobbying efforts.¹⁰⁴ Furthermore, the API employed approximately 48 lobbyists per year and expended \$78 million on lobbying.¹⁰⁵ Likewise, ExxonMobil, Chevron, BP, and the API had 4,597 instances of legislative lobbying between 2011 and 2021.¹⁰⁶ This demonstrates a perverse influence on climate policy in the institutions of the American federal government, and the outcomes produced by institutional power asymmetries at the point of political ‘will formation’.¹⁰⁷

In response to such institutional influence and interests, there is an increasing need for President Biden to exercise executive powers in pursuing climate change action; recent examples demonstrate his use of executive authority. This includes invoking the Defense Production Act, facilitating the domestic manufacturing of heat pumps, solar panels, insulation, fuel cells and other technology driving emissions reduction.¹⁰⁸ Additionally, the Act enables “the use of strong labor standards, including project labor agreements and community benefits” and “projects with environmental justice outcomes that empower the clean energy transition in low income communities historically overburdened by legacy pollution”.¹⁰⁹ It is possible, that this legislation could support a just and equitable transition in fossil fuel-oriented communities. This could change the narrative underpinning historical and sociological institutionalism which guides politically conservative sentiments towards climate policy - among both the polity and politicians.¹¹⁰

Biden could also declare a formal ‘climate emergency’ under the National Emergencies Act (1976) to circumvent political opposition to climate

103 Committee on Oversight and Reform, “Analysis of the Fossil Fuel Industry’s Legislative Lobbying and Capital Expenditures Related to Climate Change,” accessed October 28, 2022, <https://oversight.house.gov/sites/democrats.oversight.house.gov/files/Analysis%20of%20the%20Fossil%20Fuel%20Industrys%20Legislative%20Lobbying%20and%20Capital%20Expenditures%20Related%20to%20Climate%20Change%20-%20Staff%20Memo%20%2810.28.21%29.pdf>.

104 Committee on Oversight and Reform, “Fossil Fuel Industry”, 2022

105 Committee on Oversight and Reform, “Fossil Fuel Industry”, 2022

106 Committee on Oversight and Reform, “Fossil Fuel Industry”, 2022

107 John Boswell, “Deliberating downstream: countering democratic distortions in the policy process,” 2016

108 The White House, “Fact Sheet: President Biden Takes Bold Executive Action to Spur Domestic Clean Energy Manufacturing,” accessed October 7, 2022, <https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/06/fact-sheet-president-biden-takes-bold-executive-action-to-spur-domestic-clean-energy-manufacturing/>.

109 The White House, “Bold Executive Action”, 2022

110 Scott Bremer et al., “Beyond Rules”, 2021

policy creation.¹¹¹ This would provide him with unique executive powers, including halting crude oil exports and offshore oil and gas, imposing regulations on international fossil fuel trade and creating renewable energy systems in climate vulnerable communities.¹¹² This demonstrates legally robust reasoning underpinning executive authority in the context of climate change policy. Additionally, Biden could use the International Emergency Economic Powers Act (1977) to manage “any unusual and extraordinary threat, which has its source in whole or substantial part outside the United States”.¹¹³ It is possible for this Act to regulate financial and commercial transactions, including sanctions on individuals and countries. It is also a decisive method to execute climate policy, providing a clear signal to market and non-market actors of America’s intentions. President Biden could redirect military resources and funding to construct climate change mitigation and adaptation infrastructure, suspending oil drilling under the auspices of a ‘national emergency’ and addressing ‘industrial shortfalls’, including a lack of battery and storage capability and even sanctioning companies who do not comply with best-practice climate risk mitigation.¹¹⁴ Furthermore, the EPA, Pentagon and American intelligence agencies have formally recognised climate change as a threat to America. This provides strong legal grounds for declaring a climate emergency - important in the case of a possible injunction.¹¹⁵ Furthermore, a court has never overturned a presidential decision to use this legislation to declare an emergency.¹¹⁶

Despite this, there are those who criticise the use of executive powers in combating climate change as excessive and heavy handed. This is especially prevalent regarding its impacts on fossil fuel dependent employees and communities.¹¹⁷ This also creates a political complexity for Biden, especially in not wanting to accentuate political acrimony or seem similar to Trump’s excessive use of executive powers. Reservations towards using executive

111 Hilary Beaumont, “Biden could unlock new powers by declaring a ‘climate emergency,’” Al Jazeera, July 27, 2022, accessed October 14, 2022, <https://www.aljazeera.com/news/2022/7/27/biden-could-unlock-new-powers-by-declaring-a-climate>.

112 Beaumont, Biden could unlock new powers, 2022

113 Dan Farber, “Declaring a Climate Emergency: A Citizen’s Guide.” Legal Planet, July 19, 2022. Accessed October 8, 2022. <https://legal-planet.org/2022/07/19/declaring-a-climate-change-emergency-a-citizens-guide/>.

114 Dan Farber, “Declaring a Climate Emergency”, 2022

115 Dan Farber, “Declaring a Climate Emergency”, 2022

116 Dan Farber, “Declaring a Climate Emergency”, 2022

117 Wall Street Journal Editorial Board, “The ‘Beast Mode’ Presidency?” accessed October 21, 2022, https://www.wsj.com/articles/the-beast-mode-presidency-joe-biden-climate-emergency-democrats-sheldon-whitehouse-supreme-court-11658268249?mod=opinion_major_pos1..

powers are exacerbated by the Republican Party's historical opposition to Democrat Presidential Executive Orders. Additionally, the recent approval of the Alaska Willow Oil Project demonstrates the political pressures upon President Biden and his administration to tackle energy inflation and energy security, even at the expense of emissions reduction goals.¹¹⁸ Importantly, matters of energy security and affordability are weaponised by the Republican party to challenge Biden's climate change agenda, placing political pressure on him. This challenges his 'political capital', especially in the domain of energy security and affordability.¹¹⁹

Furthermore, Congress has proven both hostile and supportive to Biden's climate agenda. On one hand, the passing of the Inflation Reduction Act (2022) demonstrates a somewhat supportive authorising environment in congress. Formerly, this has been better enabled by a Democrat controlled House of Representatives, although currently Republicans control the House of Representatives - albeit by a narrow majority.¹²⁰ This has mostly negative implications for legislative processes for climate change policymaking, but there is the prospect of some Republicans agreeing to climate change legislation - likely through compromise with the Democrats. Additionally, House Committees could modify legislation to make it tolerable for some Republican legislators, but compromise is often necessary to achieve such outcomes.¹²¹ However, given the political division amongst the parties, and the general emphasis of political structure and unity over agency, it is difficult and unlikely for this to occur.

Further examples of the legislature promoting climate action include the Green New Deal resolution, the development of the Select Committee on the Climate Crisis in the House of Representatives and the bipartisan conception of a Climate Solutions Caucus.¹²² Furthermore, the Inflation Reduction Act provides \$370 billion for clean energy and climate investments across the coming decade, and will facilitate America reducing its Greenhouse Gas emissions by 40% by 2030.¹²³ This demonstrates the important role the

118 Timothy Puko, "What is Willow?", 2023

119 Center for Climate and Energy Solutions, "Congress and Climate Change," accessed October 15, 2022, <https://www.c2es.org/content/congress-and-climate-change/>.

120 Dan Lashof, "Tracking Progress: Climate Action Under the Biden Administration," accessed 10 May 2023, <https://www.wri.org/insights/biden-administration-tracking-climate-action-progress>.

121 Dan Lashof, "Tracking Progress", <https://www.wri.org/insights/biden-administration-tracking-climate-action-progress>.

122 Center for Climate and Energy Solutions, "Congress and Climate Change," <https://www.c2es.org/content/congress-and-climate-change/>.

123 Center for Climate and Energy Solutions, Congress and Climate Change, 2022

legislature can play in navigating complex institutional landscapes in the context of contentious policy matters such as climate change. An example of this is the aforementioned Inflation Reduction Act (2022), which was supported by conservative Democrats such as Joe Manchin, which perhaps demonstrates that political actors are able to change their positions if proper compromise is reached. Additionally, the Inflation Reduction Act (2022) was able to pass the House and Senate committees, even with Republican committee members.¹²⁴ Therefore, even in the complex and divided dynamics of the American legislature, it is possible for contentious climate change legislation to pass.

However, conservative congresspeople, in the Republican and Democratic Party, have actively stifled the Biden administration's climate legislation. For example, prior to COP 26, Biden earmarked \$11.4 billion a year in climate finance by 2024, to assist developing countries combat climate change, yet could only secure \$US 1 billion from Congress.¹²⁵ Furthermore, even Democrat politicians such as Congressman Joe Manchin stifled climate legislation, blocking the Build Back Better Bill, although later supporting the Inflation Reduction Act.¹²⁶ Despite this, there are ways to incentivise bipartisan support for climate action, particularly in areas where climate action is a co-benefit, complementing more widely supported agendas. Improving quality infrastructure and energy efficiency, thus mitigating energy price increases, is one such co-benefit with wide support.¹²⁷ This demonstrates a possible institutional avenue for moving climate change policy through the legislature, even if it is contested and divided.

Therefore, the political dynamics of the legislature and executive present opportunities and barriers to enable climate change policy. However, the federal judiciary has also become influenced by conservative political motivations and worldviews. SCOTUS now has a conservative majority and has been alleged as a product of 'court packing'.¹²⁸ This leads to bias and ideological parochialism on behalf of the federal judiciary, questioning

124 Walters and Helmore. "Joe Manchin hails expansive bill" 2022 <https://www.theguardian.com/us-news/2022/jul/31/joe-manchin-hails-deal-inflation-reduction-act>.

125 Bernd Debusmann, "Biden Unveils \$2.3bn Plan to Fight Climate Change." BBC News, October 28, 2022. Accessed October 28, 2022. <https://www.bbc.com/news/world-us-canada-62241954>.

126 Walters and Helmore. "Joe Manchin hails expansive bill" 2022 <https://www.theguardian.com/us-news/2022/jul/31/joe-manchin-hails-deal-inflation-reduction-act>.

127 Center for Climate and Energy Solutions, "Congress Climate History," accessed October 15, 2022, <https://www.c2es.org/content/congress-climate-history/>.

128 Jackie Calmes, *Dissent: The Radicalisation of the Republican Party and Its Capture of the Court* (Twelve Books, 2021).

to what extent it is guided by legal principles as opposed to political affiliation.¹²⁹ Recent SCOTUS rulings such as *Roe v Wade*,¹³⁰ overruling universal abortion rights, and *New York State Rifle & Pistol Association Inc. v. Bruen*,¹³¹ relaxing gun restrictions, are examples of conservative orientation of the supreme court.

In the context of climate change discourse, the *West Virginia v EPA* ruling restricts the federal government's ability to regulate energy greenhouse gas emissions.¹³² However, it did not restrict other sources of emissions, including transport, agriculture, and industry, this could stifle the ambitions of the Inflation Reduction Act, further demonstrating the limitations the judiciary places on the executive and legislature.¹³³ The institutional corrosion of the judiciary is also demonstrated through such actions - seemingly influenced by political ideology more so than legal principles.¹³⁴ This also reflects broader concerns of the judicialisation of politics.¹³⁵

In lower courts, environmental NGOs, Civil Society Organisations, and some American states have fought President Trump's diminishment of environmental regulations, including Massachusetts, Connecticut, and New York.¹³⁶ However, under a conservative judiciary, lower courts may have less power to challenge federal lapses in environmental regulation and management through judicial processes.¹³⁷ Importantly, *West Virginia v EPA* does not apply to state climate change policies, creating greater onus upon states to drive American emissions reduction. Already, Biden has launched a partnership with 11 East Coast governors - both Republican and

129 Calmes, *Radicalisation of the Republican Party*, 2021

130 Supreme Court of the United States, *Jane Roe v Henry Wade*, accessed May 11, 2023, https://www.supremecourt.gov/opinions/21pdf/20-1530_n758.pdf

131 Supreme Court of the United States, *New York State Rifle & Pistol Association Inc v. Bruen*, accessed 11 May 2023, <https://www.supremecourt.gov/opinions/21pdf/20-1530>.

132 Supreme Court of the United States, *West Virginia et. al v Environmental Protection Agency et. al*, accessed October 21, 2022, <https://www.supremecourt.gov/opinions/21pdf/20-1530>.

133 Patrick Parentau, "The Inflation Reduction Act doesn't get around the Supreme Court's climate ruling in *West Virginia v EPA*, but it does strengthen the EPA's future abilities," *The Conversation*, February 3, 2022, <https://theconversation.com/the-inflation-reduction-act-doesnt-get-around-the-supreme-courts-climate-ruling-in-west-virginia-v-epa-but-it-does-strengthen-epas-future-abilities-189279>

134 Calmes, *Radicalisation of the Republican Party*, 2021

135 Torbjörn Vallinder. "The Judicialisation of Politics - A Worldwide Phenomenon: Introduction." *International Political Science Review* 15, no. 2 (1994): 91-99.

136 Nidhi Subbaraman, "What Trump's Supreme Court pick could mean for science," *Nature*, September 22, 2020, <https://www.nature.com/articles/d41586-020-02747-x>.

137 Subbaraman, "Trump's Supreme Court Pick", 2020.

Democrat - to promote offshore wind.¹³⁸ Likewise, this can facilitate the proliferation of the Greentech industry. This demonstrates the role different levels of government play in facilitating climate action, and the federal government may utilise this multiscale governance approach to long term emissions reduction.

IV: CONCLUSION

This article examined how President Biden’s climate change agenda is being stifled by institutional norms, practices, and beliefs - through the influence of both new and traditional institutionalism. Regarding new institutionalism, historical and sociological institutionalism of the American conservative polity has generated ideological inaction in combating climate change. This is especially pernicious given its influence on the American legislature and judiciary, stultifying empirical discussion and evaluation of climate change policy. In particular, the rise of anti-globalist sentiments and ideologies, typically attached to an anti-institutionalist agenda, have derived from disgruntled communities of contemporary conservative supporters.¹³⁹

This is accentuated by the hyper partisan nature of American society, reflected in the hyper partisan nature of the legislature and judicial bias. This is also exacerbated by perverse influences on political decision makers, particularly in upstream democratic processes.¹⁴⁰ Special Interest Groups and lobbyists, impacting what eventually becomes ‘downstream’ policy making, facilitate these perverse influences.¹⁴¹ Likewise, a hostile systemic authorising environment is created by strong media bias, further entrenching ideological grounding and acrimony in America. In the modern era, social media also accentuates this partisan division.¹⁴²

However, there has been a recent rise of progressive political sentiments encouraging climate action in American federal institutions. This has influenced Biden’s climate change agenda, as his administration needs to appeal to a progressive left leaning polity, demonstrating a translation of the

138 The White House, “Fact Sheet: Biden Administration Launches New Federal-State Offshore Wind Partnership to Grow American-Made Clean Energy,” accessed October 7, 2022, <https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/23/fact-sheet-biden-administration-launches-new-federal-state-offshore-wind-partnership-to-grow-american-made-clean-energy/>

139 Lockwood, “Right Wing Populism and Climate Change”, 2021

140 Boswell, “Deliberating Downstream”, 2016

141 Boswell, “Deliberating Downstream”, 2016

142 Silverblatt, “Media as a Social Institution”, 2004

systemic agenda through to the political agenda. Hence, this is an avenue of new institutionalism that is promoting stronger climate action in the American federal government.

Traditional institutionalism, including the instruments of the executive, legislature, and the judiciary, also affect climate policy making. This includes a contested legislature and judiciary, including judicial court packing. In turn, Biden is implored to exercise executive authority, which has mixed capability and success. This includes the activation of the Defense Production Act¹⁴³ and could possibly include the International Emergency Economic Powers Act.¹⁴⁴ In the future, this could progress Biden's agenda through ideological gridlocks in the legislature and judiciary. The 2024 Presidential election will further determine to what extent climate change is hindered via the political and institutional architecture of the American federal government. This will provide opportunities and challenges, and will perhaps require multi-scale governance and coordination of climate action in lieu of federal will and capacity to pursue progressive climate change action.

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143 The White House, "Bold Executive Action", 2022

144 Farber, "Declaring a Climate Emergency", 2022

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1. 1. 2. The European Union Carbon Border Adjustment Mechanism: An Opportunity for Global Carbon Price Synchronization?

SUBMITTED BY

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I: INTRODUCTION

The contemporary issues tied to the climate change phenomena have at its roots the international acknowledgment dating back to the First World Climate Conference held in 1979 in Geneva. Supported by the World Meteorological Organization (‘WMO’), the policies contemplated by virtue of climate change and its potential consequences, have to date resulted in global efforts influencing continents, state representatives, companies, and stakeholders. One such purview was the creation of the Intergovernmental Panel on Climate Change (‘IPCC’) by virtue of the 1988 United Nations General Assembly Resolution 43/53. The latest scientific iteration published by the IPCC was the Sixth Assessment Report (‘AR6’) finalised between 2021 to 2023. Despite the early vision of scientists and politicians, the podium for effective climate change mitigation and adaptation has been piece-meal at best, mainly in lieu of the traditional ‘business as usual’ approach.

In this regard, the European Union has stepped up its climate change ambitions by initiating a set of inter-governmental policies with the overarching aims of protecting the planet, the economies of its Member States, and the welfare of its citizens. In more succinct terms, as of 11 December 2019, the European Commission (the ‘Commission’) presented the European Green Deal, thereby seeking to cement the EU’s climate ambitions and leadership prowess in seeking to resolve a global concern. The umbrella aim of the European Green Deal is to make Europe the first climate-neutral continent by the year 2050.

Solidified by the European Climate Law of 2021,¹ the framework for achieving European Union climate neutrality rested on a binding obligation agreed to by the Member States to reduce the net greenhouse gas emissions of the bloc by at least 55% compared to the 1990 IPCC identified levels by the year 2030. This goal is the official commitment by the European Union of its Paris Agreement contributions to the global commons problem of climate change. As part of the EU's ambitious climate goals and in tandem with the precautionary and polluter pay principles solidified under the UNFCCC, Directive 2003/87/EC of the European Parliament and of the Council established a system for greenhouse gas emission allowance trading within the European Union (the 'EU ETS'). The issues identified in this paper will demonstrate the purpose behind switching from the EU ETS to the EU's Carbon Border Adjustment Mechanism ('CBAM').

This paper seeks to analyse the policy issues posed by the EU ETS in its fourth and final phase of operation, and the parallel infrastructure to be established by CBAM. As such, Section II of this paper will seek to review the EU ETS and its key mechanisms; Section III will seek to highlight the inherent risks and issues associated with the EU ETS mechanism; Section IV will seek to review CBAM and its key mechanisms; and Section V will seek to identify the inherent issues associated with a carbon border adjustment mechanism and prospective pathways to establishing solutions to these identified issues. This paper will not delve into WTO issues associated with a carbon border adjustment mechanism.

This paper seeks to confirm that contemporary climate change risks are being handled with a 'business-as-usual' attitude by the three main climate polluting countries, resulting in the necessity of deployment of the EU CBAM as a last resort mechanism to tackling the risks posed by climate change. To what extent this 'last resort mechanism' seeks to function and what prospective consequences it may result in vis-à-vis international trade partners will be looked at in the paper. Whether the top two global polluting countries decide to adopt the ambitious climate change policy inherent in the EU ETS and CBAM will ultimately depend on the political motivations of the countries' ruling industrial elite, and the competitive nuances such mechanisms may develop between the top three polluters.

II: EU's Emission Trading Scheme.

1 Regulation (EU) 2021/1119 (OJ L 243, 9.7.2021): 1-17.

II: EU'S EMISSION TRADING SCHEME

Directive 2003/87/EC² established a system for greenhouse gas emission allowance trading within the European Union in order to promote reductions of greenhouse gas emissions ('GHG'). Phase I of the EU ETS took place in 2005-2007 and was a revolutionary mechanism for charging a price in €EUR for the emissions originating from EU-located power generators and "energy-intensive industries" ('EII's'). In accordance with the Stern Review,³ the characteristic of the EU ETS reflects a cap-and-trade system that seeks to implement quantity of emissions controls by establishing binding emission commitments, whereupon entities covered by the scheme are free to choose how best to deliver emission reductions.

It is no surprise that the Phase I climate mitigation characteristics were extremely soft⁴ and were primarily intended to disseminate and align an intergovernmental and inter-industry infrastructure necessary to monitor, report, and verify emissions (the 'M.R.V. Characteristics') of the caught businesses. It is safe to state that without the rigorous implementation and re-consolidation of the M.R.V. Characteristics of the EU ETS, the carbon price signal that the EU ETS currently has, would not be a reality.

A momentum shift occurred in Phase III of the EU ETS which took place in 2013-2020.⁵ In Phase III, rather than relying on the broadly ineffective individual national caps established by the Member States, a single EU-wide cap on emissions was put in place, and auctioning became the default method of allocating allowances (as opposed to the previous free allocation system).⁶ Conditional free allocation, as portrayed in Article 10 for covered industries and Article 3e for the later added aviation industry,⁷ was vehemently negotiated for by the Member States' representatives and in turn was included as a key factor in the intended harmonization effects of

2 Directive 2003/87/EC (consolidated as of 01/01/2021): 1-66.

3 Nicholas Stern. "The Economics of Climate Change: The Stern Review." Pt. IV, Ch. 14.2 (CUP 2007): 311. http://mudancasclimaticas.cptec.inpe.br/~rmlclima/pdfs/destaques/sternreview_report_complete.pdf.

4 Yassen Spassov, "EU ETS: Upholding the Carbon Price without Incidence of Carbon Leakage," *Journal of Environmental Law* 24, no. 2 (July 2012): 314.

5 Annex I of the Report on the functioning of the European carbon market accompanying the document 'Report from the Commission to the European Parliament and the Council', (18.11.2015): 1-16.

6 IETA, "The EU's Emissions Trading System": 2. https://www.ieta.org/resources/Resources/3_Minute_Briefings/phase%203%20eu%20ets_final.pdf

7 Directive 2003/87/EC (consolidated as of 01/01/2021): Article 3e & 10.

the EU ETS. The single EU-wide cap and the persistence of free allocation led to the slowing down of the intended climate mitigation efficacy of the EU ETS, but at the same time, were crucial to negotiating a harmonized agreement amongst Member States who in the first two phases of the trial-system relied on their own ‘business-as-usual’ market approach.⁸

The EU ETS applies to a pre-determined set of activities as expressly defined in Annex I of Directive 2003/87/EC. The activities include stationary installation emissions and the refining of minerals emissions to the production of certain chemicals and the softly included aviation emissions within EU territory. The greenhouse gases monitored are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆).⁹ Caught businesses can only carry out their activities by applying and being granted a permit by a ‘competent authority’.¹⁰ The permit is necessary to establish that an installation, or its operator has the capacity to implement the M.R.V Characteristics.

Obtaining the emission permit is only the procedural step, and an installation caught under Annex I seeking “to emit emissions” caught by Annex II must also possess the necessary emission allowances. An allowance is defined precisely as an allowance to emit one tonne of carbon dioxide equivalent during a specified period.¹¹ Valid transfer of these allowances is only permitted in accordance with Directive 2003/87/EC. Allowances are issued each year by a Union-wide quantification methodology.

Distribution of the issued allowances occurs by virtue of the aforementioned ‘free allocation’ and an auctioning process established in accordance with the historic emissions verified during the initial phases of the EU ETS. The free allocation protocol contains a per sector and subsector Commission crafted benchmark utilised for products created by the Annex I installations as opposed to their utilised inputs.¹² The 2021-2025 ex-ante benchmark for individual sectors or subsectors will begin taking the average performance of the 10% most efficient installations per sector/subsector in the Union for the years 2016 and 2017, consult the relevant stakeholders and adjust

8 Will Ulrike. “Climate Border Adjustments and WTO Law: Extending the EU Emission Trading System to Imported Goods and Services.” Brill Nijhoff, Leiden, Boston, Nijhoff Int. Trade Law, Vol. 17 (2019): 44-45.

9 Directive 2003/87/EC (consolidated as of 01/01/2021): Annex II.

10 Ibid, Art. 4.

11 Ibid, Art 3(a).

12 Ibid, Art. 10a(1) & (2).

the annual reduction rate of each benchmark accordingly.¹³ Whereas the pre-2021 benchmark equalled to 1.74%, the 2021 onwards benchmark was increased to an annual rate of 2.2%, exemplifying an adaptation of the emission reduction targets so as to better align the technological growth and mitigation effort of the targeted polluters and the amount of free allocation tied to active production levels in the EU.¹⁴ Such adjustments represent the healthy grow in climate mitigation agendas from stakeholders but also represent steering by the Commission towards the 2030 goals.

These allowances are to be paid for by the installations in question in accordance with the EU ETS carbon price at the time of validation of the allowances themselves.¹⁵ Failure to surrender sufficient allowances in lieu of an installation's operations will trigger a penalty clause which shall be a blanket prohibition on operations and failing that, an excess emission penalty of EUR 100 for each tonne of carbon dioxide equivalent emitted during an unsanctioned emission production cycle.¹⁶

As of Phase III of the EU ETS, the healthy trading of the EU emission allowances and foreseeable regulatory stability to this point has resulted in a non-volatile carbon price above EUR 90.00. As will be seen through a comparative lens below in Section V, carbon mechanisms from the top two polluters have attempted to replicate the EU ETS cost strength, but as a result of the low price stagnation of these contemporaries, cannot so far be viewed as a serious enough effort aimed at mitigating climate emissions through a comparative process to the EU ETS. In the opinion of the author, without effective implementation of comparative M.R.V. Characteristics in the top two polluters, thereby signalling a large enough shift in the political and industrial attitude towards climate mitigation, it is unlikely that any stand-alone mechanisms (i.e., comparative emission trading schemes) will be as successful as to harness a cost-strength of \$70.00 or the ¥ equivalent.

The reason therefore is that the M.R.V. Characteristics create necessary interlinkages between industries, markets, and emissions and in so doing shave away the uncertainty inherent to carbon price fluctuations (i.e., carbon market price volatility), thereby showcasing an interlinked carbon trading

13 Ibid, Art. 10a(2).

14 Annex I of the Report on the functioning of the European carbon market accompanying the document 'Report from the Commission to the European Parliament and the Council', (18.11.2015): Section 4.2.3.

15 Ibid, Art. 13.

16 Ibid, Art. 16.

system as having potential to succeed on an inter-state level.¹⁷ In essence, the allowances of an emission trading scheme have economic value in the sense that they are a legal licence to pollute, which for heavy industrial emitters translates to being a direct cost of carrying on with their business, and the allowances are also intangible and transferable assets held by the companies that need them, thereby boosting their balance sheet utility.¹⁸

Having identified the key mechanics behind the EU ETS we turn towards taking a look at its chronic problems and the inherent risks necessitating the parallel CBAM.

III: KEY PROBLEMS OF THE EU'S ETS

Whereas the creation of a cap-and-trade mechanism on the scale of the EU ETS is a monumental accomplishment, its creation has resulted in a set of constructive problems tied to the perception of trade partners, whether domestic in nature (i.e., subsidies and competition concerns)¹⁹ or foreign (i.e., ambivalence to foreign parallel efforts)²⁰ in effect. In accordance with the author's review of the EU ETS legislative foundation, three crucial issues stem from the interlinked policy problems tied to increasing carbon costs, ensuing competitiveness loss, and carbon leakage. These three key issues will be addressed in this section of this paper in order to demonstrate culmination of the last resort put into play by the EU taking shape in the form of the CBAM.

III/a: CARBON PRICING

Of the three identified issues, the concerns revolving around the carbon price are perhaps the ones that are the most underplayed. This is because of the dual-edged nature of carbon price. To put this concern into perspective, during the onset of the first three Phases of the EU ETS (2005-2020) the EU ETS carbon price reflected the reality that external countries (i.e.,

17 World Bank Group. "Report of the High-Level Commission on Carbon Pricing and Competitiveness." Washington D.C. (2019): 19.

18 Elena Aydos. "Emission Trading Scheme and the WTO." Vol. XI, Part 7, Ch. XI.90 in The Elgar Encyclopaedia of Environmental Law (Edward Elgar Publishing, 2021): 668-669.

19 Peter Van den Bossche, "WTO law as a constraint on domestic environmental policy: an overview", Vol XI, Part 1, Ch. XI.4 in The Elgar Encyclopaedia of Environmental Law (Edward Elgar Publishing) (2021): 36.

20 Sakuya (Yoshida) Sato, "EU's Carbon Border Adjustment Mechanism: Will It Achieve Its Objective(s)?" Journal of World Trade Vol. 56, no. 3 (2022): 391-392.

United States and China) currently face: namely that the carbon price was insufficiently high to operate as an effective cost deterrent to the emitting production cycles incumbent in local, regional, and national industry operations. As of February 2023, the EU carbon price peaked at EUR 100/tonne CO₂e.²¹

As such, on the one hand, low carbon prices in a given mechanism tied to specific EII's does not give rise to a sufficient deterrent for the carbon emitting industries, as the carbon cost can be effectively internalized to overcome any negative effects on prospective marginal profits,²² but on the other hand, a too high carbon price begins to seriously concern the carbon emitting industries as they face the prospects of no longer being able to effectively internalize the associated carbon cost thereby giving rise to the risk of losing existing market share vis-à-vis importers who face a much lower, or no carbon cost associated with like products or services.²³ Hence, the inherent link between carbon price volatility and carbon leakage.

This concern revolving around carbon pricing may operate on a mid to long-term scale, but it cannot be fully appreciated without connecting the 'transitional' nature of the EU ETS free allowance mechanism,²⁴ and the subsequent plan to phase-out the free allowance mechanism by 2034.²⁵ In accordance with the plans published by the European Parliament in December 2022, in order for the EU ETS to realistically accomplish a 62% cut of GHG emissions by 2030, compared to 2005 levels, there will be an EU-wide quantity of allowance reduction in 2024 and 2026 in combination with the annual phase-out obligations of the EU ETS.²⁶ This new EU-wide quantity reduction was set in place to equate the negative effect that the free allowance mechanism inflicts on the carbon reduction goal.²⁷

21 Susanna Twidale. "EU carbon price hits record high nearing 100euros/tonne," Reuters., February 20, 2023, <https://www.reuters.com/markets/carbon/eu-carbon-price-hits-record-high-nearing-100-eurostone-2023-02-20/>

22 World Bank Group. "Report of the High-Level Commission on Carbon Pricing and Competitiveness." Washington D.C. (2019): 14.

23 Ibid., 15.

24 Commission Delegated Regulation (EU) 2019/331: 1-62.

25 Elena Aydos. "Emission Trading Scheme and the WTO." Vol. XI, Part 7, Ch. XI.90 in *The Elgar Encyclopaedia of Environmental Law* (Edward Elgar Publishing, 2021): 672-673.

26 "Climate change: Deal on a more ambitious Emissions Trading System (ETS)." European Parliament Press Release December 18, 2022. Accessed 17 March 2023, <https://www.europarl.europa.eu/news/en/press-room/20221212IPR64527/climate-change-deal-on-a-more-ambitious-emissions-trading-system-ets>

27 David Kleimann. "Carbon leakage and WTO rules", Vol. XI, Part 3, Ch. XI.27 in *The Elgar Encyclopaedia of Environmental Law* (Edward Elgar Publishing, 2021): 244.

It must also be noted that as an ancillary amelioration mechanism to the free allocation mechanism, the EU ETS permits the re-utilisation of Member State revenue generated from the auctioning process to be re-injected as state aid compensation to selected EII's in lieu of rising 'indirect emission' costs.²⁸ These indirect emission costs are classically identified as passed on increased electricity prices from power generator installations caught under the EU ETS. As of 2021, the total number of Member States with compensation schemes rose to 14 Member States.²⁹

Given the structural set-up of the EU ETS in conjunction with the free allowance system and the state aid that EII's rely on, the author believes that as a result of the phase-out initiative put into action by the Commission, for every % of free allowance phased-out an equivalent multiplicative factor will be leveraged against the EU ETS carbon price resulting in predictable carbon price spikes. Such would have been the expected occurrence, if not for the introduction of CBAM operating as a carbon price break by indirectly attempting to level-the-playing field between international competitors of EU EII's.

In conclusion, the EU ETS carbon price to date can be directly attributed to the rambunctious application of the system's M.R.V. Characteristics³⁰, industry risk assessments, competition concerns and the risk of carbon leakage. The free allowance and the state-aid rules tied to the EU ETS have so far operated as reigns on the true value of the EU ETS carbon price.

III/b: COMPETITION

A key issue behind the implementation of the EU ETS is that a carbon cost is directly linked with the greenhouse gas emissions of certain covered installations operating in the EU. In terms of trade, goods produced internalizing the additional EU ETS carbon prices, will be at a competitive disadvantage to goods produced outside the operation of the EU ETS (i.e., outside the European Union).³¹ The growth of the EU ETS carbon price in its current Phase IV was only possible because a 'level-playing field'

28 Report from the Commission to the European Parliament and the Council on the Functioning of the European carbon market in 2021, (14.12.2022): 1-39.

29 Ibid.

30 The Stern Review. Pt. IV, Ch. 15.4 (CUP 2007): 336.

31 World Bank Group. "Report of the High-Level Commission on Carbon Pricing and Competitiveness." Washington D.C. (2019): 14.

existed in the European Union. Considering this factor in conjunction with the amelioration mechanics, such as the free allowance distributions and the historical excess allowance distribution, buffered the true additional costs of production incumbent on EU Annex I industries.³² It ought to be reiterated that the EU intends to phase-out these amelioration mechanics, thereby sharply increasing the risk of a competitive disadvantage in terms of product price or marginal profits of covered industries.

Traditionally, firms have three atypical options at mitigating an increase in costs resulting from carbon emission prices: [1] they pass on costs to consumers; [2] reduce their own emissions (i.e., cost effective abatement); or [3] rely on the amelioration mechanics, such as free allowances.³³ Reducing internal carbon costs may be impractical for certain EII's and the free allowance mechanisms will be phased-out. Passing costs on to consumers in a level-playing field is a viable option, but passing-costs on to consumers in an international trade environment is far more difficult to do.³⁴ As a result, the competitive risk (even if hypothetical in practice) is a factor that higher carbon footprint companies operating in the EU must take into consideration, especially when faced with a mid-term decrease of amelioration mechanics and a potential increase in the carbon price itself.

