

MASTER
MASTER IN INNOVATION AND RESEARCH FOR
SUSTAINABILITY (MIRS)

MASTER'S FINAL WORK
DISSERTATION

**POPULIST NARRATIVES AND THEIR INFLUENCE ON INNOVATION: AN
ANALYSIS OF POLITICAL DYNAMICS IN PORTUGAL, FRANCE AND THE
EU (2014-2024)**

MARIA AGUIAR DE CARVALHO BOTELHO DO SOUTO

JANUARY - 2025

MASTER
MASTER IN INNOVATION AND RESEARCH FOR
SUSTAINABILITY(MIRS)

MASTER'S FINAL WORK
DISSERTATION

POPULIST NARRATIVES AND THEIR INFLUENCE ON INNOVATION: AN
ANALYSIS OF POLITICAL DYNAMICS IN PORTUGAL, FRANCE AND THE
EU (2014-2024)

MARIA AGUIAR DE CARVALHO BOTELHO DO SOUTO

SUPERVISION:
PROF.^A ANA MOUTINHO

JANUARY - 2025

GLOSSARY

CEPR - Centre for Economic Policy Research.

EU – European Union.

GDP – Gross Domestic Product.

NIS – National Innovation Systems.

OECD – Organization of Economic Cooperation and Development.

PfE – Patriots for Europe.

R&D – Research and Development.

RN – Rassemblement National.

SMEs – Small and Medium Enterprises.

ABSTRACT

Populist movements have increasingly shaped political discourse in Europe, influencing public perceptions of political matters. This thesis explores the influence of populist narratives on innovation policies in Portugal and France, between 2014 and 2024, analysing how these movements shape and disrupt policymaking. Existing literature highlights the antagonism between populist rhetoric and innovation, yet there remains a gap in understanding how these narratives influence public trust and policy direction. Using a document analysis approach as well as innovation indicators for context, the study assesses the ways in which populism can disrupt political discourse on innovation. Findings suggest that populist movements exploit economic and social insecurities to present innovation as elitist or threatening, thereby stalling progressive policy initiatives. While populism has altered narratives surrounding innovation, its direct impact on policy remains difficult to quantify in the short term. This research contributes to the broader ongoing discussion on the intersection of political dynamics and innovation policy.