III/c: CARBON LEAKAGE

The final key consideration is interestingly the strongest reason nullifying the intended climate change mitigation mechanism embodied in the EU ETS: carbon leakage. Even as early as the 1997 Kyoto Protocol the risk of carbon leakage was recognised.³⁵ The Commission describes carbon leakage as the ambivalence of international trade partners to commit to a similar degree of climate mitigation ambition that the EU has adopted, thereby producing the consequences of shifting production capacity from the Union to non-EU countries with lower carbon costs, or the substitution effect of replacing Union products by less-carbon intensive imports.³⁶ Even though this description is categorized by the justification for the necessity

32 Ibid, 19.

33 The Stern Review. Pt. IV, Ch. 15.4 (CUP 2007): 335.

34 World Bank Group. "Report of the High-Level Commission on Carbon Pricing and Competitiveness." Washington D.C. (2019): 15.

35 Tobias Nielsen; Nicolai Baumert; Astrid Kander; Magnus Jiborn; Viktoras Kulionis; "The Risk of Carbon Leakage in Global Climate Agreements," International Environmental Agreements: Politics, Law and Economics 21, no. 2 (June 2021): 149.

36 EU Commission Communication, "Guidelines on State Aid vis-à-vis GHG Emission Allowance Trading post-2021." (OJ C 317, 25.9.2020): Preamble 5.

of state aid amelioration mechanisms, it demonstrates the prime concern necessitating such a drastic response, despite a potential reduction of the climate mitigation effort embedded in the EU ETS.

It has been posited that carbon leakage is inherently tied to a loss of competitiveness as a direct result of ensuing domestic industrial pressures being made known to EU policy makers,³⁷ a lack of realization by foreign partners of equivalent environmental methods with similar political gusto,³⁸ and a potential shift of production costs on the balance sheets of affected companies to looser climates.³⁹ As an ancillary effect, carbon leakage has the negative connotation of indirectly increasing the emission intensity of the relocated country because of the shift by the producer from carbon-heavy to carbon-light production costs.⁴⁰ Even though it has been criticised as an issue whose consequences have not yet materialized in practice,⁴¹ the concern is grounded in logical construction of the economics behind heavy-emitting industries and their associated operating costs and profit margins. The actual manifestation of an expected mass exodus of industry would never come to pass as the Commission and the European institutions have instituted the aforementioned ameliorating mechanisms tied to the EU ETS so as to ensure that it does not occur as a direct response to these known risks. From industry's perspective, long-term uncertainties surrounding the implementation and amelioration of carbon price mechanics may discourage low-carbon investment if the firms are concerned that the carbon pricing policy will not endure.⁴²

In the opinion of the author there is a strong linkage between carbon price increases (whether directly or indirectly affected by amelioration mechanisms), the issue of competitiveness brought to the fore as a result thereof, and prospective risk of carbon leakage ensuing as a result of the two aforementioned issues conjoined by a failure to commit to a global problem of the commons by international trade partners. As a result of these factors and the intention of the EU to accomplish its ambitious green

37 Eva Pander Maat, "Leading by Example, Ideas or Coercion? The Carbon Border Adjustment Mechanism as a Case of Hybrid EU Climate Leadership", in *Insight: The EU and Climate Change* (eds. Charlotte Beaucillon and Benedikt Pirker) *European Papers*, Vol. 7, 2022, No. 1: 66

38 Francesco Sindico, "The EU and Carbon Leakage: How to Reconcile Border Adjustments with the WTO." *17 European Energy & Environmental Law Review* (2008): 329.

39 Yassen Spassov, "EU ETS: Upholding the Carbon Price without Incidence of Carbon Leakage," *Journal of Environmental Law* 24, no. 2 (July 2012): 315.

40 David Kleimann. "Carbon leakage and WTO rules", Vol. XI, Part 3, Ch. XI.27 in *The Elgar Encyclopaedia of Environmental Law* (Edward Elgar Publishing, 2021): 238.

41 World Bank Group, "Report of the High-Level Commission on Carbon Pricing and Competitiveness." Washington D.C. (2019): 8.

42 *Ibid*, 27.

targets by 2030 and 2050 respectively, the phase-out process of the key amelioration mechanisms tied to the EU ETS have once more increased the perceived risk scenario for EII's, thereby triggering the EU's last resort: a carbon border adjustment mechanism.

IV: EU'S CARBON BORDER ADJUSTMENT MECHANISM

A global concern identified as early as 1979 has to date only been seriously approached by the European Union's Emission Trading System. As a result of a very significant first-mover disadvantage, the EU's carbon policy operated as a test vehicle for intergovernmental market analysis by the remaining three largest emitters (the United States, China, and India). It has shown the potential behind raising a sufficient carbon price to demonstrate a prospective hidden market, but a level international playing field was never sufficiently realised so as to disuse the utilization of the aforementioned amelioration mechanisms tied to the EU ETS.

As a direct consequence of the inaction by the largest state polluters, and a lack of a 'level-playing field' diffusing associated carbon costs across multiple markets, the Council and the European Parliament reached a political agreement on the 13th of December 2022, to utilise the mechanism of last resort,⁴³ a carbon border adjustment mechanism applicable to EU importers of goods (the "CBAM").⁴⁴ The CBAM explains its *raison d'être* as an "alternative measure aimed to address the risk of carbon leakage in the EU ETS".⁴⁵ Having unpacked the interlink between carbon price, competitiveness, and carbon leakage in Section B and C of this paper, we now look towards the functional mechanisms established by the CBAM which are to operate on parallel rails alongside the EU ETS.

CBAM consists of the surrender of unique CBAM certificates to be charged on certain imported products, originating in a third country (i.e., non-EU country) and certain precursors whose production is carbon intensive.⁴⁶ The initial set of carbon intensive goods will originate from the steel, aluminium, fertiliser, electricity, and hydrogen industries.⁴⁷ Specificity of the covered goods will rely on the existing EC framework of the combined

43 Francesco Sindico, "The EU and Carbon Leakage: How to Reconcile Border Adjustments with the WTO." 17 *European Energy & Environmental Law Review* (2008): 332-333.

44 European Commission, "CBAM Proposal." Brussels (14.7.2021): 1-60.

45 *Ibid.*, 2.

46 *Ibid.*, Art. 1(1) & 2(1).

47 *Ibid.*

nomenclature (“CN”) codes identified in Annex I of CBAM.⁴⁸

Specifically, the caught goods will only be permitted to be imported into the EU market by a person lodging a customs declaration for release of the goods for free circulation (a ‘declarant’) if such a person has been authorised by the ‘competent authority’⁴⁹ to that effect.⁵⁰ To be an ‘authorised’ declarant, within the purview of CBAM, the declarant will have to comply with submission of very extensive documentation, involving whether the declarant is operating on another legal entities’ behalf.⁵¹ If so validly authorised, by 31 May of each year, every authorised declarant will submit to the competent authority the crucial ‘CBAM declaration’ for the calendar year of operation preceding the actual declaration (i.e., a year grace period of submission).⁵² The CBAM declaration must include the following: (a) an extensive quantification of each type of goods to be imported during the calendar year of the declaration itself, expressed either in megawatt hours (for electricity products) or tonnes (for non-electricity products);⁵³ (b) the total ‘embedded emissions’ for each type of good to be imported;⁵⁴ and (c) the total number corresponding CBAM certificates to be surrendered, after deduction of correlative paid carbon prices arising from the products’ country of origin (i.e., from non-EU countries, if any) or the EU ETS adjustment vis-à-vis granted free allowances (i.e., for EU EII’s products benefiting from the EU ETS’s free allowance amelioration mechanism).⁵⁵

The price of each CBAM certificate to be sold by the respective Member State authority where the imported goods are to enter the Union market will be calculated as the average price of the closing price of the EU ETS allowances sold on the common auction platform (the ‘European Energy Exchange’ (EEX)) for each calendar week.⁵⁶

Failure to surrender the requisite number of CBAM certificates corresponding to the embedded emissions of the imported goods (during the applicable year) will trigger a penalty equivalent to the penalty charged by the EU

48 Council Regulation (EEC) No. 2658/87 of 23 July 1987: 1.

49 European Commission, “CBAM Proposal.” Brussels (14.7.2021): Art. 11(1).

50 Ibid, Art. 4.

51 Ibid, Art. 5.

52 Ibid, Art. 6(1).

53 Ibid, Art. 6(2)(a).

54 Ibid, Art. 6(2)(b).

55 Ibid, Art. 6(2)(c).

56 Ibid, Art. 21(1).

ETS vis-à-vis domestic emitters.⁵⁷ Payment of the fee will not release the authorised declarant's obligation to surrender the corresponding CBAM certificates.⁵⁸ Failure to pay the fee and/or surrender the requisite number of CBAM certificates will trigger a revision by the competent authority of the 'authorised' nature of the declarant, thereby potentially prohibiting future goods to enter the EU territory.⁵⁹

In its current form, CBAM will enter into its transitional (data-gathering) phase on the 1st of October 2023, with the first reporting period for traders ending 31 January 2024.⁶⁰ Akin to the implementation phase of the EU ETS, the CBAM has left open a 'delegated' legislative window tied to the EU Commission and the CBAM Committee's expertise. The full system, including the data submission aspects, will enter into force on 1 January 2026, having direct consequences for all EU importers vis-à-vis their supplied goods, and electricity.

V: POTENTIAL PROBLEMS OF THE EU'S CBAM

As identified in the previous section, CBAM's transitional step is scheduled for being phased as from October 1st until the 31st of December 2025. An important step of this transition phase is for the Commission and CBAM Committee to be ready to tackle any outstanding issues identified by industrial and affected players in the EU market. In turn, the Commission will begin an encroachment of the identified M.R.V. Characteristics prevalent in the EU ETS into the CBAM infrastructure.⁶¹ The ensuing consequences for affected EII's are mainly tied with additional regulatory burdens, and for the EU itself, the prospect of trade-partner reprisals.

V/a: THE REGULATORY BURDEN

The inherent issue of regulatory burden can be translated to a short-term additional cost for authorised declarants attached to the M.R.V. Characteristics transcribed from the EU ETS into the CBAM. The prime regulatory burden of the CBAM originates from the calculation methodology of embedded

57 Ibid, Art. 26(1).

58 Ibid, Art. 26(3).

59 Ibid, Art. 26(4).

60 European Commission, "Carbon Border Adjustment Mechanism" https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en.

61 Ibid, Art. 32, 33, 34 & 35.

emissions (i.e., the ‘Monitoring Characteristic’),⁶² and the verification of the submitted embedded emissions.⁶³ The reporting obligation tied to ‘CBAM reports’ for declarants will not be inspected as they must be handled on a case-by-case basis.⁶⁴

The first concern, as per Annex III of CBAM is tied to its Monitoring Characteristic and thereby calculation of all direct embedded emissions vis-à-vis an EII’s goods, or electricity (separated further into ‘simple’ and ‘complex’ goods representing different degrees of specificity for their respective calculations). Indirect emissions and associated costs are not currently included in the CBAM embedded emission calculation, which creates a prospective balancing option for the Commission in the future.

Mapping a product cycle is a complex issue despite its inherent connection with the caught EII’s.⁶⁵ CBAM acknowledges this and introduces a leeway mechanism. In the event that an authorised declarant cannot adequately provide the ‘actual embedded emission’ of a product batch manufactured at the registered installation, the authorised declarant can apply set default values.⁶⁶

The default values are revised periodically by the Commission and are set at “the average emission intensity of each exporting country and for each good” caught under CBAM (other than electricity which uses a different calculation methodology). If the default values per exporting country cannot be created, as a result of a lack of reliable data for that country, the default values for that type of good will be based “on the average emission intensity of the 10% worst performing EU installations for that type of good”.⁶⁷

This calculation methodology for caught goods under CBAM represents a leeway mechanism in the sense that authorised declarants (i.e., importers) are not punished for having complex production sequences, but they are tapped on the wrist if they seek to rely on default values not directly incorporating their own unique GHG mitigation technology in their respective production cycles (if any).⁶⁸ As an additional internal amelioration mechanism for

62 Ibid, Art. 7.

63 Ibid, Art. 8.

64 Ibid, Art. 35.

65 Commission Recommendation 2013/179/EU of 9 April 2013: 1.

66 European Commission, “CBAM Proposal.” Brussels (14.7.2021): Annex III, Art. 4.1.

67 Ibid.

68 Sakuya (Yoshida) Sato, “EU’s Carbon Border Adjustment Mechanism: Will It Achieve Its Objective(s)?”, *Journal of World Trade* Vol. 56, no. 3 (2022): 389.

non-EU countries, adaptation of the default values in a product type can be effectively linked by indirect emission factors not incorporated in the calculation methodology itself (as it focuses on the ‘direct’ emissions), such as geography, natural resources, market conditions, energy mix, or industrial production systems.⁶⁹ Sources of information tied to a trade partner’s ‘indirect emissions’ may entail a bargaining forum for seriously affected trade partners who may have no choice but to issue reprisal legislation to tackle the negative economic connotation posed to them by virtue of CBAM.

The second concern of the regulatory burden is tied to the CBAM’s Verification Characteristic. Verification of the submitted ‘total embedded emissions’ of products or electricity, is the dual nature of the regulatory burden incumbent on the authorised declarant, and as such, an additional short-term cost. The total embedded emissions submitted by the declarant in its CBAM declaration must be verified by an accredited verifier.⁷⁰ A ‘reliable’ verified report under CBAM will seek to incorporate the general EU standard for verification reports, and any specificities applicable to the respective EII.⁷¹

The main potential issue stemming from the verification obligation for non-EU declarants is the logistics behind the accreditation factor vis-à-vis prospective non-EU verifiers seeking to be accredited by EU standards. This issue is solved either by hiring EU verifiers to perform outside EU verification tests on caught installations, or if the former solution is impractical, the introduction of early harmonization linkages between the EU standards of emission accreditation and the non-EU standards operating for the trade partner country.

V/b: RISK OF REPRISAL

Leaving the risk of WTO-incompatibility aside, the main policy issues feeding into an ancillary risk of reprisal from third countries is a factor to be considered by the EU. The issue of reprisal can manifest in direct trade measures by non-EU countries (e.g., state aid), or indirect responses tied to the natural resource input of caught EII’s.

69 Ibid, Art. 6.

70 European Commission, “CBAM Proposal.” Brussels (14.7.2021): Art. 8(1).

71 Commission Implementing Regulation (EU) 2018/2067 of 19 December 2018: 94; see also, Commission Recommendation 2013/179/EU of 9 April 2013, Annex II.

To exemplify the issue, the current U.S. administration under President Biden is keen to establish a firm foothold in the climate change prospects. An interesting set of methods is contained in the Inflation Reduction Act of 2022 ('IRA'), signed into effect on August 16, 2022. The IRA has been touted as an initiative that will deliver clean energy to Americans and trading partners – powered by American workers. The U.S. Department of Energy has estimated that the IRA, in conjunction with the earlier Bipartisan Infrastructure Law act (and other actions) will enable the United States to achieve a 40% reduction in economy wide GHG emissions below 2005 levels by 2030.⁷² Comparatively, China's and India's 2030 targets are a 60-65% reduction of CO2 emissions per unit of GDP.⁷³

These ambitious projects serve to increase the competitive attraction of U.S. originated products in contrast to the current state of affairs. They do not seek to attach a carbon price to any of the new U.S. products, but rather to inject a large amount of new equity to spurn competition between the U.S. and China, in terms of production. As a direct consequence of the 'business-as-usual' attitude, the risk of climate change exemplified by IPCC's AR6 remains out of sight. No equivalent to the EU ETS exists in the U.S., and the 2007 Lieberman-Warner Bill which sought to attempt such a market linkage unfortunately never passed into binding law.⁷⁴ As a result no viable U.S. harmonization platform currently exists for M.R.V. Characteristic adoption, thereby making diffusion of carbon related issues across a linked EU-US playing field, that much harder to accomplish.

In contrast we look at the early Chinese harmonization platform. The test mechanism adopted by China in 2019, the Shenzhen Emissions Trading System was ultimately condensed in 2021 into a Chinese carbon ETS which opened at ¥48 per ton (\$7.40 per ton) and climbed to a \$10.22 equivalent on February 2022.⁷⁵ The U.S. has no domestic carbon price equivalent, and aside from federation action, several states have launched regional

72 U.S. Department of Energy, "The Inflation Reduction Act Drives Significant Emissions Reductions and Positive America to Reach Our Climate Goals" (Office of Policy, August, 2022) (DOE/OP-0018). Accessed March, 19, 2023 https://www.energy.gov/sites/default/files/2022-08/8.18%20InflationReductionAct_Factsheet_Final.pdf.

73 Tobias Nielsen; Nicolai Baumert; Astrid Kander; Magnus Jiborn; Viktoras Kulionis, "The Risk of Carbon Leakage in Global Climate Agreements," *International Environmental Agreements: Politics, Law and Economics* 21, no. 2 (June 2021): 152.

74 Yassen Spassov, "EU ETS: Upholding the Carbon Price without Incidence of Carbon Leakage," *Journal of Environmental Law* 24, no. 2 (July 2012): 329.

75 William Alan Reinsch & Emily Benson, "Convergence and Divergence: Multilateral Trade and Climate Agendas." *Center for Strategic & International Studies* (March 2022): 22.

blocks, one thereof being the Regional Greenhouse Gas Initiative ('RGGI'), comprised of eleven states, representing a regional cap-and trade program for the power sector. The carbon price fluctuates around \$7.00 per ton.⁷⁶ The EU carbon price hit a record high of €97.50 (\$106.67) in February 2022.⁷⁷

For both attempts at an equivalent EU ETS, the lack of effective M.R.V. Characteristics implemented across a national level pertaining to specific EII's denotes a weak carbon price, and in turn avoids becoming a true concern for carbon-intensive producers. Despite a weak carbon price signal, it is highly possible that if either the U.S. or China would seek to permit piece-meal implementation of the EU CBAM via the adoption of the M.R.V. Characteristics into their own EII's, without the prospect of direct or indirect reprisal, then the carbon price signals that producers must consider would magnify. Failing such minimum linkages, and even with the operation of the equivalence mechanism contained in Article 9(1) CBAM, the risk of reprisal would remain a key corollary issue tied to CBAM. A further step on the wrong path of tackling climate change would be the creation of 'Climate Clubs',⁷⁸ which in the author's point of view, would ultimately lead to a fragmented international system and in turn, a fragmented global response to a global concern of the commons.

A factor that would concern the U.S. or China is that if either nation decides to implement the aforementioned EU linkages, the linked markets would present a common political concern at the international stage as U.S. and EU, or Chinese and EU energy intensive emitting industries would be indirectly linked. The optimal solution to this specific Prisoners Dilemma is for both countries to permit linkages, or for neither to do so. Such linkages have the potential to level-the playing field, create signals for producers related to a tied carbon price, alleviate competitiveness concerns and given credence to climate justiciability sought by politicians.⁷⁹

The advantage of utilizing CBAM is that it is being introduced in a piece-meal effort, currently only applicable to energy intensive industries. Even though a piece-meal methodology slows the global carbon mitigation

76 Ibid, 19.

77 Ibid, 17.

78 Rafael Leal-Arcas, Manuliza Faktaufon & Anna Kyprianou, "A Legal Exploration of the European Union's Carbon Border Adjustment Mechanism." *European Energy and Environmental Law Review*, Vol. 31, Issue 4 August 2022: 239.

79 World Bank Group. "Report of the High-Level Commission on Carbon Pricing and Competitiveness." Washington D.C. (2019): 27.

factor, it presents a safety net for local producers caught by the climate mitigation initiative. Harmonizing the M.R.V. Characteristics with non-EU goods produced in parallel contexts (vis-à-vis actual emissions) gives rise to the potential to avoid reprisal, and to initiate the largest world emitters to begin preparing a new liquid market tied to carbon costs.

CONCLUSION

In conclusion, this paper has analysed the EU ETS and its key issues which have ultimately resulted in the EU having no choice but to utilise its card of last resort, the CBAM. Following up on this connection, this paper has looked at the CBAM proposal within the auspices of climate change policy between the two other major polluters, the U.S. and China, in order to determine the potential behind EU-U.S. or EU-China linkages in terms of carbon policy. This methodology was adopted because the current piece-meal adoption of carbon pricing and carbon policy tied to GHG emissions from the U.S. and China lack severely behind the EU's own attempts. Despite the ambitious nature of the EU's carbon policy, without a multilateral solution spread across the top three polluters in the world, the efficiency of any policy is muffled in the face of a global problem of the commons.

The climate ambitions of the EU have the potential to culminate in success, or alternatively in failure. If an insufficient number of countries fail to seriously subscribe to CBAM, and/or the M.R.V. Characteristics presented by the EU ETS, the internalization of the identified risks tied to the operation of the EU ETS can only ever be temporary. A worst case-scenario would be that the key polluters would initiate legislative reprisals to counter the perceived tax tied to CBAM and non-EU goods. The best case-scenario is if all three largest polluting countries would minimally harmonize their M.R.V. Characteristics so as to determine a new playing field vis-à-vis carbon pricing. A middle-man scenario would be if a Climate Club would be created between EU and US, or alternatively, EU and Chinese carbon markets only. The result thereof would be an incomplete template to handling the issue of climate change, thereby leaving it to future generations to deal with.

It is to be noted that despite the focus of this paper on the EU, U.S., and China as major emitting economies, the issues revolving around climate change affect other major economical blocs, including Russia, the Middle East, India, Japan, and Australia. However, subsumption of a CBAM equivalent between the top three emitters would create a knock-on effect

vis-à-vis carbon price dictation for the remaining emitters.

Ultimately for the main emitters in the world, a policy shift towards climate change mitigation will be necessary to even begin considering the potential behind utilizing the EU's CBAM to ameliorate local market issues. Whether this happens before the 2030 and 2050 agendas set by the largest carbon emitters is a moment to look out for. To avoid the worst prisoner dilemma result, and considering the gravity of the issue, acting too late will produce a result that will threaten the justiciability of any state's climate policy.

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1. 1. 3 Status seeking as a climate security leader – investigating the EU’s focus on external climate security policies

SUBMITTED BY

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I: INTRODUCTION

With the aggravation of the climate crisis, the security implications of climate change become more apparent. Global warming worsens existing conflicts and creates new tensions by increasing extreme weather events, water scarcity, and poor harvests, amongst other pathways. While research has provided broad evidence for climate-induced violence,¹ awareness and attention are lacking and only grow slowly among decision-makers. Until today policy action in mitigating both climate change and climate-related security implications is not sufficient. Therefore, understanding the patterns of and motives behind the existing initiatives is of great relevance.

The European Union (EU) was among the first intergovernmental organizations to address climate security and “among the most active actors in advocating a climate security discourse.”² The Union has recognized climate change as an issue with a significant impact on the security landscape since the early 2000s. Since then, it has incorporated references to climate change in its key foreign policy documents and started putting them into practice through, for example, the Green Diplomacy Network and the reform of the EU’s Early Warning System.³ All these efforts seem, however, to be grounded in the EU’s foreign policy and focus on tackling the security implications of global warming elsewhere in the world. Within

1 Marshall Burke, Solomon M. Hsiang, and Edward Miguel, “Climate and Conflict,” *Annual Review of Economics* 7, no. 1 (August 1, 2015): 577–617, <https://doi.org/10.1146/annurev-economics-080614-115430>.

2 Beatriz Pérez de las Heras, “Climate Security in the European Union’s Foreign Policy: Addressing the Responsibility to Prepare for Conflict Prevention,” *Journal of Contemporary European Studies* 28, no. 3 (July 2, 2020): 336.

3 Pérez de las Heras, “Climate Security in the European Union’s Foreign Policy: Addressing the Responsibility to Prepare for Conflict Prevention.”

the Union, the climate security nexus appears to be far less present. This paper puts forward the argument that the EU's initiatives regarding climate security are motivated by international status seeking and therefore focus on the foreign policy realm. An actual threat perception of climate-induced or increased conflict and suffering is less present within the Union. Thus, the EU's climate security rhetoric, as well as practices, are directed toward an outside audience rather than addressing the multiplying effect that climate change may have on internal security issues. I will provide backing for this argument first, by embedding it within the wider literature on status seeking. Afterwards, an empirical analysis will contrast the EU's efforts in the external and internal spheres clearly hinting at a foreign policy focus in climate security.

II: THEORETICAL FOUNDATION OF THE ARGUMENT

Political theorists have acknowledged the importance that status possesses for states and their decisions for centuries. The term status can be understood as a “shared consensus of a given state’s standing in the international system”.⁴ In modern international relations, status is considered an alternative currency to power.⁵ It represents a key interest for states as it holds the potential to reshape hierarchies of power and achieve higher influence than their material capabilities would allow.⁶

As a state’s standing is based on the shared values of the international community, the status is positional, perceptual, and social.⁷ Many scholars have drawn on Social Identity Theory for exploring the pathways of states to enhance their status. An important contribution to the debate was introduced by Deborah Larson and Alexei Shevchenko, who identified three strategies for status seeking: social mobility, social competition, and social creativity. Mobility refers to joining a higher-ranked group whereas competition implies the relative elevation over other groups by resource mobilization.⁸ Lastly, creativity comprises the redefinition of positive and

4 Jonathan Beldner Renshon, “Fighting for Status,” ProQuest Dissertations and Theses (Ph.D., Ann Arbor, Harvard University, 2012), 37, ProQuest Dissertations & Theses Global: The Humanities and Social Sciences Collection.

5 e.g., Robert Gilpin, *War and Change in World Politics* (Cambridge University Press, 1983), 31.

6 Donald Kagan, *On the Origins of War and the Preservation of Peace*. (New York: Random House, 1995).

7 William C. Wohlforth et al., “Moral Authority and Status in International Relations: Good States and the Social Dimension of Status Seeking,” *Review of International Studies* 44, no. 3 (2018): 526–46.

8 “Shortcut to Greatness: The New Thinking and the Revolution in Soviet Foreign Policy,” *International Organization* 57, no. 1 (2003): 79.

negative features and the invention of new dimensions in which a state or a group of states trumps others. This last dimension, therefore, relates to ‘soft power’. Inspired by Larson and Shevchenko’s work, Wohlforth et al. show that portraying oneself as a ‘good’ or ‘moral’ actor can be an effective way to seek power, especially if positional wins compared to the great powers are unrealistic.⁹

Applying the status seeking literature to the EU, the Union has for a long time deployed the strategy of social creativity when positioning itself as a ‘normative power’.¹⁰ This strategy seems logical against the backdrop that the EU constitutes an important actor on the international stage but needs to compete with the major powers, the United States, China, and Russia, which are all militarily superior. Upward social mobility and competition are in this situation not viable tactics for the EU. Previous research has, hence, pointed out that the EU aims to create its own status group based on moral, normative features through differentiation from others.¹¹ A common way for the Union to practice social creativity for status seeking is norm entrepreneurship. The EU has been described as a norm entrepreneur on a variety of issues ranging from human rights¹² to education policy¹³ and data protection.¹⁴

Climate security represents a successful case of European norm entrepreneurship, as shown by Zwolski and Kaunert.¹⁵ Based on the status seeking literature, I argue that the climate security nexus was brought forward by the EU to introduce a new value to the international community in which it can surpass others and, therefore, advance its international

9 Wohlforth et al., “Moral Authority and Status in International Relations: Good States and the Social Dimension of Status Seeking.”

10 as introduced by Ian Manners, “Normative Power Europe: A Contradiction in Terms?,” *JCMS: Journal of Common Market Studies* 40, no. 2 (2002): 235–58.

11 see e.g., Edward Keene, “Social Status, Social Closure and the Idea of Europe as a ‘Normative Power,’” *European Journal of International Relations* 19, no. 4 (2013): 954.

12 Anne Jenichen, “The Politics of Normative Power Europe: Norm Entrepreneurs and Contestation in the Making of EU External Human Rights Policy,” *JCMS: Journal of Common Market Studies*, 2020; Katharine Vadura, “The EU as ‘Norm Entrepreneur’ in the Asian Region: Exploring the Digital Diplomacy Aspect of the Human Rights Toolbox,” *Asia Europe Journal* 13, no. 3 (2015): 349–60.

13 Tonia Bieber, “The EU as a Norm Entrepreneur in Education Policy: An Analysis of the Diffusion of European Ideas and Policies,” in *Regional Organizations and Social Policy in Europe and Latin America* (Springer, 2016), 206–27.

14 Wolf Jürgen Schünemann and Jana Windwehr, “Towards a ‘Gold Standard for the World’? The European General Data Protection Regulation between Supranational and National Norm Entrepreneurship,” *Journal of European Integration* 43, no. 7 (October 3, 2021): 859–74, <https://doi.org/10.1080/07036337.2020.1846032>.

15 “The EU and Climate Security: A Case of Successful Norm Entrepreneurship?,” *European Security* 20, no. 1 (March 1, 2011): 21–43, <https://doi.org/10.1080/09662839.2010.526108>.

prestige. Consequently, it is more concerned with its norm entrepreneurship in the international than the domestic sphere which is why I expect the EU to focus on promoting climate security as a norm in its foreign policy.

III: EMPIRICAL ANALYSIS

The ensuing analysis scrutinizes empirical examples to investigate the argument that the EU focuses on external over internal climate security policies as an indication of its international status seeking. Firstly, I assess the references made to climate change in the EU's core external and internal security strategies. Secondly, I look at security references in the EU's climate-related Council Conclusions and determine whether they are directed at the domestic or foreign sphere. This analysis will, hence, reveal if the policy outcomes correspond to the manifestation of the theoretical proposition. While this constitutes a necessary initial step for investigating the EU's patterns in addressing climate security and giving hints for status seeking, the methodological design will not be able to provide explicit evidence for the underlying reasons.

III/a: THE ROLE OF CLIMATE CHANGE IN THE EU'S CORE SECURITY DOCUMENTS

Taking a close look at the EU's main strategies for external and internal security provides a good impression of how much importance is given to climate as a security threat. For this purpose, I consider three core documents: Regarding external security, I look at the 2016 *Shared Vision, Common Action: A Stronger Europe - A Global Strategy for the European Union's Foreign and Security Policy* (hereafter called in short Global Strategy). Recently, the Strategic Compass for Security and Defence - For a European Union that protects its citizens, values and interests and contributes to international peace and security (Strategic Compass) was published which outlines the EU's security and defense acts and priorities until 2030. Hence, I also consider the Strategic Compass as a second externally directed document. *The Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on the EU Security Union Strategy* (EU Security Union Strategy) passed in 2020 represents the single, core document on internal security and is thus analyzed regarding the relationship between climate change and domestic threats.

Starting with the external security realm, the Global Strategy mentions the

implications of climate 26 times in its 60 pages. Climate change is listed besides terrorism, hybrid threats, economic volatility, and energy insecurity as a danger to the European population and territory.¹⁶ The connection between climate change as a threat multiplier and land degradation, scarcity of natural resources, displacements, pandemics, and migration is highlighted.¹⁷ The paper states the EU's aim to deepen cooperation on the mitigation of climate change and its security implications with a variety of partners worldwide including the United States, China, and Latin American countries. However, only the Mediterranean, the Middle East, and Africa as well as Asia are seen to be most vulnerable to climate change and consequent disruptions of the stability of the regions.¹⁸ The EU does not see itself as a target of climate threats to security but rather as a role model leading the way to a more sustainable future and helping others to increase resilience regarding their climate vulnerability. An example of the self-representation of the EU is this paragraph regarding the implementation of global norms:

The EU will lead by example by implementing its commitments on sustainable development and climate change. It will increase climate financing, drive climate mainstreaming in multilateral fora, raise the ambition for review foreseen in the Paris agreement, and work for clean energy cost reductions.¹⁹

The newly established **Strategic Compass** places an even greater focus on climate security than the Global Strategy and mentions climate 25 times in its 47 pages. It comprises a one-page long section solely dedicated to “Enhancing resilience to climate change, disasters and emergencies.”²⁰ It also promotes clear objectives and policies in this domain including the development of national strategies for military preparation regarding climate change as well as environmental footprint reporting for all EU security operations.²¹ Whereas the Strategic Compass acknowledges the function of climate change as a threat multiplier for risks and conflicts all around the

16 European Union, “Shared Vision, Common Action: A Stronger Europe - A Global Strategy for the European Union’s Foreign and Security Policy” (European External Action Service, 2016), 9, 18–19, https://eeas.europa.eu/sites/default/files/eugs_review_web_0.pdf.

17 European Union, 27, 29.

18 European Union, 7, 13.

19 European Union, 40.

20 European Union, “A Strategic Compass for Security and Defence - For a European Union That Protects Its Citizens, Values and Interests and Contributes to International Peace and Security” (Council of the European Union, 2022), 26, <https://data.consilium.europa.eu/doc/document/ST-7371-2022-INIT/en/pdf>.

21 European Union, 29.

world,²² it states that “[t]his adds to the potential for social, economic, and political instability and conflict in fragile countries”²³ – to which the EU most likely does not count itself.

Moving on to the internal security realm, the **EU Security Union Strategy** includes only one reference to climate in its 28 pages: “Europeans today face a security landscape in flux, impacted by evolving threats as well as other factors including *climate change*, demographic trends and political instability beyond our borders.”²⁴ The climate factor is, however, not referred to again. The focus areas of the strategy are limited to organized crime, terrorism and radicalization, cybersecurity, external borders, and critical infrastructure. While critical infrastructure is understood to comprise health services, transportation, energy,²⁵ finance, and food supply, all of which might be endangered by the effects of climate change, climate itself is not mentioned in this regard.

To sum up, climate change and its role as a threat multiplier are acknowledged in the EU’s core external security documents. It comprises an especially relevant part of the new Strategic Compass. The EU Security Union Strategy as the core internal security paper, by contrast, hardly mentions climate change and does not regard it as one of the major risks concerning the domestic security environment. Moreover, the EU uses its external documents to also portray itself as a global leader in the fight against climate change. This provides hints in favor of the assumption that the EU places an external focus on climate security motivated by its goal of advancing its international status.

Status seeking is not the only possible, but the most compelling explanation for the neglect of climate change within the internal security realm. Alternative explanations could be (1) missing agreement on how to tackle the issue internally, (2) the aim to avoid ‘panic making’, and (3) the results of security analysis revealed climate factors as negligible. Yet, all of these also face counterarguments. Firstly, it can be questioned why internal climate

22 European Union, 12.

23 European Union, 26.

24 European Union, “Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on the EU Security Union Strategy” (European Commission, 2020), 1, <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1596452256370&uri=CELEX:52020DC0605>, emphasis added.

25 The implications of climate mitigation policies on energy production are also disregarded in the EU Security Union Strategy.

security should be subject to more disagreement than external climate security and internal climate mitigation and adaptation. These realms also face lots of discussions and diverging opinions on how to best address them. Yet many reports, briefings, and policies are managed to be adopted. This leads to the second alternative explanation that internal security implications of climate change could be expected to create a sense of panic within the European public. It is, however, unlikely that a high-level policy strategy of which most citizens have probably never heard of creates public unrest. Additionally, an increased sense of urgency could be desired by EU bodies as it would enable them to take more ambitious measures. Lastly, it is unrealistic that the Union concluded climate change not to have any domestic security implications since e.g., the International Panel on Climate Change (IPCC) has found worrying impacts on among others the economic and energy sector. The IPCC states that “[c]limate change will increase the likelihood of systemic failures across European countries caused by extreme climate events affecting multiple sectors”²⁶ including economic, social, and health systems. As the risk of such system failures certainly constitutes a security threat, there are no reasons why the EU should come to diverging conclusions in its own assessment. While alternative explanations cannot be fully ruled out, the status seeking argument seems convincing especially given that the EU utilizes its foreign strategies for image cultivation as a climate leader.

III/b: CLIMATE SECURITY IN EXTERNALLY AND INTERNALLY DIRECTED COUNCIL CONCLUSIONS

The EU’s ambition for external status seeking is also suggested when looking at the Council Conclusions (CC/CCs) concerning climate change. For this purpose, an analysis of the CCs concluded between the start of 2015 and the end of March 2022 referring to climate in their title is conducted. The CCs are categorized both on whether their content refers to external or internal policies and whether they mention the security implications of climate change. A CC is coded as external or internal if it contains predominantly external or internal policies and action plans and concerns mostly external or internal audiences. One or more statements regarding the risks resulting

26 Kovats, R.S., R. Valentini, L.M. Bouwer, E. Georgopoulou, D. Jacob, E. Martin, M. Rounsevell, and J.-F. Soussana, “Europe,” in *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press, 2014), 1270.

from climate change on stability, disasters, or other security domains are understood as a reference to the security implication. A mere mention of climate-related risks without clarification of what these risks comprise is, however, not coded as if the CC encompasses security implications. In cases where a CC was amended afterwards, the latest version is analyzed, and the CC is only counted once. The sample includes 24 CCs of which 17 have an external and 7 an internal focus and 12 mention the security implications of climate change. A list of the CCs can be found in *Table 1*.

Table 1: Categorization of Council Conclusions referring to climate change in their title from January 2015 to March 2022

Date	Code	Subject	Target	Climate security reference
14/03/2022	7146/22	Council Conclusions on civil protection work in view of climate change	Internal	Yes
21/02/2022	6120/22	Council Conclusions on EU Climate Diplomacy: accelerating the implementation of Glasgow outcomes	External	Yes
20/12/2021	15261/21	Conclusions on Special report No 21/2021 from the European Court of Auditors entitled ‘EU funding for biodiversity and climate change in EU forests’	Internal	No

12/12/2021	14859/21	Special Report No 16/2021 from the European Court of Auditors entitled “Common Agricultural Policy and climate - Half of EU climate spending but farm emissions are not decreasing”	Internal	No
06/10/2021	12594/21	Preparations for the United Nations Framework on Climate Change (UNFCCC) meetings (Glasgow, 31 October - 12 November 2021)	External	Yes
05/10/2021	12203/21	Council Conclusions on Climate Finance	External	No
10/05/2021	9694/21	Forging a climate-resilient Europe – the new EU Strategy on Adaptation to Climate Change	Internal	Yes
25/01/2021	5263/21	Council Conclusions on Climate and Energy Diplomacy - Delivering on the external dimension of the European Green Deal	External	Yes

30/10/2020	12481/20	Council Conclusions on Special Report No 04/2020 from the European Court of Auditors entitled: “Using new imaging technologies to monitor the Common Agricultural Policy: steady progress overall, but slower for climate and environment monitoring”	Internal	No
20/01/2020	5033/20	Council Conclusions on Climate Diplomacy	External	Yes
08/11/2019	13871/19	Council Conclusions on Climate Finance	External	No
04/10/2019	12796/19	Preparations for the United Nations Framework Convention on Climate Change (UNFCCC) meetings (Santiago de Chile, 2-13 December 2019)	External	Yes
26/05/2019	10592/19	Conclusions on the future of energy systems in the Energy Union to ensure the energy transition and the achievement of energy and climate objectives towards 2030 and beyond	Internal	No
18/02/2019	6153/19	Climate Diplomacy - Council Conclusions	External	Yes
07/11/2018	13864/18	Council Conclusions on Climate Finance	External	No

26/02/2018	6125/18	Council Conclusions on Climate Diplomacy	External	Yes
09/11/2017	14148/17	Council Conclusions on Climate Finance	External	No
19/06/2017	10456/17	Council Conclusions on Climate Change following the United States Administration's decision to withdraw from the Paris Agreement	External	Yes
21/03/2017	7495/17	European Court of Auditors' special report no 31: 'Spending at least one euro in every five from the EU budget on climate action: ambitious work underway, but serious risk of falling short'	Internal	No
06/03/2017	6981/17	Implementing the EU Global Strategy - strengthening synergies between EU climate and energy diplomacies and elements for priorities for 2017	External	Yes
08/11/2016	14167/16	Climate Finance - Council Conclusions	External	No
30/09/2016	12807/16	Preparations for the United Nations Framework Convention on Climate Change meetings in Marrakech	External	No
15/02/2016	6061/16	European climate diplomacy after COP21 - Council Conclusions	External	Yes

10/11/2015	13875/15	Council Conclusions on Climate Finance	External	No
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Looking at the categorization, it catches the eye that climate security references appear more often in the externally directed CCs than the internally directed ones. The percentage of external CCs with security references is 59 per cent in the analyzed period, whereas for internal CCs it is only 29 per cent. This is also underpinned by the fact that many external CCs directly start by stressing the security risks of climate change, such as the CC on the *Preparations for the United Nations Framework on Climate Change (UNFCCC)* meetings which instantaneously “STRESSES that climate change is a direct and existential threat to humanity and biodiversity that spares no country.”²⁷ The two internal CCs with climate security references, however, state them in the middle or at the end of the text.

In addition, the Union frames itself in the external CCs as a role model in the fight against climate change and its security implications, as can be seen in the 2019 CC on Climate Diplomacy:

The European Union is therefore determined to help raise global ambition and lead the way on accelerated climate action on all fronts and recognizes the severe implications that climate change poses to international security and stability.²⁸

Yet, even in the CCs on climate financing, which do not stress the security implications of climate change, the EU portrays itself as the most important facilitator of climate adaptation and mitigation in the world, as can be seen in the following quotes:

HIGHLIGHTS that the EU and its Member States r e m a i n the largest provider of public climate finance, including to the multilateral climate funds, and have contributed EUR 20.4 billion in climate finance for 2017.²⁹

²⁷ European Union, “Preparations for the United Nations Framework on Climate Change (UNFCCC) Meetings (Glasgow, 31 October - 12 November 2021) - Council Conclusions” (Council of the European Union, 2021), 2, <https://data.consilium.europa.eu/doc/document/ST-12594-2021-INIT/en/pdf>.

²⁸ European Union, “Climate Diplomacy - Council Conclusions” (Council of the European Union, 2019), 2, <https://data.consilium.europa.eu/doc/document/ST-6153-2019-INIT/en/pdf>.

²⁹ European Union, “Climate Finance - Council Conclusions on Climate Finance” (Council of the European Union, 2018), 3, <https://data.consilium.europa.eu/doc/document/ST-13864-2018-INIT/en/pdf>.

RECOGNISES the important contribution of the Adaptation Fund (AF) and the Least Developed Countries Fund (LDCF), to which the EU Member States are the largest donors, as part of the broader adaptation finance landscape.³⁰

Such positioning as a leader is mostly absent in the CCs which predominantly include internal policies. These CCs appear more neutral in their wording, not portraying the EU as a leader in the domain and even acknowledging shortcomings such as the need for a more coherent and systematic approach.³¹ In conclusion, the analyzed climate-related CCs which are directed at external policies highlight more often the security implications of climate change. Additionally, the EU seems to use those CCs to position itself as a leading actor in climate security. Both security references and stressing of the EU's pioneering role are less frequent in internally directed CCs. While it is possible that other reasons account for the lack of climate security references in the internal CCs, the references to the EU's leading example in the foreign-targeted documents clearly point towards international status seeking. All in all, the findings of this analysis imply congruence with the argument that the Union seeks status through its international promotion of climate security while possibly not focusing domestically on climate security as this does not bring international prestige.

CONCLUSION

This paper has argued that the EU focuses on being perceived as a leader in climate security on the international rather than the European level due to its ambition for status seeking through norm entrepreneurship. The empirical analysis found first hints at this assumption: Firstly, climate security is much more present in the key foreign policy strategies of the EU than in the main internal security document analyzed. Secondly, climate change seems to be more commonly connected to security implications in Council Conclusions with external than with internal focus. Furthermore, the Union also portrays itself more often as a leader in the domain in the externally directed documents.

The paper contributes to the literature on climate security by taking a deeper

30 European Union, 5.

31 European Union, "Council Conclusions on Civil Protection Work in View of Climate Change" (Council of the European Union, 2022), 4, <https://data.consilium.europa.eu/doc/document/ST-7146-2022-INIT/en/pdf>.

look into the patterns of how and in which policies intergovernmental organizations consider climate-related security concerns. It can, however, only serve as a starting point for further, more comprehensive research on the distinction between the EU's external and internal promotion of climate security. While this research provided hints for the EU's motivation by external status seeking, further evidence ruling out alternative explanations is required. Ensuing scholars could study the internal and intra-European discussion on climate security in more detail by analyzing official debates rather than policy documents to grasp the reasoning behind these outcomes. In addition, interviews with European security officials working in foreign and internal security could provide additional, valuable insights into this issue and extend evidence on the reasons behind the EU's external climate security focus.

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1.1.4 Combating Climate Change Through Carbon Pricing Policies: Examining the Impacts of Carbon Pricing Policies in the European Union and the United States of America

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I: INTRODUCTION AND PROBLEM DEFINITION

Both the European Union and the United States are facing multiple challenges including climate change, social inequality, and the consequences of the COVID-19 pandemic.¹ Additionally, the EU has been severely impacted by an energy burden due to Russia's invasion of Ukraine. Since then, there has been a notable decline in gas imports from Russia to the EU. The shortfall has been largely made up for by a marked rise in liquified natural gas imports, particularly from the US. While in 2021, almost half of EU's total gas imports were from Russia, as of June 2022, Russia's portion of gas imports has dropped to less than 20%.² The events related to Russia's invasion of Ukraine have further emphasized the need to shift away from

1 Andrew Kruczkiewicz et al., "Compound risks and complex emergencies require new approaches to preparedness," *Proceedings of the National Academy of Sciences* 118, no. 19 (2021): 1-4. <https://doi.org/10.1073/pnas.210679511>.

2 "Infographic – where does the EU's gas come from?" *Consilium Europa*, accessed May 15, 2023, <https://www.consilium.europa.eu/en/infographics/eu-gas-supply/>.

fossil fuels and pursue a more sustainable, low-carbon economy.

The EU aims to achieve full independence from Russian fossil fuels by 2030 and climate neutrality by 2050.³ Climate neutrality, also known as net-zero emissions, refers to achieving a balance between the amount of greenhouse gases emitted into the atmosphere and the amount removed or offset. The US has set a goal to decrease emissions by 50% below 2005 levels by 2030 and has also committed, like the EU, to achieving net zero emissions by 2050 at the latest.⁴ Accordingly, carbon pricing has been widely discussed as a policy approach to address economic and environmental issues regarding climate change.

Carbon pricing is a policy tool that aims to reduce greenhouse gas (GHG) emissions by placing a monetary cost on the carbon content of fossil fuels and industrial activities that produce carbon dioxide (CO₂), as well as other greenhouse gases such as methane, nitrous oxide, and fluorinated gases. The goal of carbon pricing is to create an economic incentive for individuals, businesses, and governments to reduce their carbon emissions, and to encourage the development and adoption of low-carbon technologies.

There are two main types of carbon pricing policies: carbon taxes and cap-and-trade systems. A carbon tax is a fee that is placed on the carbon content of fossil fuels at the point of production or importation. The tax rate is usually set per ton of carbon dioxide emitted. The idea behind a carbon tax is to make the use of fossil fuels more expensive, thereby encouraging individuals and businesses to find alternatives, such as renewable energy sources, energy efficiency measures, or alternative transportation options. Cap-and-trade systems, on the other hand, set a cap on the total amount of carbon dioxide and other greenhouse gases that are allowed in a given period, and allocate emissions permits to businesses and industries that emit greenhouse gases.⁵ Each permit represents the right to emit a certain quantity of greenhouse gases, and businesses can trade these permits for money, or purchase additional permits. The cap on emissions gradually decreases over time, creating an economic incentive for businesses to find

3 “RePowerEU: A plan to rapidly reduce dependence on Russian fossil fuels and Fast Forward the Green Transition,” European Commission, accessed May 14, 2023, https://neighbourhood-enlargement.ec.europa.eu/news/repowereu-plan-rapidly-reduce-dependence-russian-fossil-fuels-and-fast-forward-green-transition-2022-05-18_en.

4 “USA – Country summary,” Climate Action Tracker, accessed May 15, 2023, <https://climateactiontracker.org/countries/usa/>.

5 Hart Craig, *Climate Change and the Private Sector: Scaling up Private Sector Response to Climate Change* (Oxfordshire, England, UK: Routledge, 2013), 13.

ways to reduce their emissions, including by developing and adopting low-carbon technologies. A variation on cap-and-trade is cap-and-invest, where the main difference between them is how they handle the excess emissions beyond the cap. Cap-and-trade creates a market for emissions permits, while cap-and-invest uses the proceeds from permit auctions to invest in emissions reduction programs.⁶

Carbon taxes and cap-and-trade systems are policy tools designed to reduce GHG emissions by putting a price on them. A carbon tax directly charges polluters for their emissions, while a cap-and-trade system sets a limit on the total amount of emissions allowed and distributes permits for them. Both approaches can lead to higher prices for fossil fuels, which affects individual consumers and businesses. While carbon taxes are straightforward to implement, they may not guarantee specific emission reductions. On the other hand, cap-and-trade systems may provide greater certainty in emission reductions but can be complex to set up and administer. It is important to note that carbon taxes and cap-and-trade systems often focus on CO₂ emissions but can also include other greenhouse gases.

Carbon pricing policies regulate the price of fuels that produce carbon emissions in order to incentivize individuals and companies to reduce their carbon footprint. The OECD Environmental Outlook to 2050 suggests that implementing global carbon pricing could result in a reduction of GHG emissions by approximately 70% in 2050 compared to the projected future outcomes based on current trends and policies without any additional efforts to address environmental challenges.⁷ However, while carbon pricing has been widely touted as a solution to help prevent further climate change, there are several problems associated with it that need to be considered. When developing a carbon pricing system, policymakers should consider not only the impact of this system on emissions, but also the crosscutting environmental, geographic, and social justice dimensions.

One of the main challenges of carbon pricing is ensuring a fair implementation during the transition to a green economy. While some of the concerns related to justice are inherent to carbon pricing, such as the risk of placing

6 “Cap-and-invest as a Tool to Reduce Pollution,” Transportation & Climate Initiative, accessed May 14, 2023, <https://www.transportationandclimate.org/fact-sheet-cap-and-invest-tool-reduce-pollution>.

7 “OECD Environmental Outlook to 2050,” OECD, accessed May 13, 2023, <https://www.oecd.org/env/indicators-modelling-outlooks/oecdenvironmentaloutlookto2050theconsequencesofinaction-keyfactsandfigures.htm>.

a disproportionate burden on low-income households, others are specific to the implementation of carbon pricing policies in a particular context. It is important to consider these challenges and their context-specific nature when examining the effectiveness of carbon pricing policies in different regions and countries. They can disproportionately affect low-income workers and households. Both carbon taxes and cap-and-trade programs can lead to an increase in the cost of energy and goods, which can be especially burdensome for those with limited financial resources. This can create a regressive effect where lower-income households end up paying a larger share of their income towards the increase in cost of fossil fuels than higher-income households.⁸

Another issue with carbon pricing is that it can lead to competitiveness concerns for certain industries. This is because carbon pricing policies can increase the cost of production for companies in industries that are heavily reliant on fossil fuels.⁹ If other countries do not have similar carbon pricing policies in place, this can put companies in carbon-pricing countries at a disadvantage in the global market. This is because carbon pricing policies increase the cost of production for companies, making their products relatively more expensive compared to products from countries without these policies. As a result, consumers may choose to buy from foreign companies that do not have to pay the same cost for carbon emissions, which can lead to job losses in certain sectors and potentially undermine the effectiveness of carbon pricing policies in reducing emissions. A related concern is that carbon pricing policies can lead to the problem of carbon leakage. This occurs when companies in carbon-pricing countries move their operations to countries without carbon pricing policies in order to avoid higher costs. This can result in emissions being shifted from one country in the Global North to another in the Global South rather than being reduced globally. Furthermore, carbon pricing may be too local to address the scale of the climate change challenge. Carbon pricing policies are typically implemented at a national or regional level, but climate change is a global issue that requires coordinated action across multiple countries.

8 Arun Advan et al., “What Is the Case for Carbon Taxes in Developing Countries?” Institute for Fiscal Studies, March 15, 2023, <https://ifs.org.uk/articles/what-case-carbon-taxes-developing-countries>.

9 Florian Misch, “Carbon Pricing: What Role for Border Carbon Adjustments?” International Monetary Fund, September 27, 2021, <https://www.elibrary.imf.org/view/journals/066/2021/004/article-A001-en.xml>.

Finally, there are concerns about the political acceptability of carbon pricing.¹⁰ While it is a popular policy idea among economists and environmentalists, carbon pricing can be difficult to implement in practice because it is a market-based policy that may interfere with current business models and industries that heavily depend on fossil fuels. As a result, industries and political representatives who support them may oppose carbon pricing more strongly. From another perspective, citizens may also express doubts regarding the efficacy of carbon pricing in addressing climate change comprehensively. They might question its ability to significantly reduce global emissions and view it as a burdensome policy lacking immediate and noticeable advantages.

The upcoming part of the paper will concentrate on the United States and European Union, including a section on the Nordic countries. We will examine the potential impact of carbon pricing on low-income households and carbon leakage, while also describing their overall functionality and effectiveness. Subsequently, the recommendations address the aforementioned concerns, while also considering political acceptability and exploring opportunities for wider cooperation on carbon pricing policies.

II: THE CASE OF THE UNITED STATES

Given that the United States (US) is a federal union composed of 50 states and the District of Columbia, it is crucial to distinguish between policies that are implemented at the state level versus the federal level.

The Regional Greenhouse Gas Initiative (RGGI) is a collaborative effort among twelve eastern US states to reduce carbon dioxide emissions from power plants in each participating state through a cap-and-invest program. The states have established a regional cap on CO₂ emissions, which sets a limit on the emissions from regulated power plants within the RGGI states. Since its establishment, RGGI has managed to reduce emissions by more than 50%, which is twice as fast as the nation as a whole, and it has so far generated nearly 6 billion USD to invest into local communities. Under the RGGI, power plants with a capacity of 25 MW or more are required to buy allowances for every ton of CO₂ they emit. The number of allowances available for purchase is limited and decreases gradually

10 Marco Fugazza, “Carbon Pricing: A Development and Trade Reality Check,” UNCTAD, November 18, 2022, <https://unctad.org/publication/carbon-pricing-development-and-trade-reality-check>.

over time to encourage power plants to either reduce their emissions or purchase allowances from other sources. These allowances are issued by the participating states and can be traded on the regional carbon market. The revenue generated from the sale of these allowances is mostly used for community investments, which mainly focus on promoting clean energy, energy efficiency, and bill assistance for local businesses and communities. There is a particular emphasis on directing a larger proportion of revenue towards low-income households, which has increased over time.¹¹

The implementation of energy-efficient practices and cost-effective renewable energy initiatives in the RGGI has resulted in significant cost savings for consumers, exceeding 1.2 billion USD to date. Over the first nine years of the program, the region saw a reduction of 5.7% in electricity prices, while other states experienced an average increase of 8.6%. Not only program participants benefit from these energy efficiency measures, but overall demand reduction also leads to reduced market prices of electricity for everyone, even for those who do not participate in the program. This development is especially beneficial for low-income households and is considered a positive impact.¹²

To prevent carbon leakage, the RGGI implemented the Cost Containment Reserve (CCR), which sets a cap on the price of RGGI allowances. The CCR provides additional allowances to be sold if the market price of allowances exceeds a certain threshold, which helps to stabilize the market and prevent businesses from moving to other regions.¹³ As the RGGI program implements changes such as a 30% reduction in emissions cap by 2030 compared to 2020 levels, the risk of carbon leakage is expected to rise. A federal cap-and-trade system that could help prevent leakage is not currently on the horizon, making it essential to strengthen policies aimed at preventing it.¹⁴

Another cap-and-trade program has been implemented in California, which is one of the largest multi-sectoral emissions trading systems globally. The policy intends to assist California in meeting its ambitious greenhouse

11 “RGGI 101 Fact Sheet,” Regional Greenhouse Gas Initiative, accessed March 19, 2023, <https://www.rggi.org/>.

12 “The Regional Greenhouse Gas Initiative is a Model for the Nation,” NRDC, accessed May 9, 2023, <https://www.nrdc.org/resources/regional-greenhouse-gas-initiative-model-nation>.

13 “Elements of RGGI,” Regional Greenhouse Gas Initiative, accessed May 9, 2023, <https://www.rggi.org/program-overview-and-design/elements>.

14 “Regional Greenhouse Gas Initiative,” Center for Climate and Energy Solutions, accessed May 9, 2023, <https://www.c2es.org/content/regional-greenhouse-gas-initiative-rggi/>.

gas emissions reduction targets. The revenue generated from the program finances initiatives that aim to reduce emissions, with a considerable portion allocated to disadvantaged and low-income communities. For instance, the Low Carbon Transportation Program is an initiative financed by the California cap-and-trade program that supports the deployment of low-carbon transportation technologies and infrastructure like public transit and electric vehicle charging stations. The cap covers a wide range of businesses, including large electric power and industrial plants, and fuel distributors, which are accountable for 85% of California’s greenhouse gas emissions. Since its implementation, the program has generated 5 billion USD in revenue and has expanded its scope by linking with Québec’s cap-and-trade program. Although it is challenging to determine the direct relationship between emissions reductions and any specific policy or market, state-wide GHG emissions declined by 5.3% from the start of the program in 2013 to 2017, which represents 23 million metric tons of CO₂ equivalent (MMT CO₂e).¹⁵ To provide a comparison, let’s examine the emissions reductions of other states during the same period. The selection of these specific states was purposeful due to their membership in the RGGI, making them an intriguing point of reference. In Massachusetts, GHG emissions decreased by 6.4%, which resulted in a reduction of approximately 5 MMT CO₂e.¹⁶ In New York, GHG emissions decreased by 12.8%, which represents about 31 MMT CO₂e.¹⁷ It should be noted that the decrease in GHG emissions for each state is impacted by a range of factors, including the state’s energy portfolio, economic activity, and emission reduction policies. Regarding the concerns with competitiveness, besides trading credits, the state provides some credits for free to industries that may be vulnerable to competition from other states. While competitiveness is a significant challenge, the current approach of distributing approximately half of the allowances for free, as stated by the head of the advisory committee, is a matter that requires attention.¹⁸

15 “California Cap and Trade,” Center for Climate and Energy Solutions, accessed March 19, 2023, <https://www.c2es.org/content/california-cap-and-trade/>.

16 “Greenhouse Gas Baseline & Inventory,” Commonwealth of Massachusetts, accessed May 8, 2023, <https://www.mass.gov/lists/massdep-emissions-inventories#greenhouse-gas-baseline-&-inventory->.

17 “Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021,” Environmental Protection Agency, accessed May 8, 2023, <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2021>.

18 Julie Cart, “Experts – once again – tell Senate panel that California’s key climate change strategy is flawed,” CalMatters, February 23, 2022, <https://calmatters.org/environment/2022/02/california-climate-cap-trade/>.

The lack of a consistent constituency and the presence of key veto actors have prevented carbon pricing in the US from becoming a national reality, despite attempts over the past three decades. The Waxman-Markey cap-and-trade bill, created during the Obama administration, successfully passed the House in 2009 but failed to pass in the Senate. Currently, a tax-based carbon pricing mechanism is seen as more politically viable, with recent carbon tax proposals including carbon border adjustments, which is a policy tool designed to address carbon leakage by imposing a fee on imported products based on their carbon footprint. Under the Biden administration, several companies expressed their support for carbon pricing because they were concerned that regulations such as clean energy standards would be used instead. While both policies aim to decrease greenhouse gas emissions, cap-and-trade systems impose a limit on emissions and enable the trading of emission allowances between companies, permitting them to find the most cost-effective way to reduce emissions. On the other hand, clean energy standards require a specific proportion of electricity production to come from clean energy sources like wind or solar, which may be more challenging for businesses. Some individuals suspect that these positions may be insincere or politically motivated. In 2021, an ExxonMobil lobbyist admitted that the company's support for carbon pricing was mostly a political tactic.¹⁹

III: THE EUROPEAN UNION CASE

In 1992, the European Union (EU) proposed a carbon and energy tax as a way to reduce GHG emissions.²⁰ Since unanimous agreement from all EU member states was required, the proposal was blocked, and negotiations continued for almost a decade.²¹ In 2003, the Energy Tax Directive was implemented to improve the functioning of the EU's single market by imposing uniform and reduced taxes on energy fuel usage, including both greenhouse gas emitting and non-emitting sources. It covers all energy sources used for transport, heating, and electricity production. However, the rates are not linked to CO₂ emissions and the tax base does not cover many significant sources.²² The limitations of the Energy Tax Directive resulted

19 Easwaran Narassimhan, Stefan Koester and Kelly Sims Gallagher, "Carbon Pricing in the US: Examining State-Level Policy Support and Federal Resistance," *Politics and Governance* 10, no. 1 (2022): 280-283. <https://doi.org/10.17645/pag.v10i1.4857>.

20 "Official Journal of the European Communities, C 196, 3 August 1992," EUR-Lex, August 3, 1992, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:C:1992:196:TOC>.

21 "Procedure 1992/1019/CNS," EUR-Lex, accessed March 21, 2023, https://eur-lex.europa.eu/procedure/EN/1992_1019.

22 David A. Weisbach, "Carbon Taxation in the EU: Expanding the EU Carbon Price," *Journal of Environmental Law* 24, no. 2 (2012): 184. <https://doi.org/10.1093/jel/eqr033>.

in a shift towards establishing the Emissions Trading System (ETS) to cap and trade emissions, which was seen as a more politically viable approach.

The ETS limits the amount of GHG emissions that certain industries may produce and issues allowances that can be traded. Companies that exceed their limit must purchase additional allowances or face penalties, creating a market that incentivizes emissions reductions and rewards environmentally responsible behaviour.²³ According to the EEA “Trends and Projections in Europe 2021” the EU achieved its 20-20-20 targets, one of them being reducing GHG emissions by 20% compared to 1990 levels. The report states that the EU-27 exceeded the 20% target for reducing GHG emissions by achieving a 31% reduction. The exact influence of the ETS is hard to estimate, as there was a 10% emissions reduction from 2019 and 2020, during the Covid-19 pandemic.²⁴

The EU ETS covers around 40% of the EU’s GHG emissions; transportation, buildings, and agriculture are not included, even though they are among the economic sectors that are responsible for most GHG emissions.²⁵ Recently, the European Commission has proposed expanding emissions trading to include building and road transport sectors. Under this proposal, a new ETS is set to start across the EU as of 2027. Despite the price-dampening mechanism, experts warn that the maximum carbon price of 45€ per ton of CO₂ emissions set by EU institutions may be exceeded. This could have a severe social impact, especially on low-income households that heavily rely on fossil fuels for transportation and heating. It is feared that the proposed “Social Climate Fund” will not be enough to mitigate the social consequences of the ETS extension.²⁶

In the past, high-polluting industries received free allowances under the EU ETS to prevent carbon leakage, which is the phenomenon of companies moving production to countries with weaker emissions regulations to avoid paying for carbon allowances. However, the EU has plans to reduce the cap

23 “EU Emissions Trading System,” European Commission, accessed March 21, 2023, https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets_en#a-cap-and-trade-system

24 “EU achieves 20-20-20 climate targets,” European Environment Agency, accessed March 22, 2023, <https://www.eea.europa.eu/highlights/eu-achieves-20-20-20>.

25 “Quarterly greenhouse gas emissions in the EU,” Eurostat, accessed March 22, 2023, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Quarterly_greenhouse_gas_emissions_in_the_EU#Greenhouse_gas_emissions.

26 Anna Bajomi, “EU ETS extension could have devastating impact on low-income households,” Euractiv, April 21, 2023, <https://www.euractiv.com/section/emissions-trading-scheme/opinion/eu-ets-extension-could-have-devastating-impact-on-low-income-households/>.

of the ETS and phase out the allocation of free allowances. This is where the proposed Carbon Border Adjustment Mechanism (CBAM) comes in. The CBAM aims to tax the emissions embedded in imports entering the EU to create a level playing field for domestic industries. This would ensure that the competitiveness of goods subject to carbon pricing is improved when compared to those imported from countries without carbon pricing. The transition period for CBAM will coincide with the phasing out of free allocations in the EU ETS. The introduction of CBAM would encourage non-EU countries to reduce their GHG emissions, prevent carbon leakage, and generate revenue for the EU.²⁷

Overall, the EU's approach to reducing GHG emissions has shifted from taxation to capping and trading emissions through the ETS. However, the idea of taxing is making a comeback through the proposed CBAM which aims to tax the emissions in imports into the EU.

IV: THE CASE OF THE NORDIC COUNTRIES

The Nordic countries – Denmark, Finland, Iceland, Norway, and Sweden – have witnessed the effects of climate change first-hand, with some areas experiencing a temperature increase of 10°C since preindustrial times due to polar amplification.²⁸ In response, the region has implemented carbon taxing as one of its key strategies (on top of the EU ETS), which has proven to be one of the most effective instruments for reducing emissions. Sweden has reduced GHG emissions by 73% compared to 1990 levels, while Denmark has achieved a 41% reduction up until 2021. However, the average decrease in the Nordic countries is 24%, which is lower than the EU's average of around 30%. This is partly due to Iceland's reliance on geothermal and hydroelectric power, with renewable energy accounting for most of its primary energy consumption. As a result, it is more difficult to achieve significant additional emissions reductions. Norway, on the other hand, is a major oil and gas producer and heavily dependent on the energy sector. While the progress made by the country is not as significant as that of Sweden or Denmark, it has still led to a notable 20% decrease in GHG emissions

27 “The EU's new climate policy will spark international cooperation on carbon pricing,” Power Technology, February 16, 2023, <https://www.power-technology.com/comment/cooperation-carbon-pricing/>.

28 Julien Grosjean and Éric Duédal, “Climate Strategies in the Nordic Countries,” Trésor-Economics no. 285 (May 2021): 1.

when compared to the levels recorded in 1990.²⁹ The Nordic countries have implemented various policies and approaches to address climate change, and while carbon taxation has been a key strategy, other factors such as energy mix, economic structure, and imports of manufactured goods from other countries have also played a role in the differences in their emission reduction results.

They were among the first to introduce a carbon tax in the 1990s, with Sweden's current carbon tax rate being the highest in the world at 114€ per ton of CO₂. Norway tripled its nominal carbon tax rate in early 2021 to 192€ per ton of CO₂ by 2030. To prevent the regressive effects of carbon taxes on low-income households, the Nordic countries have introduced support measures, such as income-tested tax credits and increases to the basic income tax allowance. The implementation of high carbon taxes in the Nordic countries has promoted the use of bioenergy sources as an alternative to fossil fuels, which are largely exempt from carbon taxes. Bioenergy sources have helped to cut the share of fossil fuels in industrial energy consumption in Finland in half since 1990 and have reduced fossil fuels' share in industrial energy consumption in Sweden to 19%, down from 55% in 1975. To prevent carbon leakage, the Nordic countries have implemented measures such as providing free carbon quotas to exposed sectors under the EU ETS and offering green national tax exemptions to companies under the scheme. Ultimately, the region's high level of carbon emissions per unit of economic output is worrisome, particularly since Denmark and Sweden have only managed to reduce their carbon emissions intensity by 24% and 31%, respectively, between 2005 and 2015, largely due to an increase in imports of manufactured goods from China.³⁰

V: CONCLUSION

There are several advantages to carbon pricing. First, it creates a price signal that reflects the social cost of carbon emissions, thereby encouraging individuals and businesses to reduce their emissions. Second, it can generate revenue for governments that can be used to invest in renewable energy, energy efficiency, and other climate mitigation measures. Third, it can create a level playing field for businesses, as those that emit fewer

29 "EEA greenhouse gases – data viewer," European Environment Agency, accessed May 10, 2023, <https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer>.

30 Julien Grosjean and Éric Duédal, "Climate Strategies in the Nordic Countries," Trésor-Economics no. 285 (May 2021): 5-10.

greenhouse gases are rewarded with lower costs. However, there are also some challenges to implementing carbon pricing. One of the main concerns is that it may disproportionately affect low-income households. Another challenge is that carbon pricing may not be enough to tackle climate change on its own. Additionally, it can cause competitiveness concerns for certain industries that rely heavily on fossil fuels. There are also concerns about the political acceptability of carbon pricing that arise from its interference with current business models and citizens' scepticism regarding its efficacy and benefits.

It is critical to highlight that the impacts of carbon pricing vary for different individuals, communities, cities, regions, and countries. This is because of several reasons including but not limited to the level of social preparedness, the territorial resources, and the institutional capacities. For example, the EU has been implementing carbon pricing policies for over a decade and has shown that they can work effectively in reducing emissions while also stimulating economic growth. The Nordic countries' implementation of carbon pricing policies, specifically the early adoption of a carbon tax, also indicates their strong institutional capacity and political determination to combat climate change. However, the same policies may not be as effective in middle-income countries, where there may be less institutional capacity to enforce regulations and less financial resources to support the transition to low-carbon energy systems. Therefore, it is important to consider these variations and tailor carbon pricing policies to the specific contexts and needs.

In the United States, the Regional Greenhouse Gas Initiative in the eastern states and California's cap-and-trade program are two instances of state-level initiatives that have reduced emissions and generated substantial revenue for community investments. Nonetheless, these policies face certain challenges, including the risk of increase in carbon leakage and the excessive allocation of free allowances, which can hinder the intended objectives of these measures. Furthermore, the lack of a consistent constituency and the presence of veto actors have prevented carbon pricing from becoming a national reality in the US. Carbon tax proposals, including carbon border adjustments, are now seen as politically viable. This is becoming increasingly important as the potential for carbon leakage rises due to stricter limits on emissions.

Ultimately, in order to effectively tackle climate change, it is crucial for the

analysed carbon pricing programs to incorporate additional measures that mitigate the impact of their policies on low-income households, particularly as these policies become more rigorous. For instance, the European Union is facing concerns about the potential negative social consequences of extending the emissions trading system without sufficient support for those who are most affected by it. While carbon pricing is an effective tool for reducing greenhouse gas emissions, which in turn contributes to mitigating the impacts of climate change, no policy is flawless and it is crucial to adequately address the challenges associated with it, as they have the potential to undermine its effectiveness and desired outcomes.

VI: RECOMMENDATIONS

One of the major concerns regarding carbon pricing is whether it can be scaled up sufficiently to make a tangible impact on addressing climate change. Considering this, the implementation of a nation-wide carbon-pricing system in the United States is crucial. This brings up the issue of which specific policy instrument should be employed – some favour carbon taxes while others support cap-and-trade mechanisms. To effectively address this challenge, we suggest adopting a federal policy that considers the potential for linkage with other countries in the future. When considering the linkage of policies across different countries, cap-and-trade systems have a natural unit of exchange, which is allowances denominated in units of carbon content or CO₂ emissions. It would be therefore easier to link a domestic US cap-and-trade system with other countries that use similar approaches. Linkage could also be achieved between a domestic US carbon tax system and certain other policy instruments in other jurisdictions, although connecting such heterogeneous policy instruments is considerably more challenging than the standard variety of linking two cap-and-trade regimes.³¹

Another concern regarding new carbon-pricing policies is their impact on competitiveness. By increasing the cost of producing carbon-intensive goods and services within a jurisdiction, there is a risk of leakage of economic activity and related emissions to other jurisdictions that do not face equivalent climate policy compliance costs. Carbon taxes offer the possibility of border adjustments, which are taxes on imports of

31 Robert N. Stavins, “The future of US carbon-pricing policy,” in *Environmental and energy policy and the economy*, eds. Matthew J. Kotchen, James H. Stock and Catherine D. Wolfram (Chicago: The University of Chicago Press, 2020), 26-27.

products from countries without comparable climate policies. Cap-and-trade systems can use an allowance requirement for the same imports, along with an output-based updating allocation of allowances.³² The EU is a great example of how different policies can work together to achieve a common goal. In addition to its emissions trading system, some member states, particularly in the Nordic region, already had a carbon tax that was adjusted to complement the cap-and-trade system. Recently, the EU also announced plans to implement a border adjustment tax in the future. The crucial question is how to incentivize other countries to join in the effort to decarbonize their economies. To further advance the idea, a possible solution can be the implementation of carbon border adjustment measures in a cooperative effort between the USA and the EU. The policy involves imposing tariffs on imported goods based on their carbon content, which would be equivalent to the domestic carbon prices. It is a necessary step for any country serious about scaling up decarbonization efforts. Without such measures, there is a risk of companies shifting production to countries with weaker environmental policies, in order to reduce costs. This can lead to economies with strong climate policies importing carbon-intensive goods from countries with weaker policies. Carbon border adjustments are not intended to be protectionist, but rather to create a level-playing field, as some regions may be doing more than others to implement their decarbonization commitments.

This partnership between the US and EU could be formed by establishing a “climate club,” as suggested by William Nordhaus.³³ The participating countries would impose a carbon tariff on imports from non-participating countries, creating an incentive for those to join the club and adopt similar climate policies. Doing so, it would help them avoid being subjected to tariffs in major export markets. An example here is Turkey which trades closely with the EU and intends to introduce its carbon pricing scheme in response to the EU’s plan to introduce a carbon border adjustment mechanism.³⁴ It is exactly the middle-income countries that could be motivated by this policy to increase their efforts in lowering CO₂ emissions. Regarding low-income

32 Robert N. Stavins, “The future of US carbon-pricing policy,” in *Environmental and energy policy and the economy*, eds. Matthew J. Kotchen, James H. Stock and Catherine D. Wolfram (Chicago: The University of Chicago Press, 2020), 20.

33 Guntram B. Wolff and Simone Tagliapietra, “Relaunching transatlantic cooperation with a carbon border adjustment mechanism,” *Bruegel*, June 11, 2021, <https://www.bruegel.org/comment/relaunching-transatlantic-cooperation-carbon-border-adjustment-mechanism>.

34 Frank Eich, Zsombor Garzo and Lize Wan, “Carbon pricing schemes – only for the rich?” CRU Group, June 1, 2022, <https://sustainability.crugroup.com/article/carbon-pricing-schemes-only-for-the-rich>.

countries, it is not expected that they will introduce such schemes for years to come as their contributions to global carbon emissions are negligible. Climate change adaptation will remain a more important priority. The financial resources generated from carbon pricing by high-income countries like the US and EU could be used to support various climate change adaptation measures such as building climate-resilient infrastructure, improving water management systems, and supporting sustainable agricultural practices. International climate finance mechanisms such as the Green Climate Fund and the Adaptation Fund are already established to support such initiatives, and the use of revenues from carbon pricing policies could augment these efforts.³⁵

The main challenge to implementing ambitious carbon pricing policies is political acceptability. While economic efficiency and equity are important, they are not enough if the policy cannot be implemented for political reasons. To increase the political acceptability of carbon pricing policies, insights from behavioural and political sciences can be used, such as using revenue to benefit constituencies who will actively support the policy's passage and preservation, which can enhance their acceptability to citizens. Additionally, carbon pricing policies are more likely to survive successive changes in government if they benefit constituencies across the political spectrum. Countries with high levels of public trust and low corruption tend to have stronger climate policies and higher carbon prices. This highlights the crucial role of transparency and trust in the development of carbon pricing policies, as seen in the case of Nordic countries. Approaches that can last even when different political parties come into power are those that help everyone, no matter which party they belong to. For example, policies that encourage energy efficiency, renewable energy, and green infrastructure, can create jobs and help boost the economy by incentivizing the adoption of energy-efficient practices and technologies. Similarly, investing in green infrastructure like public transportation or bike lanes can not only help reduce emissions but also improve quality of life by reducing traffic congestion and air pollution.

Policies as such, at least some of them, have already been implemented in the US and EU, however it is essential to increase awareness of the benefits of these policies to improve their acceptability. For this reason, visible revenue recycling may be advisable. Moreover, the labelling of the carbon

35 "Introduction to Climate Finance," UNFCCC, accessed May 15, 2023, <https://unfccc.int/topics/introduction-to-climate-finance>.

price may alter perceptions of its desirability to citizens. For example, renaming a carbon price as a ‘CO2 levy’, as demonstrated in Switzerland, could make the measure more acceptable.³⁶ Looking ahead, it is anticipated that carbon pricing will raise the costs for households, and the mere thought of combating climate change may not be enough to convince people of its importance. Therefore, it is crucial to prioritize measures that are tangible in citizens’ daily lives, provide genuine benefits for them and enhance transparency.

Low-income households are likely to be the most affected by the increased costs associated with carbon pricing. While energy assistance programs and policies that reduce energy consumption and provide funding are already in place, they may not be sufficient. For example, in some Central and Eastern European countries, the poorest households rely on firewood for heating, and the price of firewood doubled in Hungary in just one year as gas prices increased. To address this issue, member states could be urged to provide clean, efficient, and affordable heating solutions for vulnerable households. It is important to reduce energy needs and dependence on carbon and outdated heating methods as soon as possible. Without significant investment in measures to protect and support vulnerable populations, the transition to a low-carbon economy could exacerbate already existing inequalities.³⁷

As the global community increasingly recognizes the urgent need to reduce greenhouse gas emissions, the adoption and expansion of carbon pricing mechanisms are likely to continue in the years ahead. Governments around the world will need to work together to develop effective and equitable pricing schemes that incentivize decarbonization while protecting vulnerable communities. With collective effort, carbon pricing can help steer the world towards a more sustainable future.

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³⁶ David Klenert and Cameron Hepburn, “Making carbon pricing work for citizens,” VoxEU, July 31, 2018, <https://cepr.org/voxeu/columns/making-carbon-pricing-work-citizens>.

³⁷ Anna Bajomi, “EU ETS extension could have devastating impact on low-income households,” Euractive, April 21, 2023, <https://www.euractiv.com/section/emissions-trading-scheme/opinion/eu-ets-extension-could-have-devastating-impact-on-low-income-households/>.

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DEFENDING DEMOCRACY

1.2.1 Reconsidering the role of the EU in the Western Balkans as a promoter of democracy.

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I: INTRODUCTION

The Western Balkans is a unique region to consider when we think about democracy and human rights, since democracy has failed to take a stronghold in the region - with all of the Western Balkan six (Albania, Bosnia and Herzegovina, Montenegro, Kosovo, North Macedonia and Serbia) classified as either partly free¹ or ‘competitive authoritarian’ regimes. The lack of democracy in the region can be attributed to the violent breakup of Yugoslavia and the subsequent Balkan wars, which have left the region vulnerable to ethnic conflict.

Albania, Montenegro, North Macedonia and Serbia are also official candidates for accession to the European Union, while Bosnia and Herzegovina and Kosovo are potential candidates. This is important to consider since democratic development for many post-communist countries is strongly linked to EU accession. The European Union has invested a considerable amount of monetary, political, and social aid to encourage democratisation in the Western Balkans. However, this effort has been largely unsuccessful, and arguably even contributed to the decline of democracy in the region.

¹ Freedom house: Western Balkan countries remain hybrid regimes, decline for Serbia and BiH.” 2022. European Western Balkans.

This essay will explore this phenomenon further and assess the ways in which the EU has unintentionally facilitated democratic backsliding in the region from 2008 until present day. Considering the unique position of the EU as a promoter of democracy in its neighbourhood, this is an important matter to consider so that better decisions can be made moving forward. This essay does not seek to reduce EU democratic assistance to ‘the achievement or non-achievement of stated goals’² since progress is neither linear nor permanent. However, it is apparent that the normative power of the European Union is severely diminished - thus it must be considered whether or not the EU can continue playing a political or merely socio-economic role in the region. This essay will discuss three key points - Stability, COVID-19, and Migration - with reference to various Balkan states in order to determine how the European Union affects democracy in the Western Balkans during different events and policy streams.

II: THE EUROPEAN UNION AS A PROMOTER OF DEMOCRACY

The European Union is a key promoter of democracy in its ‘near abroad’. It has various mechanisms through which it can influence democratic development in the region since the 1990s, and while the initial trend was positive, there seems to be democratic stagnation in the region. The EU has historically helped the former Yugoslav states to take accountability for war crimes and crimes against humanity - making the International Criminal Tribunal for the Former Yugoslavia (ICTY) a key part of the accession process. The EU has also been heavily involved in the process of ‘normalisation of relations between Pristina and Belgrade, which constitutes a key barrier to stability in the region. While the EU has been instrumental in democratic development in Western Balkans - especially in cases such as North Macedonia - progress was short lived or had detrimental ‘unintended consequences’.

A key factor which dictates the reasons the EU may or may not succeed in the Western Balkans is simply the social or material constraints from within. Dandashly and Noutcheva argue that ‘social reasons’ such as lack of consensus among member states or incoherent mandates and ‘material reasons’ such as lack of resources or staff as well as career interests may

2 Assem Dandashly and Olga Noutcheva (2019) unintended consequences of EU democracy support in the European Neighbourhood. The international spectator: Italian journal of international affairs, volume 54, issue 1 pp. 105-120

limit democratic promotion.³ These factors are evident in the examples mentioned in this paper - especially in regard to Kosovo and the issue of migration. Moreover, a key question which must be addressed is whether the EU should be responsible for democracy promotion in the region. The expectation that the EU can act as a democracy promoter stems from a 'period of positive thinking'⁴ during its success at encouraging the democratic transition of Eastern and Central European countries. However, it is not reasonable to expect that the EU will be able to replicate this same phenomenon in a region with a sensitive and completely unique history.

III: MAINTAINING STABILITY

The main challenge in the region comes from ethnic conflict and the question of Kosovo's unresolved statehood and subsequently its relations with Serbia. This is an important factor to consider when discussing democracy in the region since it complicates the relationships Western Balkan states have with each other, but also their relationships with the European Union and other external powers.

The EU has often been accused of prioritising stability in the region at the expense of genuine democratic development. This is particularly evident in the question of Kosovo's unresolved statehood and migration. EULEX Rule of law 2008 managed to isolate Kosovar Serbs since they saw the EU Special Representative (EUSR) in Kosovo - Pieter Feith - as supporting the independence of Kosovo, as he had to abide by the UNSC Resolution 1244 and observe status neutrality. It also isolated Kosovar Albanians who expected more decisive action from the EU, thus damaging the credibility of the EU on both sides.

Normalisation of relations between Belgrade and Pristina is a huge aspect of EU contribution to the region, however Krenar Gashi emphasises that the EU as a facilitator of the normalisation dialogue has no legal significance for either of the parties due to its legal ambiguities which are designed to keep 'all EU states satisfied' but have no real consequences.⁵ This is relevant

3 Assem Dandashly and Olga Noutcheva (2019) unintended consequences of EU democracy support in the European Neighbourhood. *The international spectator: Italian journal of international affairs*, volume 54, issue 1 pp. 105-120

4 Assem Dandashly and Olga Noutcheva (2019) unintended consequences of EU democracy support in the European Neighbourhood. *The international spectator: Italian journal of international affairs*, volume 54, issue 1 pp. 105-120

5 Krenar Gashi (2021) Stimulated power and the power of stimulation: the European Union in the dialogue between Kosovo and Serbia, *JCMS 2021 Volume 59*, 2. Pp. 206-221

considering that not only do the member states have differing opinion regarding the legitimacy of Kosovo's independence - with five EU member states (Romania, Cyprus, Spain, Greece, Slovakia) still not recognising Kosovo's independence - but also neither Belgrade nor Pristina would like to make important concessions which may have huge domestic costs. The top-down approach also does little to increase public trust, further entrenching divisions between ethnic Albanians and Serbs in Kosovo, barring Pristina from seeing 'integration beyond territorial aspects', ultimately focusing on territorial control of the North without offering citizens any 'tangible opportunities'.⁶ Serbia is also influential in the North and has consistently created problems or exacerbated fears of Kosovo Serbs to prevent effective political engagement. It is apparent that the EU has adopted this approach to ensure stability in the region; however this is at the expense of genuine democratic development.⁷ Brussels has often been praised for its contribution to stability between Serbia and Kosovo despite the fact that it has consistently overlooked serious deficiencies in Rule of Law and Human Rights. This focus on stability has arguably strengthened authoritarian regimes whilst allowing them to progress in terms of EU accession. For example, Serbia is 'one of the top ten fastest autocratising countries', often resolving to 'self-inflicted incidents with neighbouring countries',⁸ yet it still enjoys close relations with the EU and maintains its membership prospect because of its surface level cooperation with the EU.

Arguably the European Union is in a unique position to mediate between the two countries and engage in nation building due to its non-militaristic approach, but it must come to terms with the sensitivities of the Western Balkans and not hide behind intentionally created ambiguities in order to feign progress. Achieving this, however, is not straightforward, since the EU must resolve internal differences before trying to solve external problems. Moreover, while this process has not necessarily encouraged backsliding in either Kosovo nor Serbia, it has helped entrench the authoritarian regime in Serbia further since a) the requests from the EU go against the democratic opinion of the Serbs regarding the independence of Kosovo and b) by praising the Vucic government for surface level developments, the

6 Donika Emini, Isidora Stakic (2018) Belgrade and Pristina: Lost in normalisation? European Institute for security studies (EUISS)

7 Adea Gefauri, Meltem Muftuler-Bac (2021) Caught between stability and democracy in the Western Balkans: a comparative analysis of paths of accession to the European Union. *East European Politics*, 37:2. 267-291

8 Adea Gefauri, Meltem Muftuler-Bac (2021) Caught between stability and democracy in the Western Balkans: a comparative analysis of paths of accession to the European Union. *East European Politics*, 37:2. 267-291

EU unintentionally further legitimises its position. Many have also argued that the normalisation process should be a bottom-up approach rather than an EU mandated top-down approach⁹ in order to see significant progress. Additionally, the EU cannot expect in this case to link the issue of Kosovo to Serbia's accession prospects and must instead change its outlook entirely in order to reflect the uniqueness and importance of the situation at the domestic level.

A similar instance involving the Bulgarian Veto against North Macedonia's EU accession is of particular importance, insofar as it could undermine positive results achieved in North Macedonia since 2017. North Macedonia, like Kosovo, initially faced problems with Greece due to its name and shared history. It took 27 years but both countries managed to resolve the name issue and North Macedonia was recognised by all member states. This process, however, severely hindered the accession prospects of North Macedonia, despite it since making considerable reforms in order to align with the standards of the Copenhagen Criteria. Bulgaria's veto was made on the grounds of an interpretation of 'shared history', and was seen to serve the political elite (Boyko Borisov) in their domestic electoral campaign. The Commission argues that North Macedonia has made decisive progress and hopes to start intergovernmental conferences, but the differences in opinion of the Commission and certain member states has led to a parallel process on enlargement, consequently undermining EU credibility and reform processes in Balkans. This situation once again highlighted the fact that EU member states are too comfortable with pushing for their own domestic agenda parallel to the goals of the Commission when it concerns the Western Balkans. If the European Union wants to maintain credibility in the face of new challenges, it has to start taking a much stricter stance with its own member states and presenting a unified front unaffected by the ambitions of individual member states. After this event however, with the EU preoccupied by the situation in Ukraine and leaving Bulgaria and North Macedonia to resolve this issue by themselves - support for the EU in North Macedonia fell by 25%.

However, this is not an indicator of North Macedonia's turn away from the EU, since a majority of the population still prefers security alliances with the West. This trend holds across the Western Balkans except for Serbia. However, a poll finds that the benefits of EU membership are understood in an economic sense rather than political, highlighting the fact that for a

9 Milica Stojanovic (2019) Serbia's Attitude to Kosovo is 'damaging Kosovo Serbs' Balkan Insight

democracy to sustain itself, it also needs citizens who are willing to uphold it.¹⁰ It also draws attention to the greater problems of corruption and lack of trust in government in North Macedonia and the economic stress caused by COVID-19 due to the strict lockdowns. Bieber suggests that this should be a key concern for the EU to deliver alongside social and democratic reform so that it could have a genuine and long lasting impact.

IV: COVID-19

COVID-19 was a unique global challenge, forcing widespread lockdowns and the curtailment of basic civil liberties in order to contain the virus. It is important to assess the quality of democracy and human rights during the pandemic in the Western Balkans, since some suspect that the pandemic helped further entrench anti-democratic tendencies in the region.¹¹ At the moment, it can be argued that it is too early to make any assumptions about the long-lasting impact of the pandemic on Western Balkan democracy's quality. During the pandemic, there were some key developments in the Western Balkans which scholars have highlighted as possibly being consequential in the future. The key point is the involvement of Russia and China in the region and the fact that they were able to provide aid during the pandemic, while the EU was too late in providing either vaccines or funding. While this is not inherently anti-democratic, it may decrease the influence and leverage of the EU if the Western Balkan states feel that they are not significantly supported by the EU. Serbia emerged during the pandemic as the second country in Europe in vaccinations per capita with 8.6% of the population vaccinated by March 2021.¹² This was highlighted as a huge victory for SNS by Serbian media. Articles emphasising that Serbia was even 'in front of the European Union' in terms of vaccination were printed daily during this time. It is difficult to ascertain whether the emergence of Serbia from passive to an assertive actor in the region may have long term consequences, since Serbia was not only able to vaccinate a large part of its population but also was able to provide assistance to some of the neighbouring countries.

However, it must be noted that despite the fact the EU was slow in providing

10 Florian Bieber, Zoran Nechev, "public opinion analysis on citizens' perceptions about the European Union, External Actors and Trust: Focus on North Macedonia, BiEPAG

11 Nikolaos Tzifakis (2020) The Western Balkans during the Pandemic: Democracy and Rule of law in quarantine European View, Vol. 19 (2) 197 - 205

12 Florian Bieber, Zoran Nechev "public opinion analysis on citizens' perceptions about the European Union, External Actors and Trust: Focus on North Macedonia, BiEPAG

vaccines to the region, the capacity of the Western Balkan states to navigate COVID-19 at the socioeconomic level has been largely facilitated by the EU fiscal disbursements of approximately 3.3 billion euros.¹³ The financial assistance reflects the ‘Union’s renewed commitment to the Balkans’¹⁴ and aligns with the renewed enlargement efforts by the Union.¹⁵ However, the case can be made, that either the pandemic itself has been an excuse for governments to enact further illiberal policies, or the long term impact of EU funding may aid entrenchment of clientelist networks and state capture in Western Balkan states. Moreover, EU financial aid was not efficient in itself in aiding democratic development during COVID-19 due to the fact that the lack of government accountability, corruption and organised crime are key factors of the political and economic systems in the Western Balkan states.

In addition to the lockdown measures, many Balkan states introduced fiscal stimulus packages to prevent total economic disruption - these accounted for approximately 50% (Serbia) to 70% (Montenegro) of the minimum wage at the time. In the Western Balkans, the general trend indicates that there is a strong correlation between high IPA funds (one of the primary means the EU uses to support democratic development in the enlargement counties) and political corruption¹⁶ as well as a positive correlation between IPA funds and vote buying as seen in Serbia and Kosovo. In Serbia, the government provided an ‘additional 100 euros for young people’ between the ages of 16 and 30 during the pandemic. However, Vučić highlighted the fact that this aid would not be given before the election. Although this was viewed as a bribe,¹⁷ it still aided the victory of the SNS in 2020. However, such practices are not limited to the pandemic and have been prevalent since 2007.

EU efforts to assist democratic development through aid is further undermined by the lack of opposition parties and weakness of the judicial systems in the region which can check the authoritarian tendencies of incumbent parties.

13 Alabana Shehaj (2020) The perils of succour : The European Union’s financial role in the Western Balkans during COVID-19, European Policy Analysis. Vol. 6 (2) p. 264-276

14 Alabana Shehaj (2020) The perils of succour : The European Union’s financial role in the Western Balkans during COVID-19, European Policy Analysis. Vol. 6 (2) p. 264-276

15 European Commission (2023) Enhanced EU engagement with the Western Balkans

16 Alabana Shehaj (2020) The perils of succour : The European Union’s financial role in the Western Balkans during COVID-19, European Policy Analysis. Vol. 6 (2) p. 264-276 DOI: 10.1002/epa2.1102

17 Hoxhaj. Andi. Zhilla, Fabian “THE IMPLICATION OF COVID-19 CRISES ON THE RULE OF LAW AND STATE OF DEMOCRACY IN THE WESTERN BALKANS.” 2020. UCL Discovery.

Despite judicial reform being a key aspect of the Copenhagen Criteria, the judiciary in many Western Balkan states is controlled by the government and has no power to act as a safeguard against autocratic measures. For example, in North Macedonia, the pandemic began during the pre-electoral period in which parliament was dissolved. The president Stevo Pendarovski declared a state of emergency on 18th march that could not receive legislative approval. North Macedonia was then ruled by a caretaker government which was accused of having overstepped its mandate as only one-third of its decrees were related to the pandemic.¹⁸ This did initially hinder the prospect of North Macedonia's EU accession when France vetoed the opening of accession talks with North Macedonia in 2019, but since then the Council has already opened negotiation talks with North Macedonia, in March 2020.¹⁹

This calls to question the basis on which the EU is proceeding with accession talks - if not the Copenhagen Criteria - which emphasises the importance of Democracy, the Rule of Law, and judicial reform. It has been argued that two factors are to blame for this; firstly, the fact that the EU has tried to copy and paste the democratisation model it used for Central and Eastern Europe and apply it to the Western Balkans where the level of commitment to the EU remains low and unsteady and where the political context is considerably more sensitive. Secondly, some have argued that the EU now has more important security related concerns (migration, war, terrorism) and uses the inflated prospect of EU accession to obtain cooperation from the Western Balkan states instead of focusing on democratic development.

V: MIGRATION

Migration has been a key part of EU security since the Maastricht Treaty. Initially it was presented as an internal security concern; however from the 1990s an external dimension of migration policy emerges, and the issue becomes increasingly important to European politics and security.²⁰ The Western Balkans is an important migration route to Europe due to its geographical position. Ferruccio Pastore questions whether the Western Balkans has been a foreign policy priority for the European Union vis-a-

18 Nikolaos Tzifakis (2020) The Western Balkans during the Pandemic: Democracy and Rule of law in quarantine, *European View*, Vol. 19 (2) 197 - 205

19 European Commission, North Macedonia

20 Ferruccio Pastore (2019) From source to corridor: changing geopolitical narratives about migration and the EU-Western Balkans Relations, *Journal of Balkan and Near Eastern Studies*, 21:1, 11-26

vis international migration,²¹ since their membership prospects have been severely inflated and often progress is tied to cooperation with the EU instead of democratic considerations. This position is further supported by the fact that the revised Stability pact in 2002 promoted a Migration, Asylum, Refugees regional Initiative (MARRI) to include regional cooperation in the migration and asylum policy field. The EU also made its migration related priorities explicit at the Thessaloniki summit in 2003, and emphasised that EU visa liberalisation was related to ‘illegal migration’ and ‘strengthening administrative capacity in border control and security documents’.²²

The refugee crisis of 2015 has had a noticeable impact on EU domestic politics, but also on EU external policy. The securitisation of the migration crisis and the challenges faced at the time sowed discontent in the EU and gave rise to populist and nationalist political parties. Many EU countries in the Southeast such as Bulgaria, Hungary or Croatia adopted stringent border control laws or constructed physical fences to keep migrants away. In terms of the Western Balkans, this perceived threat made it a priority for the EU to reinforce its internal and external borders with the Western Balkans and enforce new border controls. This created a major humanitarian crisis with migration now perceived as a security threat and a source of anxiety among the member states.²³

In 2018 Serbia adopted a refugee-friendly policy and put new laws in place in order to open chapter 24 (justice, freedom and security; concerning asylum, migration, visas and external borders) with the EU. Since Serbia remained only a transit country after the closure of the Balkan migration route, many refugees did apply for asylum, but did not wish to stay there in the long term. Serbian authorities were initially committed to a humanitarian approach in order to appease Brussels, however the shift in discourse regarding migrants and the focus of the EU states on ‘border protection and deportation’ instead of ‘integration and social inclusion’²⁴ meant that migrants stuck in Serbia

21 Ferruccio Pastore (2019) From source to corridor: changing geopolitical narratives about migration and the EU-Western Balkans Relations, *Journal of Balkan and Near Eastern Studies*, 21:1, 11-26

22 Ferruccio Pastore (2019) From source to corridor: changing geopolitical narratives about migration and the EU-Western Balkans Relations, *Journal of Balkan and Near Eastern Studies*, 21:1, 11-26

23 Mirjana Bobić, Danica Šantić (2019) Forced migrations and Externalization of European Union Border Control: Serbia on the Balkan Migration Route, *International Migration* volume 58, issue 3 pp. 220-234

24 Mirjana Bobić, Danica Šantić, Danica (2019) Forced migrations and Externalization of European Union Border Control: Serbia on the Balkan Migration Route, *International Migration* volume 58, issue 3 pp. 220-234

during this time did not receive the appropriate facilities or guidance from the EU on how to manage the significant volume of migrants.

Additionally, this issue became a key means of the Western Balkan states to exert leverage over the EU through their cooperation on policy matters which remain domestically low risk. This enhanced cooperation between the EU and the Western Balkans has been viewed as ‘political’ in the way that the Western Balkan countries have the capability of ‘shaping the process in a way that allows them to avoid undertaking fundamental reforms.’²⁵ This reinforces theories arguing that authoritarian governments can achieve a degree of political legitimacy from surface level cooperation with the EU whilst simultaneously resisting its transformative power.

The securitisation of migration provides Western Balkan states with yet more funding to act as the ‘gatekeepers’ of Europe. This is a key issue not only because the EU unintentionally facilitates several human rights violations. In December 2022 the EU adopted a new strategy for migration control with Bosnia and Herzegovina to increase cooperation in terms of border control. As was the case with Serbia, this was listed as a key demand by the commission for BiH to receive candidate status.²⁶ Human rights groups at the time were rightly concerned that the ‘security aspect of migration is still overemphasised’²⁷ and that more education is needed regarding the matter. Since then, there have been several concerns regarding the EU funded migration centres in BiH²⁸ and the EU has only sought to place stricter migration measures in the wake of the earthquakes in Turkey and the invasion of Ukraine.²⁹ The problem of migration and human rights abuses does not lie in the Balkans alone, and the EU has consistently used other countries to help minimise the number of migrants coming into Europe. This was the case especially when the EU stopped Syrian migrants in Turkey, which subsequently committed several human rights abuses and left migrants in poor conditions. Similarly, the Border Violence Monitoring Network found in December 2022 that almost 25,000 migrants were ‘beaten, humiliated’ and ‘detained’ at EU borders and that such instances are being increasingly normalised at EU borders.³⁰

25 Jonathan Webb (2022) The ‘refugee crisis’ and its transformative impact on EU-Western Balkan relations, *Journal of Ethnic and Migration Studies*, 48:6, 1363-1380

26 European Commission, Bosnia and Herzegovina

27 Azem Kurtic (2022) Bosnia to tighten border controls in line with EU demands, *Balkan Insight*

28 Azem Kurtic (2022) Bosnia to tighten border controls in line with EU demands, *Balkan Insight*

29 Stamatoukou, Eleni (2023) EU agrees stricter migration measures after quakes in Turkey, Syria. *Balkan Insight*

30 Fjori Sinoruka (2022) Study Reports 25,000 Violent Push Backs at EU border. *Balkan Insight*

CONCLUSION

The EU plays an instrumental role in the Western Balkans, and the geopolitical relationship between the Western Balkans and the EU is necessary for both sides in the face of modern problems such as migration and COVID-19. However, the EU cannot be seen as a credible promoter of democracy in the region due to the fact that it has consistently compromised democratic development for stability in the region or to achieve cooperation from the Balkan states regarding key policy matters. However, it cannot be argued that the EU failed at maintaining democracy in the region since we cannot make a comparison to what democracy would have looked like in the region if the EU had not interfered. However, it is evident the success of democratisation in East and Central Europe after the fall of communism cannot be easily replicated in the Western Balkans. Going forward, the EU has to reconsider its political role, and deflate the prospect of membership for the Western Balkan states, where it is not realistic. While there is a renewed moment in the EU's Western Balkan enlargement policy,³¹ it is difficult to ascertain if the democratic situation in the Western Balkans will consequently improve.

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NATO & TRANSATLANTIC SECURITY

1.3.1 To What Extent Are The Taiwanese and Ukrainian Situations Similar?

SUBMITTED BY

Caroline Bouisse

I: INTRODUCTION

Recent events in Ukraine have sparked interest in the collective imagination and led some to question whether the situation faced by Ukraine today might be the fate of Taiwan tomorrow. One could argue that Russia's poor performance in Ukraine has amplified the optimism of those who aim to deter the Chinese assault on Taiwan, but it is likewise reasonable to think that Taiwan would be more difficult to defend than Ukraine. However, going a step further, one can argue that China is investing heavily in its military and is determined to learn from Russian mistakes in Ukraine. It is therefore interesting to ask whether the US and other supporters of Taiwan will do the same.

Russia's aggression against Ukraine immediately catalysed media attention, mobilised a section of public opinion and provoked strong statements, and

an outpour of support.¹ The determination and willingness of the Ukrainian people to defend democracy and freedom evoked deep empathy and support from the Taiwanese people. David J Keegan argues that independence-minded President Tsai Ing-Wen strongly condemned Russia's actions and established severe economic sanctions against Moscow.² While some academics, like James Baron, contend that the two conflicts are diametric opposites,³ this essay agrees with Jean-Paul Burdy in asserting that the ongoing conflict in Ukraine provides a wealth of lessons for Taiwan and that, even though the two conflicts are largely dissimilar, we can still identify some key similarities.⁴

First, this paper outlines the similarities between Ukraine and Taiwan, focusing on their history of political independence and their desire to defend their democracy. Second, it will highlight the major differences between them, notably in terms of the level of international recognition of the two countries, but also in terms of their respective global autonomy and the global repercussions, that their respective invasions did, or would generate.

I: THE SIMILARITIES BETWEEN UKRAINE AND TAIWAN

On one hand, Taiwan and Ukraine are distinct countries, located in far-off parts of the world, with unique cultural and historical backgrounds. However, there are some notable similarities between the two situations.

One similarity is the issue of political independence. Indeed, both Taiwan and Ukraine are seeking to assert their independence from larger entities. Taiwan, on the one side, is seeking independence from China, while Ukraine is seeking independence from Russia. In both cases, the countries are fighting for the right to determine their own political fate and to establish, or maintain their own independent nation-state. This essay concurs with William H Overholt, who argues that the fact that both nations are on the

1 Ruth Endam Mbah and Divine Forcha Wasum, "Russian-Ukraine 2022 War: A Review of the Economic Impact of Russian-Ukraine Crisis on the USA, UK, Canada, and Europe," *Advances in Social Sciences Research Journal* 9, no. 3 (2022): 145–50.

2 David J Keegan and Kyle Churchman, "China-Taiwan Relations: Taiwan and China Seek Lessons from Ukraine as Taiwan's International Position Strengthens," *Comparative Connections* 24, no. 1 (2022): 89–100.

3 James Baron, "Taiwan and Ukraine: Parallels, Divergences and Potential Lessons," *Global Asia* 17, no. 2 (2022): 28–34.

4 Jean-Paul Burdy, "Aujourd'hui l'Ukraine, Demain Taiwan ?": L'impact de La Guerre En Ukraine Sur Les Enjeux Taiwanais," *Diplomatie*, no. 115 (2022): 17–20.

periphery of former empires is to the detriment of their situation.⁵

China and Russia demand their ‘reintegration’ or ‘reunification’ with the metropolis, in the name of an irredentist rewriting of ancient and recent history.⁶ In Moscow, the “Kievan Rus” is perceived as the “cradle of the Russian nation”, and Ukrainians are represented as Russians.⁷ In Beijing, Taiwan is defined as a “Chinese province” from all times, despite that fact that it was only administered by the empire from the 17th century to 1895, and never by the communist regime acceding to power in 1949. Chinese ethnic nationalism sees all Taiwanese, in their ethno-linguistic diversity, as belonging to the Han ethnic group. The sovereignty of both Ukraine and Taiwan is seen as illegitimate, insofar as they were created by the “hand of the foreigner” - Americans in both cases.⁸ Moscow and Beijing share the same detestation of democracy and equal contempt for freely elected leaders: President Volodymyr Zelensky is called a “Nazi”; President Tsai is “the leader of separatists doomed to the dustbin of history”.⁹

Ukraine and Taiwan are also similar in their profound struggle to preserve democratic values and institutions in the face of opposition from external and internal forces. For example, Taiwan, an island nation located in East Asia, has been democratic for over three decades. However, the country is constantly threatened by its neighbor, the People’s Republic of China, which considers Taiwan as a rogue province and has not ruled out the use of military force to reunify the island with the mainland. China has also been using diplomatic and economic pressure to isolate Taiwan on the international stage, making it difficult for the country to maintain its democracy.

Ukraine, located in Eastern Europe, has also been struggling to maintain democracy in the face of external pressures. Ever since the country gained independence from the Soviet Union in 1991 it has been struggling to establish itself as a democratic state. The 2014 Ukrainian Revolution, also known as the Maidan Revolution, was a significant step in the country’s journey towards democracy. However, the country has since been plagued

5 William H Overholt, “Ukraine Offers No Easy Lessons on Taiwan,” *Global Asia* 17, no. 2 (2022): 36–39.

6 Mara Kozelsky, “Religion and the Crisis in Ukraine,” *International Journal for the Study of the Christian Church* 14, no. 3 (2014): 219–41.

7 Peter Havlik, “Economic Consequences of the Ukraine Conflict,” 2014.

8 S King, “Taiwan after Ukraine,” 2022.

9 Gérard Wormser, “Poutine S’en Va-t-En Guerre Poutine En Ukraine, Assassin d’Une Démocratie Naissante” (2022).

by conflict in the eastern part of the country and interference from Russia, which has annexed Crimea and supported separatist rebels in the Donbas region. These challenges have made it difficult for Ukraine to fully realize its democratic aspirations.¹⁰

Both Taiwan and Ukraine have faced challenges in maintaining democracy due to external and internal pressures. Taiwan has been struggling to maintain its democratic values and institutions in the face of opposition from China, while Ukraine has been grappling with conflict in the east and interference from Russia. Despite these challenges, both countries have remained steadfast in their commitment to democracy and have taken steps to preserve their democratic institutions. For example, Taiwan has continued to participate in international organizations and has taken steps to strengthen its democratic institutions, while Ukraine has undergone reforms to improve the rule of law and transparency in government.

II: THE DIFFERENCES BETWEEN UKRAINE AND TAIWAN

However, despite these similarities, there are some significant differences between the two cases. One difference is the level of international recognition. As S.King argues, while Taiwan is only recognized by a limited number of countries, Ukraine is recognized by most of the international community as a sovereign state.¹¹ This recognition has allowed Ukraine to gain support and assistance from the international community, while Taiwan has struggled to gain recognition and support.

This means that as a victim of Russian aggression, Ukraine can seek help from the UN Security Council and General Assembly. On the other hand, Taiwan is diplomatically recognised in 2022 by only 14 nations, mostly microstates. Furthermore, geopolitically, as Robert Ross wrote at the dawn of the 21st century, East Asia is bipolar, with the United States as the dominant maritime power and China as the dominant mainland power,¹² with Taiwan situated between the two spheres. In this respect, whoever controls Taiwan will have an advantage over the other. Arguably, Taiwan is more important to the US than Ukraine, both economically and strategically. Japan is even

10 David J Keegan and Kyle Churchman, “ChinaTaiwan Relations: Taiwan and China Seek Lessons from Ukraine as Taiwan’s International Position Strengthens,” *Comparative Connections* 24, no. 1 (2022): 89–100.

11 S King, “Taiwan after Ukraine,” 2022.

12 Robert S Ross, “Navigating the Taiwan Strait: Deterrence, Escalation Dominance, and U.S.-China Relations,” *International Security* 27, no. 2 (2022): 48–85.

more reluctant to see Taiwan united with mainland China, as it considers the Taiwan Strait to be part of its lifeline, especially in terms of energy transport security.

Furthermore, another difference is that Taiwan is much more autonomous than Ukraine militarily.¹³ Taiwan has been preparing for Chinese aggression for some time, notably through its comprehensive defense concept. This process has improved its combat readiness, but in the face of the Ukrainian crisis, Taiwan has taken multiple additional measures to equip and prepare its population by setting up self-defense, rescue, and evacuation courses in order to solidify and guarantee civil resistance. Moreover, Taiwan's military budget is twice as large as that of Ukraine.¹⁴ Ukraine possesses a different advantage — experience. It has spent nearly eight years fighting Russia and has built up its military strength.¹⁵

Taiwan finds itself in a delicate position geographically and strategically vis-à-vis China. Indeed, China has multiple strategies for action. On the one hand, as S. King explains, it can launch an amphibious attack on Taiwan and its offshore islands by combining sea, air and land bombing with an air or sea assault.¹⁶ On the other hand, it can mount a coercive campaign combining economic and diplomatic pressure or impose a blockade on Taiwan.

In the context of a potential war in the Taiwan Strait, its deep integration in the global economy is a double-edged sword for China. It has been one of the most important factors in China's economic growth for decades; however, as H. Wei argues, deep economic interdependence makes China's economic growth vulnerable in times of crisis.¹⁷ China is now the world's largest trading country, based on combined imports and exports. This is largely due to the fact that China trades with the United States and its major allies, which account for eight of China's top ten trading partners. In a scenario where China uses force to achieve reunification with Taiwan, the US and its allies could impose severe sanctions. This would be too costly for the Chinese economy. China would experience a severe economic recession,

13 Ruth Endam Mbah and Divine Forcha Wasum, "Russian-Ukraine 2022 War: A Review of the Economic Impact of Russian-Ukraine Crisis on the USA, UK, Canada, and Europe," *Advances in Social Sciences Research Journal* 9, no. 3 (2022): 145–50.

14 Robert S Ross, "Navigating the Taiwan Strait: Deterrence, Escalation Dominance, and U.S.-China Relations," *International Security* 27, no. 2 (2022): 48–85.

15 Lawrence Freedman, "Ukraine and the Art of Limited War," *Global Politics and Strategy* 56, no. 6 (2014): 7–38.

16 S King, "Taiwan after Ukraine," 2022.

17 H Wei, "Possible Outcomes of the Russo-Ukrainian War and China's Choice," 2022.

with profound domestic social and political repercussions. In this respect, Russia has less to fear economically from a deterioration in relations with the US and the EU. In particular, the EU is highly dependent on Russian natural gas supplies, although recent EU sanctions against Russia have greatly reduced this dependence.

III: THE LESSONS THAT CAN BE DRAWN FROM THE TWO CASE STUDIES

The Taiwan and Ukrainian cases offer valuable lessons on the challenges of managing relations with powerful, revisionist neighbors and the importance of international support in defending sovereignty. Both cases share the common theme of struggle whilst under significant political, economic, and military pressure from larger and more powerful neighbours. This account is supported by Wei who argues that these lessons are relevant not only for Taiwan and Ukraine but also for other countries facing similar challenges in the modern world.¹⁸

A lesson that can be drawn from the Taiwan and Ukrainian cases is the importance of international support in defending sovereignty. Both Taiwan and Ukraine have relied heavily on the support of the international community to counter the pressure from their powerful neighbors. In the case of Taiwan, the United States has played a crucial role in providing security guarantees and diplomatic support. Similarly, Ukraine has received significant support from the European Union and NATO.

The Taiwanese and Ukrainian cases also highlight the importance of maintaining a strong military deterrent. In both cases, the threat of military force has been a significant factor in the pressure exerted by the larger neighbor.¹⁹ A powerful military deterrent can aid in thwarting aggression and defending a country's sovereignty.

Furthermore, these cases highlight the importance of economic independence. Both countries have faced economic pressure from their powerful neighbors, making it difficult for them to maintain their independence. Taiwan has built a robust economy that is less dependent on China, while Ukraine has struggled to reduce its economic dependence on Russia.²⁰ Economic independence can help to reduce vulnerability to external pressure and

18 H Wei, "Possible Outcomes of the Russo-Ukrainian War and China's Choice," 2022.

19 Sheena Chestnut Greitens, "China's Response to War in Ukraine," 2022, 751–81.

20 Peter Havlik, "Economic Consequences of the Ukraine Conflict," 2014.

protect national sovereignty.

The list of lessons learned is long and continues to grow, as King emphasizes.²¹ In this respect, as early as last April, for example, the Command Doctrine and Education Centre (CDEC) had already identified some thirty major lessons showing, among other things, that the final decision remains on the ground, regardless of the importance of the third dimension and air superiority.²² Nonetheless, these first lessons confirmed the impact of cyber and electronic warfare, the major role of drones, the problem of logistics and the scale of both human and material losses.

Overall, military institutions remain rather discreet about the lessons already learned from this conflict, since they would run the risk of revealing their own weaknesses. For example, the French Ministry of the Armed Forces identified ten areas of vulnerability (including low levels of ammunition, lack of anti-aircraft artillery, the need for new long-range artillery, etc.) but did not disclose the full list.²³ The authors considered that in Ukraine cities remain the priority targets, justifying the efforts made by the army to train in this environment, and they recalled that urban warfare requires high material capabilities in terms of firepower, manpower, and logistics, but also moral strength.²⁴

CONCLUSION

In conclusion, Taiwan and Ukraine are two countries facing multiple challenges on their own territory and beyond. Both possess distinct cultural and political histories but also share similarities related to their own situations.

Taiwan is renowned for its vibrant blend of Chinese, Japanese, and indigenous cultures, while Ukraine has a rich and diverse heritage that has been shaped by centuries of various influences.

Taiwan is struggling to maintain its sovereignty in the face of pressure from China, which claims Taiwan as a part of its territory. Ukraine, on the other hand, is dealing with Russia's aggressive expansionism and interference in

21 S King, "Taiwan after Ukraine," 2022.

22 H Wei, "Possible Outcomes of the Russo-Ukrainian War and China's Choice," 2022.

23 F. Aslam et al., "The Footprints of Russia-Ukraine War on the Intraday (In) Efficiency of Energy Markets: A Multifractal Analysis," *The Journal of Risk Finance* 24, no. 1 (2023): 89–104.

24 James Baron, "Taiwan and Ukraine: Parallels, Divergences and Potential Lessons," *Global Asia* 17, no. 2 (2022): 28–34.

its internal affairs, particularly in the annexation of Crimea and the ongoing conflict in the Donbas region.

These similarities and differences demonstrate the resilience and determination of their respective people in the face of adversity. Both countries have shown remarkable perseverance in protecting their political independence and sovereignty, despite the challenges they face.

Furthermore, the Taiwan and Ukraine cases provide valuable insight for other countries that are facing similar challenges in the modern world. The experiences of Taiwan and Ukraine demonstrate the importance of international support in defending sovereignty, maintaining a strong military deterrent, and building a robust economy that is less dependent on powerful neighbors.

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1.3.2 Crimea: Exploring the Political and Economic Ramifications Nine Years Later

SUBMITTED BY

Henry Liu

I: ABSTRACT

With the war in Ukraine pushing past its one-year mark with no end in sight, it is important to reflect on the radical changes it has caused, both on the European continent and around the world. The war has called into question many fundamental assumptions about Europe that went unchallenged for too long—namely, Europe’s energy independence, relations with authoritarian governments, and attitude towards open military confrontation. Despite the ample commentary about the immediate causes of the Ukraine War, ranging from Russian President Vladimir Putin’s isolation from his top advisers to perceived political weakness in Western Europe, it is critical to analyze the principal cause of the conflict between Russia and Ukraine—the annexation of Crimea. Putin’s decision to send Russian troops into the Crimean Peninsula in 2014 immediately triggered an international crisis and placed Ukraine and Russia into direct conflict. The annexation then triggered the first wave of sanctions, which scholars and politicians alike have criticized as too lenient and further emboldening Russia, while some have defended as necessary to prevent a broader war from breaking out in 2014. This leads to the overarching question: To what extent did the sanctions in 2014 achieve their political and economic aims, and how can they inform NATO’s current response to the Ukraine War? Nine years after the Crimean Annexation, it is important to look back and question whether those political and economic sanctions were successful in defusing the conflict or another cause of the Ukraine War. A comprehensive evaluation through both the economic and political perspective of the 2014 sanctions will determine the true impact of those sanctions, and how those past sanctions can influence and inform NATO’s current response to the war and its attempts to maintain transatlantic peace.

II: A POLITICAL ANALYSIS OF RESPONSES TO THE CRIMEA ANNEXATION

II/a: INTRODUCTION TO CRIMEA

With Crimea's strategic location by the Black Sea and the 1.1 trillion cubic meters of natural gas present within it, the region holds great strategic and economic importance that can become a source of territorial conflict.¹ The strategic value held by Crimea posed great incentive for Russia to annex the region, as doing so would enable the construction of more gas pipelines with Europe and increase Western Europe's political dependence on Russia.² As Ukraine began to develop a preference for stronger economic and political ties with Western Europe, Russia began to fear losing the strategic value of Ukraine and its political influence in the region.³ Subsequently, Russia annexed Crimea in March of 2014 by sending troops under the pretense of "protecting ethnic Russians", which clearly violated international law regarding territorial sovereignty.⁴ According to Austin Charron, professor of geography and international law at the University of Wisconsin-Madison, "international condemnation" was swift, and Western Europe expressed great concern regarding Russia's unprovoked aggression, as it could escalate into a larger European conflict.⁵ While a number of sanctions have been imposed on Russia, the necessity of these sanctions has been contested among Western European nations, making it difficult to determine the ideal response.⁶ Thus, the question becomes increasingly important: Given Russia's rising political influence resulting from its annexation of Crimea, to what extent were the sanctions in 2014 warranted and politically effective? Analyzing the issue through the political lens investigates how the Crimean annexation could increase Russia's political influence and shift the balance of political power in Europe, in attempts to determine the

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2 Casier, Tom. "The Different Faces of Power in European Union–Russia Relations." *Cooperation and Conflict* 53, no. 1 (2018): 101–17.

3 Hale, Henry E. "How Crimea Pays: Media, Rallying 'Round the Flag, and Authoritarian Support." *Comparative Politics* 50, no. 3 (2018): 369–80.

4 Grant, Thomas D. "Annexation of Crimea." *The American Journal of International Law* 109, no. 1 (2015): 68–95: 75

5 Charron, Austin. "Whose Is Crimea? Contested Sovereignty and Regional Identity." *Region* 5, no. 2 (2016): 225–56.

6 NOSOV, MIKHAIL. "Russia and European Union: Five Years after Crimea." *Rivista Di Studi Politici Internazionali* 86, no. 3 (343) (2019): 405–12: 226

effectiveness and necessity of sanctions imposed on Russia.

III/b: RUSSIA'S INCREASING POLITICAL INFLUENCE THROUGH CRIMEA ANNEXATION

While a consensus exists that Russia's annexation of Crimea violated international law,⁷ the necessity of sanctions and other retaliatory measures against Russia should be evaluated after comprehensively assessing the extent to which the annexation of Crimea expands Russia's political influence. Jeffery Mankoff, a senior fellow in the Russia and Eurasia program at the Center for Strategic and International Studies, maintains that Russia's annexation of Crimea limits its political influence in Ukraine, as it will "only bolster Ukrainian nationalism" and encourage Ukraine to become reliant on Western Europe.⁸ While conceding that the Crimean annexation significantly escalates tensions between the West and Russia, Mankoff argues that the West should adopt a more lenient stance towards the issue in order to facilitate Ukraine's natural alignment with the West. Despite Mankoff's dismissal of the political threat that Russia poses, organizations such as NATO are raising significant concerns regarding Russia's rising political influence.⁹ Okan Yesilot, professor of foreign relations and international studies at Marmara University, claims that the annexation of Crimea ensures Ukraine's dependence on Russia for "valuable natural gas," which guarantees that Ukraine will never be completely aligned with Western Europe.¹⁰ Tatiana Zhurzhenko, professor of European politics at the University of Vienna, furthers the concerns of Yesilot by asserting that the annexation of Crimea expands Russia's "sphere of influence" and thus Russia's political power.¹¹ Although Zhurzhenko cites previous Russian conflicts in Georgia to suggest that the long-term political landscape is extremely variable, she agrees that Ukraine was becoming more dependent on Russia. Although the annexation of Crimea has weakened Ukraine's territorial sovereignty, the full extent of Ukraine's vulnerability and Russia's political gain was debated. Through the analysis of these contrasting perspectives, it becomes clear that there lacks a clear consensus on the political ramifications of the

7 Grant, Thomas D. "Annexation of Crimea." *The American Journal of International Law* 109, no. 1 (2015): 68–95.

8 Mankoff, Jeffrey. "Russia's Latest Land Grab: How Putin Won Crimea and Lost Ukraine." *Foreign Affairs* 93, no. 3 (2014): 60–68:61

9 Charron, Austin. "Whose Is Crimea? Contested Sovereignty and Regional Identity." *Region* 5, no. 2 (2016): 225–56.

10 YEŞİLOT, OKAN. "The Crimean Crisis in the Context of New Russian Geopolitics." *Insight Turkey* 16, no. 2 (2014): 167–81: 160

11 Zhurzhenko, Tatiana. "A Divided Nation? Reconsidering the Role of Identity Politics in the Ukraine Crisis." *Die Friedens-Warte* 89, no. 1/2 (2014): 249–67: 250

Crimean annexation, which further obscures the ideal response that Western Europe and the United States can pursue.

2/c: POLITICAL EFFECTIVENESS OF 2014 SANCTIONS

While several political and economic sanctions were imposed on Russia by Western Europe and the United States immediately following the Crimean annexation in 2014, their effectiveness and necessity in resolving the conflict is disputed. Daniel McCormack and Henry Pascoe, professors in politics and government at the University of Pennsylvania and University of Texas, respectively, claim that existing sanctions in Crimea have “curtailed a pattern of increased Russian military spending,” thus preventing armed conflict from breaking out and limiting Russia’s military power.¹² Since the sanctions were able to ensure long-term stability in Europe, the authors contend that the sanctions were successful in limiting Russia’s political aggression. In contrast, Ryan Crimmino, staff writer of the *Harvard International Review*, disagrees with this characterization, stating that the use of sanctions were unable to “force Russia to reconsider its aggressive approach” in Crimea due to “a lack of unified resolve” among Western Europe to implement more extreme measures.¹³ Crimmino asserts that instead of portraying the West as unified in its stance against Russian aggression, the limited effect of the sanctions spreads the perception that NATO lacks “cohesion,” which inevitably “[bolsters] Russia’s international posture” and serves a self-defeating purpose.¹⁴ Jennifer A. Yoder, professor of global studies at Colby University, furthers Crimmino’s argument by asserting that the inability of the 2014 sanctions to restrict Russia’s aggression “embolden[ed]” Russia to become more aggressive.¹⁵ However, while Crimmino attributes the failure of the sanctions to be a result from a lack of agreement among Western European nations, Yoder credits the ineffective nature of these sanctions to Western Europe’s energy reliance and desire to safeguard “valuable economic interests” in Russia.¹⁶ In spite of their differences, both Crimmino and Yoder concur that the 2014 sanctions were largely ineffective, which

12 McCormack, Daniel, and Henry Pascoe. “Sanctions and Preventive War.” *The Journal of Conflict Resolution* 61, no. 8 (2017): 1711–39: 1712

13 CRIMMINO, RYAN. “PUTIN IN CRIMEA: Have Sanctions Run Their Course?” *Harvard International Review* 39, no. 2 (2018): 16–18: 16-17

14 CRIMMINO, RYAN. “PUTIN IN CRIMEA: Have Sanctions Run Their Course?” *Harvard International Review* 39, no. 2 (2018): 16–18: 17

15 Yoder, Jennifer A. “From Amity to Enmity: German-Russian Relations in the Post Cold War Period.” *German Politics & Society* 33, no. 3 (116) (2015): 49–69: 52

16 Yoder, Jennifer A. “From Amity to Enmity: German-Russian Relations in the Post Cold War Period.” *German Politics & Society* 33, no. 3 (116) (2015): 49–69: 54

contrasts with McCormack and Pascoe, whose research contends that the sanctions were effective at preventing the annexation from escalating into a larger conflict.

2/d: ADAPTING THE FOREIGN POLICY OF THE WEST

Given the disputed effectiveness of the 2014 sanctions, scholars have recommended a shift in the West's foreign policy towards Russia. Paul Apostolicas, the editor-in-chief of the *Harvard International Review*, criticized implementing additional sanctions and instead recommended for Western Europe to find areas of "mutual cooperation" with Russia to ensure a mutually beneficial economic relationship in order to prevent Russia from "withhold[ing] gas supplies in exchange for political concessions".¹⁷ In contrast, Jeffery Gedmin, a senior fellow at Georgetown University, advocated for an economic containment of Russia, in which "US reserves of shale gas [are] used to counter Russian energy oppression" to preserve "transatlantic security".¹⁸ Gedmin contends that by reducing Western Europe's economic dependence on Russia, the West would be able to adopt a more confrontational foreign policy, which would discourage Russia from future acts of aggression.¹⁹ While Apostolicas opposes attempts to challenge Russia's political influence, Gedmin maintains that the United States should urgently act to decrease Western Europe's energy reliance on Russia. Ultimately, it is evident through the analysis of both scholars that Russia holds political leverage over Western Europe due to its energy supplies; therefore, the West should adapt its foreign policy to respond to the evolving threat Russia poses.

III: ECONOMIC ANALYSIS OF THE RESPONSES TO THE CRIMEAN ANNEXATION

3/a: ECONOMIC INTRODUCTION TO CRIMEA

After the political analysis of the sanctions imposed on Russia following the Crimean annexation, it is now imperative to consider how the 2014 sanctions impacted Russia and Europe economically. Although the Crimean annexation has been framed as a political crisis, Anders Aslund, a Swedish economist, contends that the Crimea peninsula was largely contested due

17 Apostolicas, Paul. "EVOLVING MARKETS: LNG AND ENERGY SECURITY IN EUROPE." *Harvard International Review* 41, no. 2 (2020): 6–10: 8

18 Gedmin, Jeffrey. "BEYOND CRIMEA: What Vladimir Putin Really Wants." *World Affairs* 177, no. 2 (2014): 8–16: 15

19 Gedmin, Jeffrey. "BEYOND CRIMEA: What Vladimir Putin Really Wants." *World Affairs* 177, no. 2 (2014): 8–16.

to the economic importance of Crimea as a warm water port in the Black Sea and 40 billion dollars' worth of natural gas fields.²⁰ While Russian President Vladimir Putin has justified it as an ethnic conflict between Russia and Ukraine, there is historical data that refute his claims and relate the act of annexation to economic conflicts in the region.²¹ Furthermore, Jānis Bērziņš, a director at the National Defense Academy in Latvia, believes that the conflict was a result of the complex relationships between the West and Russia.²² During the post-Cold War era, Russia entered into collaborative relationships with the West that ushered in an age of economic reform and growth in Russia from the early 2000s. Most notably in the energy sector, as of 2017, Russia was the world's second-largest oil and natural gas exporter, as Western Europe has become highly dependent on Russian oil and gas for energy.²³ Nevertheless, from a modern Russian perspective, the loss of global superpower status after the Cold War and the rise of the US's influence in Europe have impeded Russian economic growth. As a result, many Russian political figures attributed Russian economic decline to the US and the EU's growing consolidation of Western European countries. According to Aleksandr Vladmirov, the president of Russia's Board of Military Experts, Russia needs to employ "hybrid warfare", or combined economic and military action, to stop Western encroachment and revive the slowing economy, which led to the Russia's annexation of Crimea.²⁴ Thus, the following must be assessed: To what extent did NATO achieve its economic aims through the implementation of sanctions following the annexation of Crimea? Analyzing the issue through an economic lens investigates the impact restrictive sanctions from the West have had on Russia since the Crimean conflict, which plays a crucial part in the West's attempt to restrict the spread of Russian influence and directly influences the Ukraine War.

3/b: RUSSIA'S ECONOMIC MOTIVES IN CRIMEA

While there is a clear economic motivation for the Russian annexation of Crimea, scholars disagree on the extent of expansion in Russia's existing

20 Åslund, Anders. "MATERIAL LOSSES IN CRIMEA." KREMLIN AGGRESSION IN UKRAINE: THE PRICE TAG. Atlantic Council, 2018.

21 Siroky, David S., and Christopher W. Hale. "Inside Irredentism: A Global Empirical Analysis." *American Journal of Political Science* 61, no. 1 (2017): 117–28.

22 Bērziņš, Jānis. "The West Is Russia's Main Adversary, and the Answer Is New Generation Warfare." *Sicherheit Und Frieden (S+F) / Security and Peace* 34, no. 3 (2016): 171–76.

23 FORRER, JOHN. "Aligning Economic Sanctions." Atlantic Council, 2017.

24 Bērziņš, Jānis. "The West Is Russia's Main Adversary, and the Answer Is New Generation Warfare." *Sicherheit Und Frieden (S+F) / Security and Peace* 34, no. 3 (2016): 171–76: 171

economic sphere of influence. According to Jeffery Gedmin, a senior fellow at Georgetown University, Russia's annexation of Crimea reflects Putin's invasive agenda to economically control Western Europe through its near monopoly on oil and gas. He argues that Crimea was not the first time Russia used trade as a political weapon to increase its influence. In 2013, Russia punished Moldova for its EU-Friendly agenda by blocking 100 million dollars' worth of wine imports, a detrimental blow for the Moldovan economy.²⁵ Thus, Gedmin recommends that the US and EU intervene and utilize stricter economic sanctions, or legal restrictions on trade, to prevent the spread of Russian influence in Europe. In contrast, Bērziņš justifies Russia's desire to defend its sphere of influence from the economic pressure of Western institutions. From a Russian perspective, annexing Crimea was a means of retaliating against the West "forcing" Russia to become "a producer of raw materials, unable to develop military power".²⁶ He argues that economic restrictions may be ineffective as they will only raise further economic discontent towards the West. Claudia Crawford, the head of the Konrad-Adenauer-Stiftung Office in Moscow, further supports this perspective through her documentation of the rising support for the government and nationalistic policies in Russia after the passage of the 2014 sanctions.²⁷ Through the analysis of these differing perspectives, it can be argued that the economic sanctions, though criticized for being lenient and weak, still significantly increased tension between Russia and NATO and additionally increased support for Putin.

3/c: RUSSIA'S INTERNATIONAL RELATIONS

The clash between Western and Russian perspectives on the Crimean Annexation is reflected in the relations between the two economic powers.²⁸ According to Jennifer Yoder, a researcher in Government and Global Studies at Colby College, the worsening relations between Germany and Russia after the Crimean annexation demonstrate Russia's slow drift away from the West as increasing hostilities emerge from both sides on their conflicting stances on Crimea. While the economic ties between the two countries remained

25 Gedmin, Jeffrey. "BEYOND CRIMEA: What Vladimir Putin Really Wants." *World Affairs* 177, no. 2 (2014): 8–16: 11

26 Bērziņš, Jānis. "The West Is Russia's Main Adversary, and the Answer Is New Generation Warfare." *Sicherheit Und Frieden (S+F) / Security and Peace* 34, no. 3 (2016): 171–76: 173

27 Crawford, Claudia. "ONE YEAR ON FROM THE ANNEXATION OF CRIMEA." Edited by Gerhard Wahlers. *CONTEMPORARY CONFLICTS AND VALUE-DRIVEN POLICY*. Konrad Adenauer Stiftung, 2015.

28 Yoder, Jennifer A. "From Amity to Enmity: German-Russian Relations in the Post Cold War Period." *German Politics & Society* 33, no. 3 (116) (2015): 49–69: 52

uncut, the growing conflicts in “value versus profits” have compromised the cooperative relationship.²⁹ Furthermore, Maria Lapenko, an economic researcher at Saratov University, argues that while the Crimean annexation demonstrates Russia’s efforts to prevent Ukraine from leaving its sphere of influence, the resulting fallout between Russia and Europe has further alienated Russian-Ukrainian relations.³⁰ Thus, this has resulted in declining Russian influence, as Ukraine has become more pro-Western. On the other hand, Lapenko also notes that while Russia has been isolated economically from the West, it has shifted its economic policy towards Asian countries that have supported Russia economically, such as Kazakhstan and China. This is further shown by Russian oil firms’ increasing investments in the Chinese energy market after the Crimean annexation.³¹

3/d: THE ECONOMIC EFFECTIVENESS OF WESTERN SANCTIONS

While economic sanctions were the primary form of retaliation used by the US and the EU in the wake of the Crimean conflict, the previous debate over Eurasia’s varying relationships opens a debate about the effectiveness of the 2014 sanctions. Andrew Kuchins, a director at the Center for Strategic and International Studies, argues that the economic sanctions have “proven disastrous” for the Russian economy in 2014, as the economic restrictions drastically damaged the energy sector due to its reliance on the western market, leading to a depreciation of the Ruble, the Russian currency. While the author acknowledges Russia’s ability to expand its market eastward, he argues that Russia was being manipulated by the eastern markets through cheaper gas prices, stating that the expansion has only further destabilized the Russian energy industry.³² Richard Connolly, a senior fellow at the Atlantic Council, on the other hand, argues that the effects of the sanctions were exaggerated. Although he acknowledges the significant economic regression in Russia following the Crimean Conflict, he mostly attributes it to the already ongoing economic recession, arguing that the economic

29 Yoder, Jennifer A. “From Amity to Enmity: German-Russian Relations in the Post Cold War Period.” *German Politics & Society* 33, no. 3 (116) (2015): 49–69.

30 Lapenko, Marina. “The Ukrainian Crisis and Its Effect on the Project to Establish a Eurasian Economic Union.” *Connections* 14, no. 1 (2014): 121–36.

31 Bolt, Paul J. “Sino-Russian Relations in a Changing World Order.” *Strategic Studies Quarterly* 8, no. 4 (2014): 47–69.

32 Kuchins, Andrew C. “Russia and the CIS in 2014: A Rather Bad Year.” *Asian Survey* 55, no. 1 (2015): 148–56.

sanctions have had little to no effect on the Russian economy.³³ Although both Connolly and Kuchins agree that Russia's ruble depreciation was partially caused by economic sanctions, Kuchins emphasizes that the economic sanctions were the main cause of the depreciation, while Connolly argues that falling oil prices and the ongoing stagnation of the Russian economy before the conflict were the main contributors. The research of Keun Wook Paik, a senior research fellow at Oxford University, further analyzes the effects of the sanctions on the oil sector. He states that Russian energy firms like Novatek and Gazprom simply resorted to expanding their operations into Asian markets that remain open and friendly to Russian energy, effectively allowing Russia to spread its influence across the Eurasian continent without much damage to the economy as a whole.³⁴ Thus, given the analysis of the conflicting viewpoints, the case can be made that the impact of the US-EU sanctions was overestimated, rendering them unable to limit the spread of Russian regional influence across the Eurasian continent through economic means.

IV: POLICY RECOMMENDATIONS

IV/a: INCREASED POLITICAL DIALOGUE BETWEEN NATO MEMBER STATES

As Russia's political influence has grown up until 2022 as a result of the annexation of Crimea, the need for Western Europe and the United States to address Russia's aggression is increasingly prevalent. By analyzing the issue from a political perspective, it becomes evident that through its natural gas reliance on Russia, Western Europe has forged a deeply intertwined political relationship with Russia. Given the contrasting claims regarding Russia's growing influence as a result of the Crimean annexation, it is difficult to determine whether Western sanctions were truly effective and whether a more aggressive Western foreign policy should be pursued, leading to political division between the United States and Western Europe. Therefore, increased political dialogue between Western Europe and the United States will help facilitate future resolutions to the conflict while preserving regional stability and maintaining political unity. One of the costliest mistakes from the sanctions in 2014 was the lack of a unified

33 Connolly, Richard, Sara Bazoobandi, Thomas Biersteker, Francesco Giumelli, Clara Portela, Stanislav Secrieru, Peter Seeberg, and Peter A.G. van Bergeijk. "THE IMPACT OF EU ECONOMIC SANCTIONS ON RUSSIA." Edited by Iana Dreyer and José Luengo-Cabrera. On Target?: EU Sanctions as Security Policy Tools. European Union Institute for Security Studies (EUISS), 2015.

34 Paik, Keun-Wook. "Russian Energy Firms in the Eastern Market." In *Russian Energy Strategy in the Asia-Pacific: Implications for Australia*, edited by ELIZABETH BUCHANAN, 1st ed., 105–40. ANU Press, 2021.

front from NATO, with authoritarian governments, such as that of Turkey often expressing reservations about and refusing to impose the sanctions that Western European nations and the United States were advocating for. This political inconsistency weakened NATO's response to the Crimean annexation from the inside-out; however, those mistakes have informed NATO's far more unified front to the ongoing Ukraine War. As Anthony Cordesman and Grace Hwang, national security analysts at CSIS, write, "It is important to recognize that NATO as an organization has managed to do a good job of holding together the alliance at the political and military level".³⁵ NATO's ability to remain unified despite economic turmoil and Russia's threat of cutting off gas supplies will be a determining factor of this conflict, but its ability to do so will be a shining beacon of light to Ukraine and democracy around the globe.

4/b: INCREASED ECONOMIC DIALOGUE WITH DEVELOPING NATIONS IN AFRICA AND ASIA

While Russia's economic influence has grown between the Crimean Annexation and the 2022 invasion, through the analysis of differing perspectives on economic sanctions, the argument can be made that the sanctions in 2014 have had limited short-term effects on Russian expansion in Crimea and instead have led to increasing support for the annexation within Russia. Regarding the current War in Ukraine, although NATO may be completely unified behind its economic and political sanctions, many African and Asian nations are wary of becoming embroiled in a European conflict, and will likely not directly support the European sanctions. This will benefit Russia as it will maintain a market for its natural gas, weakening NATO's condemnation of Russia's unprovoked aggression. To this end, Europe must proactively engage in economic dialogue with nations such as Nigeria and India to address their economic concerns. Sven Biscop, Tobias Gehrke, and Bernard Siman, research fellows and lecturers at the Royal Institute for International Relations, write that "The EU has already struck a deal with the US to increase its import of liquified natural gas (LNG), and various member states have concluded or are exploring arrangements with suppliers such as Algeria and Qatar. Nigeria and Egypt, Africa's other LNG powers, may also play a bigger role in filling Europe's tanks".³⁶ By directly addressing the concerns and economic needs of developing African

35 Cordesman, Anthony H., and Grace Hwang. "Strengthening NATO Versus Dividing Europe and the United States." *NATO and the Ukraine: Reshaping NATO to Meet the Russian and Chinese Challenge*. Center for Strategic and International Studies (CSIS), 2022: 18

36 Biscop, Sven, Tobias Gehrke, and Bernard Siman. "Tanks versus Banks: Russian Military versus EU Geoeconomic Power." *Egmont Institute*, 2022: 1

nations, Europe can ensure that those nations do not aid Russia's attempt to circumvent NATO's sanctions. Only by gaining the unwavering trust and support of developing nations in Africa and Asia can NATO ensure that Russia becomes and remains a global pariah.

CONCLUSION

After analyzing the political and economic effectiveness of the 2014 sanctions that NATO imposed on Russia in response to the annexation of Crimea, the case can be made that the 2014 sanctions failed to have lasting impact in curtailing Russian expansionism, due a variety of factors. The inconsistent support for those very sanctions inside NATO, coupled with the unwillingness of nations outside Europe to discontinue their economic relations with Russia, doomed the sanctions in 2014 from the very start. However, NATO's response to Russia's unprovoked invasion of Ukraine has demonstrated at the very least an awareness of the mistakes made in 2014, and has maintained a far more unified response to the Ukraine War. Though the end of the war is not yet in sight, NATO's sanctions and extensive lobbying on the world stage have ensured that the entirety of Russia, from the elite oligarchs to the working class, is feeling the cost of its aggression, in stark contrast to the lax consequences Russia faced for its annexation of Crimea. The question now is whether NATO can continue to hold that same resolve against all costs.

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AI AND THE DIGITAL SPHERE

1.4.1 Artificial Intelligence and Digital Health - the Great Regulators of the Future?

SUBMITTED BY

Daniel Josef Lindegger:

I: NEW TRANSFORMATIVE POWERS

Artificial Intelligence (AI) and Digital Health (DH) have induced transformative changes in the health care sector like no other innovation over the recent years. Healthcare providers are progressively embedding AI-based technologies and software along the healthcare value chain in diagnostic and therapeutic solutions. Moreover, AI-based software for analytics, monitoring and even decision-making or decision-aid is continuously being implemented to improve operational, management, and leadership processes. The progressive use of AI-based solutions in the professional world will inadvertently transform the working process, human interaction and collaboration, and redefine job roles and professionalism.¹ While these transformative changes will occur on many levels, recent high-profile reports highlight the imminent introduction of AI-based systems in human resources and hiring as well as logistics and warehouse management. AI can help job applicants to improve their CVs and train interview skills. In addition, algorithms can allocate applications to matching job postings.

¹ Vipul Khanna Shahed Al-Haque, Suman Mandal, Mahi Rayasam, Pooja Singh, "AI ushers in next-gen prior authorization in healthcare," McKinsey Reports (2022), <https://www.mckinsey.com/industries/healthcare/our-insights/ai-ushers-in-next-gen-prior-authorization-in-healthcare>.

Language models allow almost human-like interaction and can therefore complement the recruitment and interview process. Such automated processes will require auditing to ensure compliance with ethical and work regulation standards. A profound shift is expected in the warehousing and supply chain industry because, progressively, warehouse workers are replaced by algorithmic management systems resulting in important challenges for the professional group facing complete displacement. Investments in training and job transitions services are required to help employees transition to a new position which requires their skills. Importantly, AI-based technology should also be implemented to enhance human workers, their skills and build a positive attitude towards the technological transformation.²

The transformative impact of AI and DH on the professional world will bring the requirement for future policy changes which define how the technology is used. In addition, regulations must be implemented to avoid abuse or misuse of the powerful tools. In the healthcare sector, patient data is a sacrosanct immaterial good which requires highest protection from cybersecurity attacks or data breaches. Besides the protection of sensitive patient data, the healthcare workforce is progressively scrutinised by enhanced data analytics and decision-making software. This should send out a signal of warning to politicians and labour organisations and stimulate a discussion on how the healthcare professional of the future can be protected from abuse by potent technologies.

The following essay will outline capability of AI and DH solutions to monitor and steer the healthcare system on different levels based on examples and case studies highlighting relevance and potential future impact of the technologies as well as the need for new policies and regulation. In the second part, seminal solutions will be outlined on how to guide policy changes to anticipate and integrate impact of novel technologies and their consequences for the healthcare sector. The latter is a challenging task at the current stage because especially AI systems are new technologies and many applications and use cases have only recently been implemented and are in a trial phase. In addition, healthcare systems demonstrate important differences with regards to their geographical and cultural context.

2 White House Reports, “The Impact of Artificial Intelligence on the Future of Workforces in the European Union and The United States of America,” The White House (2022), <https://www.whitehouse.gov/wp-content/uploads/2022/12/TTC-EC-CEA-AI-Report-12052022-1.pdf>.

Thus, the main research objective of the present article is to provide a cross-sectional view of the current state of AI and DH implementation using case studies of selected healthcare systems which are at the forefront of their adoption in order to highlight the need for policy change and regulation. The analysis bases on policy papers from the United Kingdom government, national health service as well as AI-strategic documents from the United States. Conceptually, the article should advocate for a profound analysis of AI and DH early-adopting healthcare systems and use these forerunners to guide and adapt policy making for the early stage technologies. This allows to guide the dynamic process and helps to balance the difficult trade-off between innovation and regulation.

II: THE POTENTIAL OF AI AND DH

Many healthcare systems, hospitals and practices are operated with paper-based ledgers or conventional software solutions for patient management, scheduling and note taking besides the usual administrative tasks. While such solutions are well-established and highly functional, there is potential for more efficiency, data safety and enhanced analysis and diagnostic capability which AI and DH can offer. Deep learning (DL), a subset of AI can be used to detect diseases faster or in a novel way, provide personalised treatment plans and improve scheduling and patient management, which is crucially linked to healthcare professional's workload and revenue.³ Cost estimates by the Institute of Public Policy in the United Kingdom show that AI could save the National Health Service (NHS) 12.5 billion pound per year by reducing expenses for staff.⁴

ML is a statistical technique and a subset of AI which makes use of mathematical models to learn from and subsequently analyse data sets in order to determine new associations (associative learning). Neural networks, another subform of AI is used to solve categorisation problems, for instance the probability of a patient acquiring a certain disease.⁵ A third form of AI is called deep learning, which uses complex network models to make predictions. It is used for instance, in radiology for image analysis

3 T. Davenport and R. Kalakota, "The potential for artificial intelligence in healthcare," *Future Healthc J* 6, no. 2 (Jun 2019), <https://doi.org/10.7861/futurehosp.6-2-94>, <https://www.ncbi.nlm.nih.gov/pubmed/31363513>.

4 Ara Darzi, "Better Health and Care for All," The Institute for Public Policy Research. (2018).

5 Margarita Sordo, "Introduction to neural networks in healthcare," *Open clinical: Knowledge management for medical care* (2002).

such as the detection of a cancerous lesion; or in ophthalmology to stage a diabetic retinopathy.⁶ Deep learning can thus help to detect diseases faster and provide personalised treatment plans, thus provide a potentially more efficient precision medicine service to patients.

The applications of deep learning are progressively expanded and show promising results in many fields related or relevant to the healthcare industry. For instance, natural language processing (NLP) allows to recognise voices and convert spoken language to text or vice versa. This can be used during a video consultation with a patient on a telehealth platform or to dictate letters and make entry in patient files.⁷ Because patient registries are themselves likely to undergo substantial transformations as part of the new blockchain technology which enables the creation of decentralised ledger-based systems with enhanced cyber safety, it is probable that AI will be an important component of the next generation digital health record system. This is likely since in recent years, cyber-attacks have compromised the IT infrastructure of many hospitals due to the progressive adaptation of digital technologies, demonstrating the vulnerability of hospital IT systems.⁸ Thus, there is a need for an improved decentralised technology such as blockchain or better cloud solutions. Once this transformation occurs, the next step to implement AI based solutions into digital health records is only a matter of time because the technologies can be easily linked with each other.⁹

The adoption of AI and DH based innovation is highly specific for a given health-care system. While there is a universal interest to adopt the new technologies to improve short-comings in healthcare delivery in a given healthcare context, there is also an excitement and wish to be at the forefront of implementation and modernize old workflows and technologies. The implementation of substantial AI innovations with system-transforming character are rare at the current stage, however, many projects are in a trial phase in a restricted contexts, as will be discussed in the following case studies. An in-depth discussion of the transformative changes that the innovations may have in a specific healthcare context is important and also

6 Rasool Fakoor et al., "Using deep learning to enhance cancer diagnosis and classification" (paper presented at the Proceedings of the international conference on machine learning, 2013).

7 Davenport and Kalakota, "The potential for artificial intelligence in healthcare."

8 Salem T. Argaw et al., "Cybersecurity of Hospitals: discussing the challenges and working towards mitigating the risks," *BMC Medical Informatics and Decision Making* 20, no. 1 (2020/07/03 2020), <https://doi.org/10.1186/s12911-020-01161-7>, <https://doi.org/10.1186/s12911-020-01161-7>.

9 P. Tagde et al., "Blockchain and artificial intelligence technology in e-Health," *Environ Sci Pollut Res Int* 28, no. 38 (Oct 2021), <https://doi.org/10.1007/s11356-021-16223-0>, <https://www.ncbi.nlm.nih.gov/pubmed/34476701>.

an important goal of the present article, which aims to raise awareness for the need of new policies and regulation. However, the discussion is also premature because the substantial projects are not yet fully implemented. In the following, a cross sectional insight of early adopting health care systems will be presented based on case studies.

III: A GLIMPSE INTO THE HEALTHCARE SYSTEM OF THE FUTURE IN SPAIN?

A case study of an implementation project for a district-wide AI-based healthcare system transformation is the Forward project in Catalonia, Spain. The region was suffering for a long time from a dysfunctional surgical allocation and management system which neither satisfied patients' nor healthcare professionals' needs. Specifically, there were long surgical waiting lists with demand exceeding capacity; patients requiring surgical treatments could not be scheduled. In addition, protectionism of surgical lists by health care professionals resulted in substantial inefficiencies and allocation mismatches. Overall, it was realised that surgical care settings have become increasingly complex and that there was a need to better coordinate equipment and resources which would require better decision-making tools. To improve productivity and utilisation of theatre facilities and increase visibility of the costs created as a consequence of the inefficiencies, a transformative change was necessary. In order to improve value in healthcare, Catalonia decided to implement a modern, AI-based healthcare management system in collaboration with Medtronic Inc., called Forward. The new process management tool should cover the entire surgical pathway and include a sophisticated data management architecture implemented in all specialities in the eight biggest hospitals in Catalonia (district-wide). The central node of all the features that the comprehensive solution has to offer, is an AI-based software algorithm.¹⁰

The new digital management system has many components including strategic planning, scheduling, patient and material management, staff coordination, thereby making use of a comprehensive digital health solution. The IT infrastructure also includes scheduling and forecasting capabilities with a warning and alert systems. Patients even receive digital tags for identification, monitoring, and location purposes. Surgical material and implants are traceable following registration with barcodes in the operating

10 Francisco de Paula Rodriguez Perera, "Managing surgical operating room capacity to create value: Catalonia experience," High-value Surgical Systems Harvard T.H. Chan School of Public Health, Presentation (2022).

room. Core innovations of the project included a sophisticated analysis and monitoring system which allows the use of statistics for every theatre of the associated hospitals in real-time, as well as consumption and use of material.¹¹

Forward brings value to the healthcare system of Catalonia through process improvement, real-time location system of staff and patients and improved efficiency and cost-control as well as enhanced AI-based planning and forecasting. Despite the successful implementation and subsequent efficiency and service improvements, the new system demands new standards and regulations in terms of cybersecurity, individual and professional rights of staff and patients and a careful reflection on ethics in the context of AI and DH. In addition, the project was realised with a large multinational company, Medtronic, which may lead into dependencies or conflict of interest.

If a “AI-governed” healthcare system would be scaled from a regional to a national project, several normative and ethical considerations would arise on different levels: Who is responsible if computer-aided decisions lead to complications, which could occur due to errors in scheduling? Are employees comfortable with the enhanced monitoring capabilities of the system or could employee right infringements occur? Is the system robust towards cybersecurity attacks? Are currently available data infrastructures sufficiently advanced to store the generated data? Can the data be exploited by a third party, such as a government or a private insurance company? A policy revision will require an answer all these questions in order to reliably define accountability and mitigate against the risks of the technology which are central conceptual functions of a policy framework. A national implementation of such a system will require a large array of stakeholders, from patient group representatives to employee organisations, technology and IT experts, healthcare policy makers as well as legal, governance and ethics specialists. It can be anticipated that implementation of such an advanced system is not free from friction between the different stakeholders, due to the complexity of the project and the risks and ethical implications. On the other hand, the potential for improvement in terms of efficiency makes the introduction and scaling of an AI-based monitoring and management system very attractive. There are many cases of public hospitals which were closed by the government or avoided by patients due to long waiting times and inferior service quality. Thus, the scenario that AI-based systems are implemented for audit purposes and on management and leadership level on

11 Perera, “Managing surgical operating room capacity to create value: Catalonia experience.”

national or global scale and become a necessary standard in healthcare are realistic based on the previous arguments.

Before further consideration will be given to those important aspects in the second half of the article, a second example will be used to further illustrate the regulatory issues arising from AI and DH which lead to requirements for new sets of rules and policies.

IV: WILL DIGITAL BIOMARKERS INDUCE A PARADIGM CHANGE IN DATA SECURITY?

AI and DH are important drivers of novel diagnostics technologies which will create a new set of digital biomarkers. Digital biomarkers are different from conventional biomarkers in the sense that they create data and frequently big data, which can be stored and exchanged. This exchange can happen via digital platforms, or in the future through digital ledger-based systems, such as the blockchain. If data is of large size, cloud storage solutions are progressively being used. The shift from conventional data architectures towards digital solutions from which more sensitive information can be extracted with powerful ML algorithms, will create more cybersecurity risks. Data gathered from AI-based diagnostic solutions could be used by insurance companies or governments for patient profiling. While there is strict regulation on data protection for patient data, barriers could break when diagnostics are progressively made available with Internet of Things (IoT) devices for home monitoring.

Glaucoma, a degenerative eye disease which required extensive and regular work-up in ophthalmic clinics so far, has proven to be an example for a potent home-monitoring solution. Recently, devices have been developed to monitor the most important biomarkers, intraocular pressure and visual fields at home using a portable tonometer and virtual reality goggles.¹² During the Covid-19 pandemic, teleophthalmology¹³ became very important due to services disruption as a consequence of restrictions aiming to limit the spread of the infectious disease. Thus, communication between home monitoring device and the healthcare professional located in a hospital or private practice is required. Such data streams could be the target of cyber

12 G. Y. Hu et al., "Home Monitoring of Glaucoma Using a Home Tonometer and a Novel Virtual Reality Visual Field Device: Acceptability and Feasibility," *Ophthalmol Glaucoma* 6, no. 2 (Mar-Apr 2023), <https://doi.org/10.1016/j.ogla.2022.05.001>, <https://www.ncbi.nlm.nih.gov/pubmed/35577312>; Jemaima Che Hamzah, Qëndresë Daka, and Augusto Azuara-Blanco, "Home monitoring for glaucoma," *Eye* 34, no. 1 (2020/01/01 2020), <https://doi.org/10.1038/s41433-019-0669-7>, <https://doi.org/10.1038/s41433-019-0669-7>.

13 J. C. Chong, C. H. N. Tan, and D. Z. Chen, "Teleophthalmology and its evolving role in a COVID-19 pandemic: A scoping review," *Ann Acad Med Singap* 50, no. 1 (Jan 2021), <https://doi.org/10.47102/annals-acadmedsg.2020459>, <https://www.ncbi.nlm.nih.gov/pubmed/33623959>.

security attacks if insufficiently protected.

Blackrock, a global investment company located in the United States, has created a sophisticated Data architecture and AI-based software system called Aladdin, which is capable of analysing vast amounts of data in powerful data centres.¹⁴ Data from digital biomarkers could therefore be used to predict and forecast healthcare costs and future expenditures, which consequently could have impacts on costs of insurance policies on individual level. While there is a lack of insight to what degree health care data is used by private and public institutions, there are many examples on how personal data has been abused in the past or how analytic software has been used to influence people's opinion. The Cambridge Analytica scandal for instance has demonstrated how data can serve as a tool to influence people's political opinions and social behaviour.¹⁵ Healthcare data is particularly sensitive because health is a valuable good which most people are reluctant to share. In addition to the data safety controversy, AI has capabilities to exploit conventional biomarkers and derive new information from it. The number of available biomarkers will progressively increase, however, there are still many disease-conditions, for example neurodegenerative disorders or cancer, which do not have a curative treatment yet. Thus, being able to diagnose a disease, for instance through smart phone-based gene tests, creates ethical conflicts because offering a test for a severe medical condition without a corresponding treatment may lead to fatalism.

The above examples have demonstrated how AI and DH can be used to both steer and control an entire health care system but also how new information is extracted and processed in a new digital way. Due to these changes which are on the horizon, think tanks as well as the government and policy makers¹⁶ have responsibility to estimate risks and anticipate consequences and adverse events created by the innovation. There is a strong rationale to review and adapt previous policies and create new ones where necessary. Before defining how policy changes should be conducted, the current policies on AI and DH for the United Kingdom will be reviewed.

V: THE UNITED KINGDOM DIGITAL HEALTH STRATEGY

The United Kingdom's parliament has identified the need for new rules

¹⁴ KPMG, "Staying one step ahead: BlackRock's Aladdin," KPMG Insights (2022), <https://kpmg.com/xx/en/home/insights/2022/04/staying-one-step-ahead-blackrocks-aladdin.html>.

¹⁵ Julia Carrie Wong, "The Cambridge Analytica scandal changed the world – but it didn't change Facebook," The Guardian (2022), <https://www.theguardian.com/technology/2019/mar/17/the-cambridge-analytica-scandal-changed-the-world-but-it-didnt-change-facebook>.

¹⁶ Reports, "The Impact of Artificial Intelligence on the Future of Workforces in the European Union and The United States of America."

and policies on AI in healthcare due the increasing interest from academia, industry, and among healthcare professionals and policy makers, as documented in a research briefing on AI and healthcare from January 2021. The report recognises that many innovations are still in development stage and being trialled and evaluated in the NHS. According to the 2017 Industrial Strategy, “transformation for prevention, early diagnosis and treatment of chronic disease by 2030” is laid out as a goal of the national healthcare strategy on AI.¹⁷ The report is derived from the comprehensive Topol Review, which aims to define the national strategy on Digital Health and orchestrate the change management in the healthcare workforce.¹⁸

The parliament report recognises the potential for cost reduction from the AI technology through automation of administrative and clinical tasks in addition to capability to make better diagnostic decisions. The parliament report also addresses concerns, such as the risk that AI could dehumanise the healthcare system or have an inherent “algorithmic bias”, which may lead to discrimination of certain demographic groups. In addition, real-world operating conditions could differ from those expected in development which may lead to underperformance or inaccurate decision making. The report also details that there is a lack of clarity in the legal system on how decisions being made or facilitated by machines or software would be assessed in terms of accountability.¹⁹ Currently, if a patient would be harmed by an AI system, the clinician, developer, and healthcare provider could face criminal charges or civil penalties.²⁰

It can be appreciated that the Topol Consortium and the United Kingdom Parliament provide a considerate and careful assessment. However, further reflection and careful monitoring is warranted if digital health systems based on AI are implemented on a larger scale capable of influencing, “nudging”, or even autonomously making management decisions. The case of Catalonia is an example where a powerful organisational system has been introduced, which could serve as a role model for other countries. While metrics and reports are positive, it is difficult to assess if the regulatory changes of the new system are adequately assessed and monitored. A new set of questions should be asked: Does an AI based digital management system with enhanced metric and tracking capabilities compromise patient

17 Lorna Christie John Smeaton, “AI and healthcare,” Research Briefing, Parliament Report UK (2021).

18 Eric Topol, “The Topol Review - Preparing the healthcare workforce to deliver the digital future,” (February 2019 2019), <https://topol.hee.nhs.uk/>.

19 John Smeaton, “AI and healthcare.”

20 Rankin, “AI and the potential liability issues arising from use in a clinical setting,” Digital Health (2019).

rights? Do we have to anticipate psychological workplace-based problems due to the increased surveillance capabilities? Do patients and healthcare professionals feel that they work in a dehumanised system and does the digital health revolution trigger a counter trend towards conservative medical care? Importantly, how far are machines allowed to decide about humans in a vulnerable context such as healthcare?

Currently there is no specific legislation in the United Kingdom which governs the use of AI in healthcare. The rules on data protection and use of digital technologies such as software and medical devices are ill-defined.²¹ In the NHS, development of AI systems is classified as research under governance of the Health Research Authority.²² The UK government has published a policy paper on the regulation of AI in which a pro-innovation approach is taken. The policy paper emphasises regulation of AI based on its use in a proportionate fashion in order to avoid implementation of unnecessary risk controls or barriers.²³ While the paper stipulates that the AI development is further monitored, many digital health projects are becoming reality and more specific regulations are sensible especially because large multinational companies have begun to support large-scale strategic projects as the case of Medtronic in Spain demonstrates.

VI: RECOMMENDATIONS FOR FURTHER REGULATION AND POLICY

A policy specific to the regulation of AI in the healthcare context should be outlined in the United Kingdom, which clearly defines the role of AI in operation, management, and leadership. The case of Catalonia has taught that the digital health transformation will lead to new ethical challenges for patients and healthcare professionals which should be analysed in detail to assure that risks and adverse consequences of software with enhanced capabilities can be anticipated. Specifically, the level of the analytical capabilities that a health care management system may have should be outlined and clearly defined. Workplaces should be surveyed in order to understand how the implementation of AI-based monitoring is perceived by the staff. Cybersecurity requirements should be outlined and evaluated in context of the national blockchain strategy. Scenario planning should

21 Peter Schildkraut Jacqueline Mulryne, Eleri Williams, “UK Policy Paper On Regulation Of AI,” Mondaq Connecting knowledge & people (2022).

22 NHS Digital, “DCB0129: Clinical Risk Management its Application in the Manufacture of Health IT Systems,” (2020).

23 Kwasi Kwarteng Nadine Dorries, “Establishing a pro-innovation approach to regulating AI,” Policy paper UK government (2022).

be used to estimate risks and define reaction patterns for potential adverse events such as data breeches or manipulation of AI-based software.

The use of digital biomarkers and their implications on data collection, management and use should be clearly understood. More detailed guidelines are required on how biomarker data can be obtained and how it can be shared and stored. The quality of biomarkers should be assessed against frameworks for biomedical ethics, which assess and regulate what implications a specific biomarker result has for a patient's quality of life.

The implementation of new policies for AI and DH in healthcare will be a complex process and require an interplay of a diverse group of institutional stakeholders. The aim of the present article is not to define the policy making process or the steps required to accomplish it in detail. Instead, it should report on current developments based on case studies and initiate a discussion among the large, diverse group of stakeholders involved. Stakeholders who should primarily be addressed are the government and legislative bodies, healthcare professional organisations, patient organisations but also ethical entities. In conclusion, monitoring of different high-impact AI and DH innovations is required under use of a multimodal assessments evaluating all aspects of the technologies and thereby allowing to make risk estimations and scenario planning. The analysis process should be followed by defining more specific policy recommendations and frameworks for high-risk innovations while keeping a pro-innovative attitude. With regards to novel digital biomarkers derived from AI innovations and the generation of healthcare data rich in personal information, clearer definitions and guidance on data handling, storage, security, and use should be formulated. AI and DH should be regulated by humans and not vice versa.

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II: EUROPEAN HORIZONS POLICY COMPETITION

2.1.1 Policy & Politics: a three-part, semester-long programme for secondary schools

SUBMITTED BY

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European Horizons Policy Competition First Place

EXECUTIVE SUMMARY

The scale of youth political engagement in Belgium is insufficient and different socio-economic backgrounds are not equally represented in political activities. In this policy memo we propose a three-part, semester-long programme to be implemented at the secondary school level, which would eradicate resource-derived barriers to political engagement and foster awareness of Ghent's political infrastructure for all.

The programme would be arranged by individual schools with the support of local authorities and would consist of three elements:

- (1) Workshops to educate students on chosen political themes;
- (2) Group debates with NGOs and local government officials (eg, Youth Alderwoman, Youth Council);
- (3) A two-day intensive policy session designed to deliver an impactful real-world solution for the Flemish government at the end of the programme.

This comprehensive itinerary would ensure that youth political engagement flourishes by nurturing practical awareness of Ghent's political system and subsequently increasing informed election participation among young people.

INTRODUCTION

Together with the problem of low youth engagement, literature shows that politics and policy-making are frequently perceived as being reserved only for those from higher socio-economic backgrounds (Kitanova, 2019).

This perception creates a self-fulfilling prophecy, whereby the factions of youth drawn to and actively participating in local and national politics are mostly those from more privileged backgrounds (Grasso and Giugni, 2022), reinforcing the conservative image of future decision-makers and those groups whose interests are represented in policy-making (Kitanova, 2019).

The overall number of politically engaged adolescents remains low as a considerable proportion lack the opportunities and resources for engagement. Therefore, providing youth from various socio-economic communities with opportunities for political engagement is key to building a diverse society, as well as ensuring policy-makers hear and address all voices equally.

Introducing our proposed programme within the education system and ensuring compulsory participation provides a structured environment for students to learn and not be disadvantaged by their socioeconomic status.

PROBLEM DESCRIPTION

Youth political participation is a key policy area of the European Union (European Council, 2021), which has led to 2022 being announced as the ‘European Year of Youth’. This initiative seeks to reach young people and encourage political participation at the national level.

The city of Ghent is a prime example of youth engagement on the continent, having been announced as European Youth Capital 2024. In the run up to the 2024 federal and European Parliament elections in Belgium, and with the voting age for EP elections being lowered locally to 16, the city must boost political awareness among young people to ensure an informed vote.

Most of the current solutions to engage the youth in politics are extracurricular in character and fundamentally exclusive in their nature. Scholars such as Sloam (2012) and Kitanova (2019) provide quantitative evidence demonstrating that it is mostly richer youths who are able to freely engage in such activities. Extracurriculars are inaccessible to a number of youngsters because of the opportunity cost of time spent on unpaid activities, which for many must be spent on part-time jobs or care for family members. This in turn reinforces biases and misrepresentation within EU or Local Authorities in three ways.

First, under the status quo, the current political education opportunities

create elites from very particular and homogeneous communities (Sander and Putnam 2010). Subsequently, policies born from these perspectives are biased towards representing the interests of this limited community of already privileged citizens (see Kuper 2022). Second, the authority of institutions occupied in such a way will decline further and increase excluded youth's apathy and resignation from any possible formal social engagement plans like voting in elections, engaging in political campaigns and becoming politicians themselves. Third, with undermined authority of decision-making elites, youth engagement will continue following unconventional ways of a rebellious involvement (if involved at all), such protests and social movements (Prickard 2019).

Therefore action is required now to boost political engagement and awareness among Ghent's youth in time for the upcoming 2024 elections.

POLICY OPTIONS

Political participation in a society can only emerge when individuals possess knowledge and understanding of politics and its impact on everyday situations. This can be provided via school-based projects while educational policies are able to equally target those from higher and lower socio-economic backgrounds (Manning and Edwards, 2013). Engagement with topics on political participation, systems of power, or background in how public institutions operate facilitates understanding that one has both a role as a private individual, but also as a citizen (Galson, 2001). Projects that impact students' views on politics have been found to be those focused on debating and group work (Campbell, 2008; Neundorf et al, 2016). We therefore identify three policy options to increase political awareness among youth in Ghent:

1. Extracurricular debating and policy-making groups in each secondary school
2. Introducing political education into secondary curriculum
3. A comprehensive programme of political engagement, mandatory for all secondary school students

1. EXTRACURRICULAR DEBATE CLUBS

An approach derived directly from currently trending solutions would be to require extracurricular debates clubs to be run in every school. It would

enable students to receive a ‘hands-on’ approach to political engagement, as it can be described as the ability to express one’s views and present arguments for them. Moreover, students would gain confidence in their ability to understand the world of politics and thus become more aware of their role as citizens (Galson, 2001).

However, as aforementioned, the exclusionary nature of extracurricular activities needs to be considered. Those who have the option to invest in out of class activities rather than paid work are more capable of participating in such projects. Studies of Heath et al. (2018) show that students who are less likely to participate in additional classes usually come from disadvantaged socio-economic backgrounds. This most likely only deepens the disparity of knowledge and political participation between students in classrooms.

2. FORMAL POLITICAL EDUCATION

An alternative solution would be to introduce a subject in schools with the purpose of raising political awareness. It would not only require schools to provide a space and resources for political education but would also necessitate compulsory attendance. Political education has been proven to be as important as other subjects taught at school, so by making it compulsory, it would ensure that individuals passing through Ghent’s education system have a clear understanding of local and national politics. The curriculum could also be tailored to ensure that both regional and national politics are well represented.

Although this idea tackles the issue of inequality and discrimination, it is also unfeasible to implement. To ensure that students are taught a useful and well-rounded course, stakeholders such as educational experts, parents, or school councils would have to be consulted on politics at the Flemish government level before a subject is implemented into the curriculum.

Moreover, by approaching political education separately from other areas of learning, students would lose out on seeing politics as an interdisciplinary field, connected for instance to literature or mathematics. Adding a course on political education could also create logistical problems, with schools lacking staff, resources or time to run the subject appropriately and students themselves being overloaded with additional subject matter and assessments.

3. COMPREHENSIVE PROGRAMME

Local authorities should strive for a policy solution that is inclusive for all students while seeking to mitigate practical limitations. By incorporating multiple approaches to learning about political engagement in a school setting, it would allow the city to overcome inequality of opportunity posed by extracurricular activities. At the same time, developing a mandatory project organised on a local level by secondary schools, in cooperation with local administrations, would instil in youngsters a set of core political values and raise their awareness on local and national policies. Proposing this project as a way for youth to engage in politics would not only increase diversity within the political sphere, but also allow the youth to develop their critical thinking and argumentation.

RECOMMENDATIONS

By introducing a compulsory, semester-long project funded by local authorities, increased political awareness will become accessible to Ghent's students across all socio-economic backgrounds, not only the privileged few.

When schools begin planning for the upcoming curriculum, the Flemish government will propose 3-5 main focus topics for a given year, with participating schools allowed to pick one. The programme will then be split into three stage over one semester.

The first stage will last two months and consist of fortnightly 2-hour workshops, organised and hosted by schools, local government and select experts such as industry representatives or politicians. At this point, students will gain knowledge on basics of politics and policy-making as well as more detailed insights into the programme's headline theme. This stage represents the first milestone in the youngster's political education, as the understanding of fundamental concepts should generate interest and therefore foster youth participation in politics (Manning and Edwards 2013).

The second stage will be conducted in a group setting. Students will undergo group debate sessions overseen by local stakeholders such as politicians, government officials and youth political representatives to foster real world understanding of the local and national political infrastructure. This stage

will prepare ground for the project's finale. To conclude the programme, students will participate in a two-day event dedicated to developing awareness of policy-making in Ghent. Students will be tasked with drafting a policy solution for a local policy area to apply their knowledge and understanding developed along the way, supplemented by insights provided by stakeholders in the second stage.

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2.1.2 Politics for all - Civic and political education for young people in 2024 European Youth Capital Ghent

SUBMITTED BY

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EXECUTIVE SUMMARY

As the European political climate has been dominated by a decline of political interest, initiatives and ideas are needed to empower youth's engagement in the political process. Specifically, civic education should focus on providing students with effective tools for political participation and civic engagement.

Underrepresentation of certain groups and a lack of youth political initiatives and innovative ways to foster civic engagement are highly alarming phenomena that have led our generation to feel disconnected from politics. We have considered forms of civic education attached to the formal academic structure, based on utilising scientifically backed interactive learning methods to renew the students' enthusiasm for politics and enhance youth active participation as part of Ghent's role as the European Youth Capital 2024.

INTRODUCTION

Ghent aims to promote youth engagement, empowerment and care in its role as the 2024 European Youth Capital, including teaching skills and knowledge relevant to civic education (City of Ghent, 2022). In order to ignite political aptitude and awareness, a political educational initiative for youth in a diverse region such as Ghent has to consider different needs and create an inclusive learning environment.

This policy memo proposes the integration of an educational workshop incorporating Problem Based Learning and modern educational technologies into Ghent's school curricula. The workshop, which will be delivered in a hybrid format including face-to-face teaching sessions and autodidactic components such as online resources will serve to equip youth with the skills required to exercise civil rights. Simulation of political procedures enables training of procedural aspects of political processes additionally to practising debating and etiquette. This initiative will define the trajectory for political maturation through empowerment, skill acquisition as well as teamwork and independent learning to reduce disparities resulting from political apathy. Outcomes of this initiative can be presented as part of the European Youth Capital 2024 events.

PROBLEM DESCRIPTION

There is growing concern that younger generations are becoming disenchanted by the political system and that most young Europeans are not civically engaged. Research shows that young people have faith in democracy but feel that the political system could be improved (Grimm & Pilkington, 2015). Not feeling included in political discourse is leading to cynical attitudes towards politics and increased likelihood of embracing anti-democratic ideas like radicalism and populism (Van Hiel, 2021).

However, most young Europeans still believe in democracy but are concerned about the lack of inclusiveness and underrepresentation of certain groups (Tatalovic, 2015). The lack of different perspectives in decision-making creates the need for a multi-faceted policy approach where different views can foster innovation and solve inclusion issues.

While young adults feel politically disengaged, 90% of Belgians are registered voters (Pew Research Centre, 2021); a result of the mandatory voting system. However, real engagement may be much lower because apathy or disinterest is masked by the statistics (The Economist Intelligence Unit, 2022). This provides a strong rationale to encourage civic engagement from another perspective: by removing barriers of political awareness and using education as the main tool to promote diverse voices in decision-making.

POLICY OPTIONS AND RECOMMENDATION

One way to foster political engagement is through political associations and youth initiatives. However, those operate on a voluntary basis and thus only attract youth that are interested in politics. An attractive vessel to foster political engagement could be through political conference simulation such as the Model United Nations. However, these initiatives again tend to attract those already interested in politics and centre around high-level topics which may be inaccessible to those without pre-existing interest. A focus on real-life politics is more approachable for young people, thus more suitable (Leser, 2011).

Compulsory schooling makes schools the ideal place to reach all young adults including those who most need civic education. An initiative could either aim to change the curriculum to establish citizenship education as a new subject or to incorporate it more in other classes. However, such a policy would infringe on school autonomy (Golden et al., 2017) and is therefore not feasible.

Instead of implementing a new mandatory course, which would take away resources from other subjects, 1–2-day workshops should be used to provide an interactive “crash course” in civic education. Such a workshop could be taught in a traditional front-of-class teaching style but may be enhanced through inclusion of modern teaching methods and technology to allow more practical learning (Brabeck & Jeffrey, 2015). When considering that civic education should enable students to develop a vision of the world they want to live in (Leser, 2011), the applicability of problem-based learning (PBL) becomes apparent. PBL is a learning style emphasising problem solving in small groups, where relevant problems are used to provide context and motivation for learning (Argaw, Haile, Ayalew & Kuma, 2016). Students taught through PBL retain more of what they were taught compared to traditional methods (Norman & Schmidt, 1992) and motivation tends to be superior due to the interactive collaboration (Achuonye, 2010; Roh & Kim, 2015).

As introducing external facilitators for the workshops would be a financial strain, the proposed workshops would be delivered by the teachers of the schools in Ghent. Instructive preparation sessions allow to brief the teachers beforehand. Thus schools will be more inclined to adopt the workshop scheme since value is brought into their workforce through external training.

Furthermore, PBL has been found to be more effective when teachers have good knowledge of the subject matter and teaching method (Van Berkel & Schmidt, 2000; Fukuzawa, Boyd & Cahn, 2017). While the proposed workshops are adapted to an educational target group between 14 to 18 years of age because these young adults will soon enter the political process as first-time-voters in the upcoming 2024 elections, they could also be made available to younger adults.

Ghent's proximity to important democratic institutions in Brussels such as the Flemish Parliament, the Parliament of Belgium or the European Parliament makes school excursions feasible. However, such site visits would not allow students to actively participate in a political process. Excursions do not include PBL, which is crucial to convey the feeling of involvement in a political decision-making process.

Another policy option to be considered are institutional changes to facilitate a better representation of young adults in politics. This is easier to accomplish on a local level, than on a national or EU-level. However, educational approaches to foster political awareness have the potential to increase students' political awareness also on national and international levels.

Based on the above considerations, we recommend that Ghent city council launches a programme of 1–2-day civic engagement workshops within schools for students aged 14-18. Due to the benefits of PBL and hands-on learning for the motivation of learners, these workshops should be interactive and take the format of challenging students to devise their own solution to a policy problem that affects their lives. This problem should relate to one of four most important themes of European Year of the Youth (Eurocities, 2022) chosen by the school, as they provide an overarching framework to work with. Additionally, the framework is clear in terms of significance and provides a multi-faceted and thus appealing concept to students with a wide variety of interests. Ideally, students work in teams of 15-20, as this is proven to be an optimal group size for collaborative learning environments (Dahley, 1994; Maastricht University, 2014), and with these teams being divided by topic choice, not by grade, as enabling them to follow their interests will increase motivation and older students can guide younger students.

The city council's main role in ensuring high-quality delivery of these workshops would be to run information sessions for teachers laying out a framework for successful workshop facilitation, including a crash course in diversity and inclusivity and sensitive language, with emphasis on encouraging students from politically underrepresented backgrounds to participate, as their civic engagement is especially needed. The council could also provide a selection of starter resources for the students via some sort of online platform. Finally, we would recommend that the city council sends letters of thanks to the students of participating schools for their recommendations to make the students feel that their voices are heard.

CONCLUSION

The proposed civic educational workshop will engage Ghent's youth and empower them in independent thinking and opinion formation. The initiative demonstrates that the city cares for young people's political education by introducing an inclusive program into the school curriculum. Problem-based learning will encourage engagement, active participation through simulation and role play to learn political behaviour and etiquette. Use of digital platforms can provide a source for further digital teaching.

The initiative is well-timed with Ghent's role as the European Youth Capital of 2024 and the concepts and outcomes of the initiative can be presented as part of the event program to the interested public as well as opinion leaders and political decision-makers. The inclusive teaching approach encompassing different training modalities is designed to be a guiding star to teaching civic education among EU states with diverse demographics in order to prevent marginalisation and disintegration of minority interest groups from the political process.

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2.1.3 Innovative approaches to the youth-targeted information campaigns

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EXECUTIVE SUMMARY

Young people's involvement in decision-making at all levels is directly tied to ensuring effective governance. Despite the challenges in introducing better approaches to policymaking, it is crucial to develop innovative strategies that would compel the younger generation to engage in creating and implementing policies more actively. Yet if we want to progress in this trail, we must deal with issues like institutional change and educational reform, both of which must be addressed. Innovative strategies via a targeted population segment like a three-day world congress and a weekly animated-show program (cartoon) would be effective measures to raise political awareness among the youth on the political front. Arguments in the policy paper are supported by academic evidence and recent statistical data.

INTRODUCTION

Younger people have been noticeably absent from political processes in recent years, and this is due to a variety of causes, including the lack of new information campaigns explicitly aimed at young people, which hinders the youth from participating on decision-making. To improve the results of youth participation in politics in the future, various policy modifications must be made, particularly with regard to institutions and education. The following recommendation is introduced, including holding a three-day conference called the European Influencer Congress that focuses on social media in an effort to raise young people's political awareness. Another option is the animated show "Ganda," which will try to reflect on many political issues in its ten-minute weekly episodes. This will be a more entertaining approach to educating and engaging the next generation in politics.

PROBLEM DESCRIPTION

Nowadays, in most countries, older citizens tend to be actively engaged in public affairs and political activities, which is explained by their comprehension of politics compared to the youth (Binstock, 2006). As young people¹ constitute 16 percent of the global population or 1.6 billion (the UN, no date), political engagement of them is one of the important tasks of every statesman. Being successful and effective in this regard is not easily achievable due to a number of reasons that deter the youth from participating in the political life of the state. First, one would argue that there exist various perceptions of politics and political activity among adults, which means they find it challenging to differentiate properly whether it is a political activity and behavior (Weiss, 2020). One of the underlying reasons for this phenomenon can be limited access of the youth to political life – formal-decision making and political processes (Mindzie, 2015). Besides, levels of political interest among youth is considerably low. This is because of their inactive participation in socio-political activities and being less politically knowledgeable (Quintelier, 2007). It is germane to state that the majority of political marketing strategies usually target the older aged population for policy decisions and election campaigns (Davidson & Binstock, 2012). The same problems could be applied in the case of Belgium. Although there is a wide range of government-funded projects, currently, there are no new youth-targeted information campaigns in the country.

POLICY OPTION

Achieving political engagement of the youth will not happen in a short period of time. Successful implementation of systematic measures to raise political awareness of the youth could be achieved in the longer term. After analyzing the existing problems, two broad options can tackle the issue: educational reform and institutional change. The essence of both brings unprecedented outcomes. As far as the first is concerned, the study curriculum will be improved by adding extra subjects in politics according to the age-group. Whereas the latter deals with changes in the institutional structure of public organizations. For instance, The Power of your Voice is an educational project which directly works with schools to raise the political awareness of young people. Also, the project Debate² is mainly concerned with building a communication bridge between the youth and policymakers

1 Young people aged 15 to 24 according to the United Nations classification.

2 They also provide information on the elections and the local youth policy.

(Youth Wiki, no date). Technology as a leitmotif of the XXI century has to be actively used in this regard. Proactive approaches of the responsible governmental bodies, along with the media, can grasp the attention of the youth by turning them to politically active citizen.

RECOMMENDATION(S)

Systematically analyzing the issue, the recommended policy recommendation could be a joint project of the Ambrassade Commission, the Flemish Youth Parliament, and StumpMedia. The joint project's main aim is to construct an open dialogue between the youth who have a large audience on Social Media³ and political representatives of Belgium by organizing a three-day event called the European Influencers Congress.

Today, 95% of teens have access to smartphone globally, and 97% of them uses the Internet daily (Vogels et al., 2022); about 4.7 billion people across the globe use social media, and on average, 2 hours and 29 minutes are spent on it (Chaffey, 2022). In order to target the younger-aged segment of the population, it is important to create political campaigns in top social media. A three-day event gathers influencers, opinion leaders, vloggers and bloggers throughout Europe to Belgium to discuss the content creation of a political campaign to target the youth. With various events and dialogues, innovative approaches to youth-targeted information on political campaigns will be created.

In addition to this event, StumpMedia and the Ambrassade Commission shall network with the Media Leaders to create animated television series called "Ganda". At first glance, it seems like a way of entertainment. However, political topics shall be addressed in the 10-minute animated show that presents instant commentary and analysis of current political affairs. It can be a powerful communication tool that interprets esoteric terms and bewildering political processes in an understandable way (Oinonen, 2016). Simultaneously, these animated shows will be spread on social media to reach the targeted audience. It is in the case of The Simpsons, an American animated TV series which shaped the way of thinking of the younger generation in the United States by using satire on serious issues such as environmental degradation, women rights, and elections (Cantor, 1999).

3 Instagram, TikTok and Youtube

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III: EUROPEAN STUDENT CONFERENCE

3.1.1 Innovation versus Regulation - The importance of scenario planning for the future of Artificial Intelligence

SUBMITTED BY

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Acknowledgement: Jan Ertl, Lou Fontaine

EXECUTIVE SUMMARY

Artificial intelligence (AI) is a rapidly developing technology with the potential to revolutionize many aspects of our lives. While the capacity of AI to innovate and improve is highly anticipated, AI also raises a number of ethical and legal concerns, such as the potential for discrimination, misuse, and other unanticipated consequences. Those consequences are of utmost importance for policy makers and specifically the European Union should continue to take a proactive approach to regulating AI, with the goal of promoting innovation while also protecting citizens' rights. An important distinction within different uses or implementations of AI is the risk level that they are associated with. Thus, a risk stratification should be conducted, followed by scenario planning. Scenario planning is a method used for forecasting and strategic planning which uses facts and statistics in combination with key driving forces to make assumptions and predictions about the future. The present policy memo focuses on planning for high-risk scenarios of AI due to their importance for society, even if there is a low probability for these scenarios to occur. In addition, principles for regulation and self-regulation are detailed which form the basis for the risk management.

INTRODUCTION – NARROW AND GENERAL ARTIFICIAL INTELLIGENCE

AI is capable of perceiving, synthesizing and inferring information as a consequence of the “action” of a machine. Current applications range from web search, speech and image recognition to automated decision making and beyond and are potentially unlimited and relevant to almost any aspect

of human life.

While current AI research is developed around narrow applications attempting to solve a specific problem, there is also the notion of AI general Intelligence. Artificial general intelligence is a hypothetical intelligent entity which can learn and replicate any intellectual task a human is capable of.¹ An early philosophical thought experiment demonstrating the capabilities of artificial general intelligence is a computer simulation prompted to make as many paperclips as possible. Independent of how trivial the AI's purpose is, if it is truly generally intelligent, it will realize the importance of money and power as useful instruments in achieving its objective. This is an example of AI misalignment, in which the AI lacks the same value system as a human and therefore chooses paths a human did not foresee in pursuit of the objective.

The paper clip simulation illustrate the challenges of AI for policy making because a general but even a narrow intelligent entity or algorithm can initiate future consequences which are difficult to anticipate by a human. Thus, new methods are required to better foresee and pre-structure future states induced by AI. Scenario planning can be helpful in drafting a system of potential future outcomes based on assumptions of the present by taking into account facts, numbers and developments over time. Therefore we would advocate to the European Union (EU) to make use of this method for AI policy making.

PROBLEM DESCRIPTION – THE CHALLENGE OF PREDICTING THE FUTURE

The technology of Artificial Intelligence has the potential to transform many aspects of our lives from how we consume goods and services to healthcare as well as transport and mobility. New policies and legislations are required to regulate the rapid development of this technology whilst maintaining the innovative power of the sector.

The current climate for AI is particularly challenging due to the wide array of applications which can be iteratively developed from algorithms along with the inherent momentum of autonomy that makes the technology less predictable than previous technical innovations. Regulators are therefore

¹ Gil Press, "Artificial General Intelligence (AGI) Is A Very Human Hallucination," Forbes Magazine (2023), <https://www.forbes.com/sites/gilpress/2023/03/28/artificial-general-intelligence-agi-is-a-very-humanhallucination/?sh=738b23a664f2>.

forced to make decisions about unforeseen and unpredictable situations, and must approach policy making from a more dynamic perspective.

In general, the human brain encounters difficulties when making decisions anticipating future situations without any past experiences to use as a basis. Thus, new methods have to be employed in policy making to deal with variable levels of uncertainty, ranging from determinism (situations in which everything is known precisely) to total ignorance (we know only that we do not know). In such situations, a dynamic risk assessment is needed to differentiate between different possible scenarios and define high-risk scenarios.

POLICY OPTIONS AND RECOMMENDATIONS – INNOVATION VERSUS REGULATION AND VALUE-BASED PRINCIPLES FOR HIGH RISK AI SCENARIOS

The EU has been at the forefront of efforts to regulate AI. In 2020, the European Commission published a white paper on AI, which set out a number of principles for the development and use of AI in the EU.² The white paper also called for the creation of a European Artificial Intelligence Act (AIA), which would provide a comprehensive legal framework for AI in the EU.³

The AIA is currently being debated by the European Parliament and the Council of the EU. The final text of the AIA is not yet known, but it is likely to include a number of provisions that are designed to promote innovation while also protecting citizens' rights.⁴

As part of the present policy memo, we would like to advocate for methodological changes, specifically, the implementation of strategic planning methods such as scenario planning, into the policy making process. Scenario planning can help to make predictions and assumptions about

2 European Commission, "Communication from the Commission to the European Parliament, The European

Council, The Council, The European Economic and Social Committee and the Committee of the Regions," European Commission Reporting (2018), <https://eur-lex.europa.eu/legalcontent/EN/TXT/PDF/?uri=CELEX:52018DC0237&from=EN>.

3 European Commission, "White Paper on Artificial Intelligence - A European Approach to Excellence and Trust," European Commission Reporting (2020), https://commission.europa.eu/system/files/2020-02/commissionwhite-paper-artificial-intelligence-feb2020_en.pdf.

4 European Commission, "Regulation of the European Parliament and of the Council: Laying down harmonised rules on Artificial Intelligence (Artificial Intelligence Act) and amending certain union legislative acts," European Commission Reporting (2021), https://eur-lex.europa.eu/resource.html?uri=cellar:e0649735-a372-11eb-958501aa75ed71a1.0001.02/DOC_1&format=PDF.

different future outcomes, allowing the production of flexible and adaptable long term plans (dynamic policies). Combining knowledge with driving forces and trends, it aims to produce a conceptual model of the future that can be used with system thinking concepts, simulations and game-based approaches to predict a future scenario.

In addition to the methodological improvements, an important aspect of AI policy is to ensure that the technologies derived from the innovation are developed and deployed in an ethical way, aligned with societal values. AI systems have to be evaluated for fairness, transparency and accountability, safety and privacy to exclude infringement of human rights or disadvantage of certain social groups.

The EU should adopt a policy which promotes innovation in AI while also protecting citizens' rights. Implement of the policy on AI should occur through a combination of regulation and selfregulation. Regulation should be used to set minimum standards for the development and use of AI, while self-regulation should be used to encourage businesses to adopt best practices, which should be monitored with external audits.

Regulation should focus on the following areas:

Transparency: AI systems should be required to be transparent, so that citizens can understand how they work and how they are being used. This could be done through a requirement for AI systems to provide explanations for their decisions.

- **Accountability:** AI systems should be accountable, so that there is someone who is responsible for their actions. This could be done through a requirement for AI systems to be registered with a government agency.
- **Fairness:** AI systems should be fair, so that they do not discriminate against individuals or groups. This could be done through a requirement for AI systems to be tested for bias.
- **Safety:** AI systems should be safe, so that they do not pose a risk to individuals or society. This could be done through a requirement for AI systems to be tested for safety.
- **Privacy:** AI systems should respect individuals' privacy. This could be done through a requirement for AI systems to be designed to protect privacy.
- **Self-regulation** should focus on the following areas:
- **Code of conduct:** Businesses should be encouraged to adopt a code of

conduct on the development and use of AI. This code of conduct could include commitments to transparency, accountability, fairness, safety, and privacy.

- **Standards:** Businesses should be encouraged to adopt standards for the development and use of AI. These standards could be developed by industry associations or by government agencies.
- **Certification:** Businesses should be encouraged to certify their AI systems against relevant standards. This certification could be provided by industry associations or by government agencies.

The values and principles for regulation can serve as calibration reference for the risk assessment used for the scenario planning. These can build the basis to define fall-back strategies and value specifications (ethical guidelines) in case high-risk AI scenarios become reality.

CONCLUSION

The present policy memos advocates for stronger implementation of scenario planning methodologies in the EU to define dynamic AI policies. The EU should adopt policies that promote innovation in AI while also protecting citizens' rights. This policy should be based on the principles of transparency, accountability, fairness, safety, and privacy, which serve as calibrators for the risk stratification. The EU should implement its policy through a combination of regulation and selfregulation.

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3.1.2 Energy Crisis Policy Group

SUBMITTED BY

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EXECUTIVE SUMMARY

This memo recommends a comprehensive solution that facilitates EU and U.S. collaborative efforts to transition to a green economy. We suggest a long-term solution involving targeted investment in nuclear power structures and research. The EU-U.S. partnership laid out in this memo will propose a joint agreement for future collaboration by further expanding upon joint financing and investing solutions. We recommend implementing this policy because it protects current economic interests while laying the groundwork for long-term collaborative solutions.

INTRODUCTION

Worldwide, energy costs have increased, and Russia's invasion of Ukraine and sanctions imposed on Russian state actors and assets have disrupted previous energy flows (Corbeau 2023). Moreover, retaliatory measures by Russian companies like GAZPROM have dramatically decreased Europe's access to natural gas and refined oil. Refinery capacity dropped as a result of the COVID-19 pandemic when demand fell. Refineries were decommissioned and are unlikely to be brought back online (Cronin 2022). While costs have stabilized somewhat from historic peaks, they continue to affect industry and consumers. These events occur in the context of global climate change and the overwhelming desire on the part of national governments to transition energy production towards renewable sources. As such, current debates around the energy crisis center on how energy capacity can be increased without negating sustainability imperatives. Also crucial are questions about how funding for the cost of transition will be distributed among governments, the private sector, and consumers.

PROBLEM DESCRIPTION

In the last several decades, temperatures have risen at an alarming rate.

Changing weather patterns have disrupted pollinator migration patterns, with honeybees and other keystone species seeing major population decline in recent years. This seriously affects agriculture systems worldwide and has implications for climate-related humanitarian disasters. At the same time, global infrastructure and business require significant energy flows. Given the necessity of both radical climate action and protecting global economies, a green energy transition is vital to addressing both issues and preventing future collapse.

PROBLEM 1:

At the time of its establishment in 1997, The Kyoto Protocol was the cornerstone of global efforts to reduce greenhouse gas emissions (Helm 2012). The framework of the Kyoto Protocol was designed to reduce carbon production, yet with this approach there is little being done to curb global carbon consumption. Major flaws within the Kyoto Protocol include that it failed to account for the continued growth of individual countries' carbon footprints while also failing to integrate developing countries and China (Hunt 2023). Moreover, the United States refused to sign this agreement meaning one of the world's largest carbon producers did not attempt to implement the framework. It is vital that all countries are held accountable for their carbon emissions and that each country is doing its part to mitigate further outputs. The implementation of the aforementioned accountability measures is imperative, as they would enable the global community to establish more efficient energy systems and better plan for the future.

PROBLEM 2:

On August 16, 2022, President Biden signed the Inflation Reduction Act (IRA) into action. The most significant climate bill in history, this act invests \$369 billion in energy security and climate change programs (Elkerbout 2022). Due to the detrimental effect on European manufacturers, the EU has declared the IRA a potential violation of the World Trade Organization rules. Due to its generous subsidy packages, the IRA may push EU green energy industries to relocate to the United States or enter into U.S.-integrated supply chains. A joint statement by France and Germany has called for a "closely coordinated European approach" and for "renewed impetus" in EU industrial policy (Wright 2023).

However, an IRA-like approach is not likely to succeed in the EU. Climate change will require global cooperation, and starting a subsidy race with the United States is an unsustainable approach. Still, the EU will need a rapid response to remain competitive in the green energy market. We recommend:

POLICY OPTIONS & RECOMMENDATIONS

POLICY 1:

The EU and the United States should encourage the construction of land-based Advanced Small Modular Reactors (SMRs) as a solution to the energy crisis. Nuclear power has reduced carbon emissions by over 60 gigatonnes in the last 50 years (Rhodes 2018). It currently powers large areas of countries such as France, China, Japan, and the United States. Though traditional nuclear power plants have a heavy initial cost and a long construction time, SMRs are less expensive and much faster to build due to modular technology.

SMRs avoid the pitfalls of weather-dependent green energy. Despite recent advancements in design, solar and wind are not feasible on a global scale. Windmills and solar fields require a tremendous amount of space to generate electricity. In contrast, a single SMR can produce as much energy as many acres of weather-dependent green energy in a much smaller area. Additionally, SMRs take up 1% of the space of a conventional reactor. Due to their smaller size, SMRs also require fewer staff for assembly and operation, further reducing costs.

One of the major benefits of SMRs is the timeline before operability. While advancements are being made in fusion reactions and new types of nuclear power plants, it will take decades for these technologies to be approved. However, SMRs rely on similar technology to traditional reactors, meaning regulators are familiar with how they work. NuScale, an SMR company, achieved build approval in the United States within four years (Rhodes 2018).

Another advantage that SMRs provide is greater energy self-sufficiency. Current energy trade requires many EU nations to depend on authoritarian states like Russia for energy resources. However, France imports most of its uranium (the element that fuels reactors) from Australia, Niger, and Kazakhstan. Unlike oil and gas, this trade has not been impacted by the

Ukraine war (“Nuclear Power Plants” 2023). A transition to SMR technology allows countries to generate all of their energy needs within their borders, avoiding reliance on unstable regimes.

Many concerns surrounding nuclear power plants center on hazardous waste. About 97% of what the United States considers nuclear waste can be used as fuel in other reactors. Recycled uranium and plutonium are reused in Japan, Russia, France, Germany, and Belgium. The 3% remaining fission byproducts can be safely disposed of through vitrification, a process that involves immobilization through mixing with glass. All SMRs will comply with the International Energy Agency’s guidelines for proper nuclear waste disposal, and governments have regulatory authority to ensure local, national, and international guidelines are followed.

Additional concerns surrounding nuclear power plants are based on the Fukushima and Chernobyl Chernobyl disasters. These tragic accidents occurred due to human error and poor reactor design and would not happen with modern reactors and regulations. Updated reactors in California have also experienced moderate to extreme earthquakes and have not had any malfunctions or operating issues.

Ultimately, nuclear power is the only energy source that has the potential to fully replace fossil fuels in the long run (Rhodes 2018). In the height of a climate crisis, the EU and the United States must take action to preserve their role in the green energy market and protect future generations from experiencing ecosystem collapse. Post-approval, SMRs can likely be deployed in as little as two years. They are affordable, feasible, and offer a robust emerging industry for investment. We recommend a strong investment in SMRs to mitigate the increasing threat of climate change and facilitate the transition to green energy.

POLICY 2:

A major barrier to the continuation of impactful transatlantic cooperation regarding the creation of a more cost and power-efficient transatlantic energy grid is the lack of financial coordination between the U.S. and the EU. Protectionist policies enacted by the U.S., such as the Inflation Reduction Act, further created rifts between these two partners, and the failure of the Kyoto Protocol only further exacerbated the discoordination amongst nations. The best solution to this issue would be to enact a cost-

price framework that utilizes resources present in the private sector while ensuring regular government oversight.

In order to further facilitate investment into the R&D of SMRs, we propose adopting the Mankala Principle financing structure. With the Mankala model, a limited liability company would be established and financed by a collective of stakeholders. This structure would establish a cooperative consisting of a group of companies and investors, where each investor would be eligible to receive their share of the energy produced (World Nuclear Association 2018). Each stakeholder would receive an amount of energy that reflects the number of shares they own in the SMR, or sell the shares back into the consumer market. This financing structure has already been utilized in Finland and has proven to be a reliable option for financing over half of the country's energy infrastructure (Kovanen 2022). The Mankala Principle allows for the funding for SMRs to be generated from numerous shareholders, who are able to distribute the costs amongst themselves. This principle is integral to this policy, as it would provide an optimal solution to the funding woes related to the financing of energy infrastructure by enabling the generation of capital to be sourced from local financiers.

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3.1.3 Proposal for a Resilient European Semiconductor Strategy

SUBMITTED BY

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EXECUTIVE SUMMARY

Semiconductors, used in the production of chips, are a form of critical technology used in a vast array of vital industries, for both civilian and military purposes. However, for the time being approximately 75 percent of semiconductor production is located in East Asia, namely China, Taiwan and Korea. The United States announced in 2022, their plans to boost semiconductor production domestically after losing its competitive edge in the market, where their share in total production dropped from 37 percent to 12 percent since the 1990s. Correspondingly, The European Commission aims to transform its participation in the global semiconductor production from just under 10 percent today to double that at 20 percent in 2030. However, for the EU to find its place between the great powers of US and China in this industry, it needs to act strategically in the short term. This policy memo recommends that the EU should bolster its own production of legacy chips by building more fabs. We recommend three sub recommendations which would help the EU achieve this goal in a sustainable and strategic way whilst collaborating with democratic allies such as the US. Firstly, the EU would need to increase the number of education schemes for future fab workers as well as future researchers in this field. Secondly, more investment in research and development of cutting-edge chip technologies is needed, for the EU to stay up to speed with other global producers in the long run. Thirdly, financial incentives for firms need to be increased in order for key firms to move and expand production in the EU.

THE POLICY PROBLEM

Semiconductors have become the critical technology of the 21st century. In the tech industry, highly sophisticated chips drive pioneering innovation in Artificial Intelligence. In the automotive industry, every BMW that rolls off the conveyor belt has upwards of 1,000 chips in its systems. And in the military realm, advanced semiconductors are reshaping the precision and

power of missiles and munitions.

The European Union, however, is far from the forefront of this pivotal industry. Its current share of global production is just under 10% and its biggest private producer of chips, STMicroelectronics, ranks only 8th in global production, stuck behind a host of American and Chinese firms. Moreover, a recent EU Chips Act promising a EUR 43bn investment in semiconductor development is dwarfed by \$150bn and \$280bn commitments from the Chinese and American governments, respectively. The result is an EU increasingly dependent on other global powers for supplies of the lifeblood of the global economy. This leaves it vulnerable both to a wide catalog of geopolitical risks and severe supply chain disruption.

Geopolitically, Russia's invasion of Ukraine highlights how the actions of countries with a monopoly over resources can completely alter the trade environment for that particular resource. The same is true of semiconductors. Taiwan, which produces 90% of the most advanced semiconductors, finds itself at the center of intense cross-strait tensions with China, for example. European - and global - access to advanced semiconductors hangs by the thread of a decades-long conflict that shows no signs of abating. Furthermore, the concentration of factories in East Asia adds a supply chain disruption risk to European multinational enterprises. The bottlenecks that floored European economic powerhouses including major automotive companies during the Covid-19 pandemic impacted not only their profit lines but also their reputations as dependable business partners. As long as fabs remain concentrated in a small number of non-European countries, all European businesses remain vulnerable to events outside their control. To this context, action by the EU is critical to attain a greater degree of strategic autonomy in relation to semiconductors. This memorandum proposes the following recommendations to this end.

RECOMMENDATIONS:

The following recommendations will focus on how the EU can create a prosperous environment for semiconductor production in EU states that will lead to increased resilience and strategic autonomy in its supply chain for its technology sector.

Increased education and the workforce in semiconductor production:

The EU can invest in its education and workforce to increase semiconductor production in Europe by focusing on building a skilled workforce and fostering innovation. One way to achieve this is through targeted investments in education, particularly in STEM fields. The EU can also establish partnerships with top US universities and institutes to create joint research and educational programs in the semiconductor industry. Programs like the EU-US Atlantis program can facilitate transatlantic education and training in advanced semiconductor technologies, providing students with exposure to state-of-the-art facilities and research practices.¹ By investing in education and workforce development, the EU can create a competitive advantage and attract investment in the semiconductor industry, boosting its production capabilities and driving economic growth.

Increase investment in research and development

The EU should invest in research and development of legacy chips as it can pave the way for technological advancements and innovation. Regarding Moore's Law, which describes the exponential growth of semiconductor technology over the years, there is a need to focus on developing alternative solutions.² By investing in legacy chips, which are based on older technologies, the EU can support the development of cost-effective, energy-efficient, and reliable solutions for a variety of applications. Furthermore, research in this field can create opportunities for spin-off technologies, promoting cross-industry collaboration and boosting economic growth. Not to mention, legacy chips play an important role in manufacturing engines, especially electric engines, as well as renewable energy sources, such as solar panels and wind turbines. These products are central to the EU's environmental objective of reaching zero net emissions by 2050, as laid out in the European Green Deal.³

1 'European Union-Government of the United States of America - Atlantis - EU-US Cooperation Programme | EFG - European Funding Guide'. <https://www.european-funding-guide.eu/scholarship/14403-atlantis-eu-us-cooperation-programme>.

2 'What Is Moore's Law? | ASML'. <https://www.asml.com/en/technology/all-about-microchips/moores-law>.

3 'A European Green Deal', 14 July 2021. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en.

Increasing financial incentives for firms working in semiconductor production to invest in EU member states:

The EU CHIPS Act has modified state aid subsidy rules to enable member states to provide financial support to companies engaged in semiconductor production. The European Union has given approval to Intel's planned construction of a USD 7 billion semiconductor fab plant in Magdeburg, Germany.⁴ The new facility is expected to create over 2,000 jobs and contribute significantly to the EU's goal of achieving technological sovereignty in the field of semiconductors. In addition to this, the EU could offer financial incentives such as tax breaks, research and development grants, and access to low-cost loans to semiconductor firms that choose to relocate to Europe. Additionally, the EU could facilitate partnerships between semiconductor firms and local universities or research institutions, providing them with access to skilled talent and cutting-edge research facilities.

DEMOCRATIC PARTNERSHIPS: OPPORTUNITIES AND CHALLENGES

This memorandum acknowledges that a possible source of contention stemming from this recommendation is disagreement among EU member states as to who receives funding and where fabrication factories are built. After all, an investment of EUR80bn similar to the one proposed by Intel in Gdansk, Poland, is the dream of many if not all EU states. Thus, internal infighting among the 27 members as they compete to provide the most attractive subsidy packages and attract the sharpest talent threatens to fragment the European approach. In doing so, the EU's current vulnerabilities would be intensified not remedied.

To mitigate this scenario, EU officials must emphasize the need to distribute the benefits so that the entire EU gains from its greater autonomy even if the Fabs themselves are only located in a handful of countries. Distribution agreements that detail a guaranteed share of semiconductors for each EU member state in the case of disrupted supply chains is one way to counter fragmentation. Capitalizing on the single market infrastructure to develop seamless and dependable cross-country distribution channels is another actionable strategy to curtail potential tensions. Put differently, qualifications

4 Fortune. 'Intel Wants Germany to Give It an Extra \$5 Billion in Subsidies to Build a Chips.Fac-tory'.<https://fortune.com/2023/03/07/intel-germany-chips-factory-extra-5-billion-subsidies/>.

can and should be made to foster the integrated response the EU must adopt if it is going to successfully carve its position in this highly competitive market.

Another potential headwind to consider is the US response to greater European autonomy on semiconductors. The US Chips Act makes no apology for supporting and prioritizing American companies and the Biden administration wields a range of devices, from export controls to subsidizing higher wages to attract talent, to ensure America regains its technological supremacy. Consequently, EU efforts to secure its own autonomy may be perceived by Washington as a direct challenge, triggering a negative response.

The above concerns about US-EU competition are legitimate. However, this memorandum paves a path for both Democratic allies to ‘compete cooperatively’ to maintain the West’s technological advantage against an autocratic China. First, the current fora developed via the EU-US Trade and Technology Council should be expanded. For instance, working group 3 already houses frequent discussions on semiconductor supply chain resilience. It should be further empowered to identify how the EU and US can develop complementary specializations in critical industries where China is leading the market, such as for semiconductors in the renewable energy sector. Second, competition should not immediately be designated as a negative force. The EU should take any US challenge as an invitation - and motivation - to continue to innovate and push itself to establish a position in the global semiconductor market. In this light, competition becomes an incubator for innovation. In this light, transatlantic competition becomes the instrument through which Europe and the United States can together forge a decisive edge for the world’s democracies in the battle with authoritarian China for strategic advantage in the critical semiconductor industry.

CONCLUSION

Semiconductors and microchips will remain central to national and international security strategies for years to come. Therefore, it is critical for the EU not only to engage in this conversation with allies and trade partners, but also to proactively devise a forward-thinking strategy on European resilience in the semiconductor market. This strategy should consider potential threats to the global supply chain, geo-political risks, and climate change adaptation. Investment into research and development on how to

create sustainable strategy while localizing semiconductor production, and increasing human talent to facilitate such production, should be at the core of the EU's economic strategy. Encouraging private sector companies to innovate in this sector by offering tax breaks will also support this agenda. Although this investment will be more expensive, the benefits of investing in this sector, especially regarding long term resilience and European security, outweigh the initial costs. For this investment to be effective European governments and the EU need to be proactive and sustainable.

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3. 1. 4 Shared Solar: an Opportunity for the EU to Empower EJ Communities and Meet its Carbon Neutrality Targets

SUBMITTED BY

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EXECUTIVE SUMMARY

Shared solar, or community solar, presents an important opportunity for the EU to develop renewable energy while revitalizing communities. Further, the EU should invest into an Environmental Justice (EJ) communities screening tool, to target Green Deal programs. The REPowerEU legislative package, currently being negotiated, should develop solar energy as a tool to direct funding towards communities that have been historically excluded in technological transitions. Solar energy can present challenges for low-income communities. Prerequisite installation costs and property ownership make solar panels a luxurious good, which is unacceptable under the EU's binding commitments. Moreover, social barriers such as unequal access to information about clean energy and existing subsidies disparately impact low-income populations. Developing networks of community solar in regions suffering from a lack of investment will allow renters to access solar energy, despite not owning their own rooftop. It will also lower the upfront cost and maintenance responsibilities for participants and increase the share of renewable energy in the European grid. Shared solar should be added as a key strategy to the EU Solar Strategy.

INTRODUCTION

The European Union aims to rely on 40% renewable energy by 2030. The EU has committed to become the first carbon neutral continent by 2050 and cut net greenhouse gas (GHG) emissions by 55% before 2030.¹ This binding target entails a drastic decrease in emissions coming from energy production

¹ European Commission. Delivering the European Green Deal.

https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en

and use, which currently accounts for 75% of EU emissions.² Amidst current proposals and slow negotiation processes, shared solar programs are an easily implementable policy that have great potential in the EU and could contribute to greening the energy grid at a fast pace to help the EU meet its 2030 targets.

On May 18th, 2022, the European Commission published the REPowerEU package, planning EU independence from Russian fossil fuels.³ This legislative package includes the EU Solar Strategy, which aims to increase solar energy production by 43%. Within this strategy is the European Solar Rooftop Initiative.

Through introducing the shared solar model to the European Solar Rooftop Initiative, we advocate for the deployment of this investment in EJ communities, as a tool to revitalize regions that have been historically underfunded. Environmental justice communities are usually defined by an intersection of criteria related to socioeconomic factors, pollution and contamination, health disparities, and natural hazards that place populations in a vulnerable position.

PROBLEM DESCRIPTION

There is a glaring inequality in the implementation of solar energy in the EU. The use of solar energy in Europe increased by 50% this past year, largely attributed to the increase in the use of rooftop solar panels.⁴ However, the financial and legal freedom exercised in deciding to install rooftop solar panels is largely limited to homeowners. Government subsidies already exist for homeowners installing solar panels, allowing them to reap the long term benefits of solar offsets on electric bills.

For people living in rented homes, landlords have control over the implementation of solar panels. There is little financial incentive for landlords to install solar energy on their properties, as only renters paying

2 European Commission. Energy and the Green Deal. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/energy-and-green-deal_en.

3 European Commission. REPowerEU: affordable, secure and sustainable energy for Europe. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/re-power-eu-affordable-secure-and-sustainable-energy-europe_en

4 Frost, R. December 2022. EU solar power soars by almost 50% in 2022: Which country installed the most? EuroNews. <https://www.euronews.com/green/2022/12/20/eu-solar-power-soars-by-almost-50-in-2022-which-country-installed-the-most>

utility bills will directly benefit. This lack of autonomy for renters has limited the reach of rooftop solar implementation across Europe. Additionally, the lack of information access and barriers to eligibility and enrollment across different EU countries has created friction between sustainable policy goals and implementation. Furthermore, because regions across Europe will feel the effects of climate change differently, more sophisticated screening and identification research is necessary to ensure that all regions are receiving investment that is equitable to their needs.

As the past year of global conflicts and natural disasters has demonstrated, energy resilience in a globalized world is becoming an increasingly important topic for communities to consider. The use of rooftop solar panels in community solar models will offer local communities more autonomy and freedom in transitioning to a sustainable future.

POLICY OPTIONS AND RECOMMENDATIONS

Primarily, we advocate for a community solar model to be integrated to the EU Solar Strategy. Similar to a program in California approved in September 2022, community solar projects will create joint public-private partnerships at the local level in a shared solar market.⁵ The most common community solar model has private developers build projects that individuals subscribe to. Instead, our recommendation aims to bring autonomy to program participants by subsidizing landlords and small business owners for a community-focused solar model, especially within suburban and rural areas. These systems will be owned by community individuals, rather than through third parties that introduce their own financial incentives to profit off of community solar.

Landlords who own residential buildings, or local business owners, can apply for subsidies towards the upfront cost of the solar panels, driven by the interest of renters and community members. Community members can then opt to invest in the project through financing a part of the upfront cost of solar panels. As the projects generate solar power and feed it into the grid, participants of the program will receive proportional reductions on their energy bills. Landlords enrolling in this program, who do not

5 Spector, J. September 2022. California is finally unlocking community solar for the masses. Canary Media. <https://www.canarymedia.com/articles/solar/california-is-finally-unlocking-community-solar-for-the-masses> 6 Climate and Economic Justice Screening Tool. Council on Environmental Quality.

<https://screeningtool.geoplatform.gov/en/#3/42.39/-96.43>

directly benefit from energy bill deductions, will benefit from a small tax credit, to incentivize them to be part of it but not exploitatively raise the price of renting. Further, having solar energy offsets makes their property more attractive to residents. For participants, the implementation of these projects are a one time investment, with limited maintenance costs, while the environmental impact and solar offsets on utility bills are indefinite.

To increase the benefits of this system, we strongly advocate for the development of local energy storage, to be coupled with solar panel installation. As energy grids become more vulnerable due to climate change and increasing frequency of extreme weather events, backup power storage is an area in need of increased investment. Community solar panel systems can easily be implemented with localized energy storage that are supplied by excess energy generation, which gives smaller communities more autonomy and resiliency.

Community outreach can be expanded through implementing an easy-to-use website explaining the requirements for shared solar subsidies. This website will have country- and municipality-specific information on accessibility of funding, resources on increasing community involvement, and curated resources for local contractors to implement solar systems. Local program-approved solar panel companies will be incentivized to advertise the program to communities. This supports local economies and jobs creation in small businesses within renewable energy across the EU, fostering the expansion of green energy providers.

Developing an EJ screening tool for the EU will better direct the investments of the Green Deal towards these communities. This tool should be used in combination with the community solar program as part of the European Solar Rooftops Initiative. The EJ community screening tool could be inspired by the US Justice40 program, which uses a detailed map of the country to focus attention on historically underfunded communities.⁶ The criteria used to determine EJ communities could be determined by each member state and reviewed by EU institutions. This initiative should also push member states to collect data about environmental degradation and pollution, like air or water quality, to determine funding eligibility to develop shared solar. However, given the urgency for the EU to meet its carbon neutrality goals and be independent from Russia's fossil fuels, the community solar model can be implemented before the roll out of the EJ screening tool. These two initiatives should be run in parallel, and once the EJ screening tool is ready,

it can be incorporated into the EU Solar Strategy.

CONCLUSION

Shared solar presents a unique opportunity for the European Union to empower EJ communities and meet its renewable energy targets. As Europe strives to become the first carbon-neutral continent, community solar can play a significant role in accelerating the transition to renewable energy sources. The structure of community solar programs remove financial access barriers and deliver environmental benefits. By integrating an EJ community screening tool into the EU Solar Strategy to identify and prioritize underfunded communities, the EU can ensure that the benefits of solar energy are accessible to all citizens, addressing historical disparities in funding and access to clean energy.

With its commitment to the Green Deal and the REPowerEU package, the EU has a unique chance to pave the way for a greener, fairer, and more resilient future through shared solar. It is imperative for the EU to seize this opportunity to make community solar a transformative tool for empowering communities, creating jobs, lowering energy bills, combating climate change, and promoting social and environmental justice. By doing so, the EU can lead by example and inspire other regions and countries to adopt similar initiatives, ultimately contributing to the global effort to combat climate change and create a more sustainable future for generations to come.

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3. 1. 5 How can transatlantic cooperation increase reliable energy supply while avoiding geopolitical tripwires and unease dependencies, keeping in mind decarbonization targets for 2050.

SUBMITTED BY

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EXECUTIVE SUMMARY

This memo provides a short- and long-term solution to address the weaknesses in EU and US energy markets. Past public policy decisions which have prematurely shifted away from fossil fuels have significantly impacted the resiliency of European and the interconnected global energy systems. The pandemic and subsequent Russian invasion of Ukraine have revealed huge weaknesses in Western energy security and highlighted the need for both short- and long-term solutions whilst maintaining the Paris Agreement's commitment to Net Zero emissions by 2050. This challenge, however, opens an opportunity for cooperation amongst EU member states and across the Atlantic. This policy memo aims to target the supply-demand gap in bridge fuels needed to achieve energy security in the EU and subsequently in the US. This includes targeting three main aims: 1) on the supply side, full EU decoupling from Russia 2) coordinate demand side management and lower overall demand 3) achieve net zero targets. We propose three different policy options including both internal and external solutions.

INTRODUCTION

The 2021 supply-side shock in global energy markets resulted from the confluence of various interconnected factors such as the recovery from

the Covid-19 crisis and capital contraction in the hydrocarbon sector due to climate policy. Russia's invasion of Ukraine and Putin's subsequent restrictive policies, such as the gas-for-roubles decree and the suspension of gas transport via the Nord Stream I (Kardas, 2022) exacerbated this crisis, putting Europe at its epicenter and leading to a surge in energy prices and market turmoil of unprecedented scope (Popkostova, 2022). The current globalized state of the world and the need for energy transition to meet 2050 decarbonization targets (Paris agreement, 2015), make this a very different crisis from the oil crises of the 1970s, and highlights the need to ease global supply bottlenecks, tackle systemic inefficiencies, and moderate demand (Popkostova, 2022). Balancing the short security, affordability and sustainability dimensions of the energy 'trilemma' with the long-term clean energy targets and the need to decouple from Russian energy supply offers a clear opportunity to create a unified front against Russian and Chinese energy and military security threats. This challenge requires collaboration at the European and transatlantic level in order to navigate the need to decrease demand, secure supply whilst maintaining competitiveness and continue investing and incentivizing renewable energy sources and technologies. Lack of cooperation will likely feed into emerging anti-transition sentiment that could sabotage support for US-EU's global climate leadership (Popkostova, 2022).

PROBLEM DESCRIPTION

In 2020, global demand for energy decreased by 5% and, as a result, cost-cutting measures affected the energy industry. This represented the biggest negative change in energy demand since World War II (The Economist 2021). At that moment in time, despite low national stockpiles in European countries, a crisis had yet to clearly unfold. Nevertheless, one year later an amalgamation of unforeseen phenomena led to a full-fledged energy crisis with effects across the 2021-2023 timeframe; namely, the slow recovery after the COVID-19 pandemic, in conjunction with disruptive weather patterns in various geographical regions (droughts in Latin America, China, and Europe reduced hydropower; limited wind in Europe; floods in certain parts of Asia), coal trade disputes (between China and Australia), the 2020 Russia–Saudi Arabia oil price war, and OPEC+ supply restrictions generated high fossil fuel prices, expanded inflationary pressures, and brought forth the prerequisites of a global recession. The status quo worsened after Russia invaded Ukraine and cut its natural gas exports to Europe by 80% (“The global energy crisis – World Energy Outlook 2022 – Analysis”, 2022.).

Natural gas makes up ~25% of the EU's energy consumption, with 26% used in power generation and 23% in industry. The majority is utilized for heating in residential and service sectors. Current policies suggest that gas demand will remain stable, but less than half of the EU's gas needs are currently met by domestic production. The rest is imported, mainly from Norway (30%), Russia (39%) and Algeria (13%). In recent years LNG has accounted for around 10% of imports, with most of that coming from Qatar, Algeria and Nigeria (EU Commission). The BP Energy Outlook 2023 illustrates the uncertainty need for an increase in Europe's LNG imports (between 93 and 186 bcm by 2030 and between around 30 to 200 bcm by 2050).

Europe's short-term response to Russian policies focused on firstly mitigating the impact of higher costs on consumers and businesses using retail price caps, regulated tariffs, support programs for energy-intensive companies, and liquidity or capital backing for energy companies. Secondly, the EU tried to stabilize and reduce wholesale prices and ensure energy security with policies to encourage energy savings and increase supply but also to cap energy costs, particularly wholesale gas prices. (Jeromin Zettelmeyer, Simone Tagliapietra, Georg Zachmann, and Conall Heussaff) EU countries managed to lower consumption of natural gas by 10-12% in 2022 due to warmer than usual winter months, a green behavior response, and reduced industrial production. This shows that coordinated effort to reduce energy demand and increase supply while keeping internal energy markets open and protecting vulnerable consumers are necessary in ways that are consistent with the EU's climate goals is a priority. (Jeromin Zettelmeyer, Simone Tagliapietra, Georg Zachmann, and Conall Heussaff).

A key issue in the crisis is diversifying gas imports. This includes increasing imports in LNG gas as stated by the REPowerEU plan which wants an additional 50 billion cubic meters (bcm) of LNG to offset the 155 bcm of Russian gas imported in 2021. The REPowerEU plan sets the 50 bcm targets for both 2022 and 2030.

In the aforementioned context, the European Union was unprepared to face multiple simultaneous crises (COVID-19, energy crisis, military crisis in Ukraine) that tested its commitment to democratic values and principles, European Green Deal, and European unity. Therefore, this paper aims to outline an exhaustive policy framework meant to support EU and U.S. policymakers in their endeavor of reducing energy dependencies, mitigating

geopolitical tensions, and creating reliable energy supplies.

POLICY OPTIONS

Option I: Transatlantic Energy Union between the US, EU and Canada: based on structure of the Energy Union and the IEA (external)

The first option is external cooperation: to establish a transatlantic Union between the US, EU and Canada based on the structure of the Energy Union and IEA. Both the United States and Canada play a critical role in global energy sector since the US is the second largest LNG exporter in the world (Aizarani, 2023) and Canada has great LNG and hydrogen potential. Furthermore, the foundation of the cooperation between the EU and Canada have already laid, namely CETA (Canada-European Union Comprehensive Economic and Trade Agreement), which focus on the development of zero-emissions vehicles and carbon capture (Dolata, 2022 225). The integration could be divided into short-term and long-term. With respect to the short-term goal, firstly the EU should build up a channel for joint energy procurement process and pricing. Secondly, collaborate with both the US and Canada to create a common emergency energy storage and the sharing of technologies and a common funding for the development of renewable energy such as hydrogen - by means of CCUS technologies, blue hydrogen could be produced from natural gas facilities-, which could be applied to transportation industries and heat pumps, which could replace gas and be applied to households (Dolata, 2022 229). The amount of money a state should provide could be based on their economic situation and their energy consumption. E.g., nations that enjoy better economic conditions and higher energy consumptions should pay more and vice versa. The long-term goal could focus on constructing shared energy and climate goals with binding regulations along with common monitory systems such as collective methane emission standard, which could not only enhance the efficiency of energy usage but also the transparency of energy footprint. Moreover, all the regulations, standards and integration process could be categorized into different levels concerning the different situation in different countries.

Option II: LNG investment and domestic consumption control (internal)

The second option is to enhance internal energy efficiency, which include both smarter LNG investment and domestic consumption control. The EU member states are now building up LNG import infrastructures, namely the regasification system, rapidly. However, it would be more efficient to invest

more in the building of network and expand the capacity of the pipeline in order to transfer gas to rural areas or regions that suffer energy poverty. After all, the construction of import infrastructures would be meaningless without the pipelines or enough capacity to transfer the gas. The Spain case is a salient example, in which they have six LNG terminals, but lacks capacity to transfer to the north (Aizarani, 2022). Moreover, the import infrastructures would be rendered obsolete once the transition completes (IEEFA, 2023). This policy could be built on the bases of the EU Ten-E policy (EU commission, 2022). With the respect of controlling the domestic consumption, the EU could pursue a dual-track, multi-leveled policy. On one hand, the EU could stipulate a customized energy consumption limit for different nations, industries and households based on their need for energy consumption along with corresponding fine, tax or punitive measures. On the other hand, the EU could provide subsidiary, bonus or various kinds of awards to entities, who abide by their limit or even consumed less depending on the percentage they saved. The awarding measures could be dependent on the percentage they saved. In this context, the demand would be reduced and entities would be motivated to lower their consumptions, which would be beneficial to the energy storage of the continent.

Option III: Contract negotiations (external)

The third option is to both negotiate with both the consumers of the LNG, namely Asian countries and the LNG export countries mainly the US. First, to negotiate with Asian consumers such as Thailand and Indonesia to lower their import quantity in exchange for EU assistance. For example: provide and share technology with them to develop their renewable energy capacities or improve their existing energy infrastructures. Since the abrupt entrance of the EU into the LNG market could lead to disorder, this tradeoff could not only avoid the outbreak of future crises and secure sufficient LNG supply for the EU, but also prevent Asian nations from turning to coal, which is detrimental to the environment (Tsafos, 2022). Moreover, Asian nations remain important since they have critical raw materials for the development of renewables and the EU is currently pushing for a systemic policy approach aimed at building a more resilient critical raw materials supply chain. (Milov, 2023). In terms of the negotiation with the US, both nations should strike an EU-US LNG partnership via flexible short-term contracts (10 years) which would ensure low LNG prices until the mid-2030s after which LNG will be phased-out to reach decarbonization goals. Or, the EU could obtain LNG contracts successfully by securing 20-year

contracts with a clause to enable the selling of contracts after 10 years in a secondary market (Calnan, 2022).

RECOMMENDATIONS

The Transatlantic Union:

The abovementioned policies are basically deeply interconnected and could be implemented simultaneously. Whereas the first option, namely, the Transatlantic Union policy seems hard to realize, it would be the best solution for both transatlantic energy security and climate change in the long-term. Nevertheless, this policy could encounter four main challenges. Firstly, the lack of grid connections and fundings for infrastructure in energy poverty regions especially CEE states. To cope with the problem efficiently, in the short-term, the common funding between the EU, US and the EU could focus more on the construction of the LNG infrastructure and the development of the pipeline grid and capacity in these regions. Furthermore, the LNG could also be transported by railways and trucks. Secondly, the different energy market system and the resistance from industries and companies. This problem could be intractable and could only be addressed by means of progressive negotiations and voluntary market integration. The negotiations between member states should be conducted in a multi-layer way along with certain extent of governmental subsidy to support small private business. Thirdly, the lack of skilled workforce such as professional installers or technicians. In the short-term, the EU could apply the mechanism the US has utilized to train Ukrainian soldiers, namely to provide short training system for workers to participate or establish a common technician team to go abroad and provide assistance and knowledge to local workers. In the long-term however, it would be essential for the EU to promote pan-European occupational training program to cultivate talents, not only for students but also for disadvantaged workers who are rendered unemployed due to the energy transition. Last but not least, one of the problems the EU are now facing is the abuse of environmental legislations. For example, the protections and democratic tools that the EU offered for the CEE states has been exploited by illiberal governments such as Hungary and Bulgaria to implement even more polluting or undemocratic projects (Vela, 2022). Accordingly, the EU under these circumstances should on one hand consolidate monitoring systems and conduct stricter acceptance inspection of the results, on the other hand enhance the standards for specific subsidiaries or deregulations.

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3. 1. 6 Establishing a Transatlantic Consensus on The Elimination of AI Bias

SUBMITTED BY

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EXECUTIVE SUMMARY

This memo will provide policy recommendations aimed at countering the rising prevalence of biased output data from Artificial Intelligence (AI) models. Across a span of several decades, AI systems have become embedded into the technological fabric of the modern world. However, a significant setback in AI's reliability has been the longstanding issue of AI bias. Industry leaders and legislators across the transatlantic sphere must form a consensus on how to protect human rights and other freedoms from possible abuses of AI technology. However, this must not come at the expense of innovation, and any regulation implemented should aim to guide AI models to the right path rather than ban them from treading it.

INTRODUCTION

In February 2020, the Brazilian Chamber of Deputies laid out a proposal for a Congressional Bill which would regulate the use of AI with the goal of optimising its position in Brazil's democratic system.¹ The proposal has informed Brazil's Draft AI Law which is currently being discussed in the Federal Senate.² Two highly relevant articles of this proposal identified predominant aims for AI regulation: (6.3) Prevention of discriminatory, unlawful, or abusive practices; (6.5) Access to the underlying decision-making process which governs the respective AI tool.³ As the first real attempt at legislating for AI, this project is important in the geopolitical

1 Chamber of Deputies, "Project creates legal framework for the use of artificial intelligence in Brazil" (2020): <https://www.camara.leg.br/noticias/641927-projeto-cria-marco-legal-para-uso-de-inteligencia-artificial-no-brasil/>

2 Convington: Inside Privacy, "Brazil's Senate Committee Publishes AI Report and AI Draft Law" (2023): <https://www.insideprivacy.com/emerging-technologies/brazils-senate-committee-publishes-ai-report-and-draft-ai-law/>

3 Chamber of Deputies (Cabinet of Deputy Eduardo Bismarck), "Bill No. 21 of 2020: Establishing principles, rights, and duties for the use of artificial intelligence in Brazil" (2020), 3-4.

sphere because it can act as a framework for other transatlantic bodies to follow, but only if it is successful.

Later projects have followed a similar model. Articles 40, 45, and 50 of the EU AI Act proposed in April 2021 reiterate the need to minimise the incidence of biased or erroneous output data generated by AI systems due to their potential negative impacts on fundamental rights.⁴ Concern over biases in AI-assisted hiring processes has led New York City lawmakers to prohibit the use of “automated employment decision tools” (AEDTs) unless an audit into the tool’s proclivity to biased judgements is made by the employer, with repercussions including monetary fines as well as enforcing candidates’ right to legal action.⁵

Therein lies an underlying agreement that AI regulation demands greater transparency from AI providers as to the variables and input data informing decision-making processes which ultimately determine the human impact of AI usage. However, differences in approach to categorising instances of bias, as well as tackling such phenomena, exist across transatlantic communities. Regulation would therefore aim to adhere to a standard code of AI Ethics which can be contextually implemented by experienced researchers, to limit the occurrence of biased outputs in machine-learning systems and maximise AI efficiency. The issue of AI bias constitutes an intersection of legislative, regulatory, and business interests across the transatlantic landscape. Therefore, policy recommendations will be made with the interests of institutional assemblies in mind as well as the need to promote and respect commercial innovation.

PROBLEM DESCRIPTION

AI bias is the transfer of pre-existing human biases and prejudices into AI models via under-diversified input datasets. This poses a risk of creating a feedback loop which amplifies discrimination, in which the available dataset is influenced by preceding instances of AI bias. The incidence of

4 European Commission, “Proposal for a Regulation of the European Parliament and of the Council: Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts” (2021), 29-31.

5 The New York City Council, “A Local Law to amend the administrative code of the city of New York, in relation to automated employment decision tools” (2021): <https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=4344524&GUID=B051915D-A9AC-451E-81F8-6596032FA3F9&Options=ID%7cText%7c&Search=>

bias in data science-oriented AI tools⁶ is a longstanding issue which has yet to be conclusively addressed by international legislators. While instances of bias and discrimination certainly happen in environments absent of AI, the predominant concern is that AI systems might enable these biases on a larger scale, hence extending their range of impact.⁷

For example, a 2016 study conducted by researchers at ProPublica revealed an overwhelming bias against African Americans within AI tools used to assess the likelihood of crime recidivism among criminal defendants in the United States.⁸ The replacement of human-oriented judgements with the application of this AI-generated data to international justice systems would lead to increased risk of potential infringement upon human rights. Additionally, using AI to perform risk-assessments of entire communities could foreseeably lead to the profiling of one ethnic or religious group as a danger due to hidden or implicit biases in the AI model.

Biased AI products can have detrimental effects on users, whether individuals, corporate entities, or institutions, warping their perception of real-world events. Certain types of emotion-estimation software have been shown to impair users' self-judgement by consistently exaggerating the emotional depth (i.e., overly positive, overly negative) demonstrated in visual examples of human emotional exhibition.⁹ The issue of facial and behavioural analysis is evidently scalable to a corporate context: AI-backed hiring platforms such as Paññā,¹⁰ which process interview content to determine whether a candidate might be engaging in inappropriate behaviour such as cheating, have raised questions as to AI's efficiency in recognising culturally-induced behavioural differences, alongside other additional complexities.¹¹ Following recommendations from these bias-prone AI systems can have seriously negative international consequences in the social, commercial,

6 Such tools include AI assistance for telecommunications software, facial recognition technology, military targeting mechanisms, etc.

7 M. Coeckelbergh, *AI Ethics* (Boston: MIT Press, 2020), 125-126.

8 J. Larson, S. Mattu, L. Kirchner, J. Angwin, "How We Analyzed the COMPAS Recidivism Algorithm" (2016): <https://www.propublica.org/article/how-we-analyzed-the-compas-recidivism-algorithm>; for more in-depth coverage of AI-based racial and gender discrimination, see T. Gebru, "Race and Gender", in M.D. Dubber et. al (eds.), *The Oxford Handbook of Ethics of AI* (Oxford: Oxford University Press, 2020).

9 K. Futami, S. Yanase, K. Murao, T. Terada, "Unconscious Other's Impression Changer: A Method to Manipulate Cognitive Biases that Subtly Change Others' Impressions Positively/Negatively by Making AI Bias in Emotion Estimation AI", *Sensors*, Vol. 22, No. 24 (2022), 17-18.

10 <https://www.panna.ai/>

11 K. Michael, R. Abbas, P. Jayashree, R.J. Bandara, A. Aloudat, "Biometrics and AI Bias", *IEEE Transactions on Technology and Society*, Vol. 3, No. 1 (2022), 3-4.

and legal zones. Although experts from MIT and Oxford University have, in recent years, attempted to generate an ethical code for AI, transatlantic legislative assemblies are yet to implement any laws to this effect. Yet, according to research conducted by IBM in 2022, 35% of global companies have adopted some form of AI into their operations; larger companies with more wide-reaching networks were also more likely to use AI products.¹² The technological complexity, widespread applications, and accelerated evolution of AI tools necessitates their regulation. Action must be taken to minimise biases which can arise in these systems, thereby decreasing the severity of any potential negative impacts.

POLICY OPTIONS

The first policy option offers a three-step solution to minimising human biases present in AI technology: (i) using AI to detect human biases, (ii) diversifying the input datasets used for training AI tools (iii) adopting a framework for counterfactual fairness. Step one of this policy option would be executed by running algorithms alongside human decision makers, comparing results, and using “explicability techniques” to help pinpoint what led the model to reach a certain decision. This would help AI providers understand the underlying factors affecting the outputs. Step two aims to prevent AI bias to be formed in the first place by using a more diverse set of data when training and developing an AI system. Step three would offer a system control by introducing counterfactual fairness. This term refers to a system that ensures that a model’s decisions are the same in a counterfactual world where attributes deemed sensitive, such as race, gender, or sexual orientation, were changed.

Such an approach has been considered by the European Commission’s High-Level Expert Group (HLEG) on AI, which has drawn attention to the need for constant monitoring and transparency as to the system’s purpose and operating mechanics in order to be certified as trustworthy.¹³ AI biases result from human biases: should all human biases be identified and mitigated, AI bias could not be an existing phenomenon. Thus, this policy option provides a root-oriented eliminatory solution. However, a circular issue remains in this policy option: that of minimising the possibility of AI bias in AI-assisted analysis of human biases.

12 “IBM Global AI Adoption Index 2022”: <https://www.ibm.com/watson/resources/ai-adoption>

13 A. Renda, “Europe: Toward a Policy Framework for Trustworthy AI”, in M.D. Dubber et. al (eds.), *The Oxford Handbook of Ethics of AI*, 659-60.

The second policy option involves a ‘human-in-the-loop’ process, one in which a human operator is left in charge of moderating output data if any bias is detected. AI tools would retain a human component which assumes responsibility for any faulty data generated by the system. After all, human judgement is undeniably exercised in the creation of AI tools: the only element of an AI process which, in an ideal world, might be considered independent of human intervention, is the ultimate decision made by the AI.¹⁴ It would make sense that tools which bear a certainty of human impact would be moderated by human beings.

One problem with this option is that it assumes an impartial human operator with no inherent biases or interests which might influence the acceptance or rejection of AI-generated outputs. No such human being exists. In fact, most AI researchers are male, predominantly come from high-performing socioeconomic backgrounds, and generally display no symptoms of physical or cognitive disability. This increases AI’s propensity to human bias, and greater diversity in the AI industry is required for this policy to bear a high probability of success. Instead of an individual, a team could be deemed legally essential to this task so as to heighten the probability of bias detection. However, stakeholders in AI products would still incur additional operating costs, significantly limiting their commercial performance. This would constrain relevant markets to few companies already possessing enough assets to sustain their AI venture. This option remains too idealistic and fundamentally ignorant of the principles of market fairness to be implemented.

A third policy option would involve greater investment in a multi-disciplinary approach to bias research. Current educational resources do not consider the social origins of AI bias. It is therefore crucial to introduce more interdisciplinary education into the training of individuals developing and training the AI systems. More diversified training data would be a first positive step to resolving the problem. This third policy option aims to prevent human bias from even arising in AI systems at all, given that there appears to be a negative correlation between human diversity of AI design and the incidence of AI bias.¹⁵ Investing in the educational diversification would offer a comprehensive solution, and would demand investment from transatlantic bodies such as the EU into AI-specific education programmes.

14 For more on this subject, see N.W. Spaulding, “Is Human Judgment Necessary? Artificial Intelligence, Algorithmic Governance, and the Law”, in M.D. Dubber et. al (eds.), *The Oxford Handbook of Ethics of AI*, 375-402.

15 Ibid.

The main shortcoming of this policy option derives of its lengthy nature. Changing the way people think requires decades and would only offer a solution to future AI models. AI biases would continue to exist in their current forms pending the effective adaptation of the education system. Additionally, algorithmic judgment has already begun to displace human judgment, notably in the automobile industry and military applications. Reversing such a process might prove very difficult as it would require the diversion of economic and technological resources away from key industries in which AI provides a competitive advantage.

RECOMMENDATIONS

Admittedly, contextual differences exist across members of the transatlantic legislative community at supranational, national, and local levels. Nevertheless, it remains possible to establish a regulatory framework to which all members must abide. Any legislative solution to the problem of AI bias must remain open to interpretation to account for more localised changes in the industrial landscape concerning AI technologies.

Currently, AI providers are opposed to regulation because they consider legislators to be out of touch with the complexities of modern technology. Regulators are concerned about innovators because they seek to create a safe, transparent, and reliable environment for commercial ventures in a rapidly high-risk domain. The introduction of experienced AI researchers as consultants who can bridge the epistemic gap between regulators and providers constitutes the most viable option. These consultants would function as digital attachés to chambers of commerce and conduct regular inspections of AI products currently on the market in their home territories. The products would be issued a ‘ranking’ based on a number of KPIs identifiable to all AI professionals. This would both encourage providers to self-regulate and work towards minimising their own biases, and help regulators identify potentially risky AI service-providers more easily. Such an approach can be implemented at all levels of industrial regulation, including supranational, provided a cohesive and interdependent network is maintained across chambers of commerce. Such relationships are already being implemented, such as recent US-EU cooperation agreements on AI

research and digital policy.¹⁶

Therefore, it is recommended that a transatlantic approach pursues a combination of the three policy options outlined above. This three-step plan offers the most comprehensive answer with each individual step directed at one of the layers of the problem at hand. The first step serves as a preventative measure by identifying human biases and excluding them from the AI system. Thus, the second step builds on the results of the first by providing diverse, bias-free data when training. The objective of the third step is to check whether the system works in the desired, unbiased way by introducing counterfactual fairness. This process would be carried out by digitally-literate auditors who are relatable to the tech sector whilst also being reliable to regulators.

As is generally the case, solutions to international problems require financial backing. Solving the issue of AI bias is no different. Funds need to be raised in order to make long-term investments into AI science and research, and in the short term there needs to be a budget for regulatory boards to employ digital teams. This memo proposes approaching individuals and corporate entities which have already committed significant capital investments to AI products. These investors undoubtedly have the most to lose from faulty AI, as this could significantly diminish ROI of their existing investments. Examples include Microsoft, IBM, Amazon Web Services, and NVIDIA.¹⁷ These large-scale investors can also be useful in directing AI providers who remain opposed to regulation to be more open to the process.

Ongoing consideration of independent auditing by the AI HLEG reinforces its position as the most viable route. It will be much easier for transatlantic commissions on AI to implement pre-existing expert opinions into regulation rather than generate entirely new structures for discussion. Leading technological innovators have come forward in support of independent audits into AI platforms as a way of minimising any potential ‘risks to society.’¹⁸ Such expressions lend support to the increasingly prevalent

16 European Commission, “The European Union and the United States of America strengthen cooperation on research in Artificial Intelligence and computing for the Public Good”: <https://digital-strategy.ec.europa.eu/en/news/european-union-and-united-states-america-strengthen-cooperation-research-artificial-intelligence>

17 Precedence Research, “Artificial Intelligence (AI) Market Size, Growth, Report 2022-2030”: <https://www.precedenceresearch.com/artificial-intelligence-market>

18 Thomson Reuters, “Hit pause on AI development, Elon Musk and others urge” (2023): <https://www.cbc.ca/news/world/chat-artificial-intelligence-safety-protocols-1.6794454>

solution of independent risk-assessments for AI products on issues related to AI bias. This memo's recommendation would generate a regulatory network pending enforceable legislation without having to expend the resources of creating a new government body dedicated to monitoring AI.

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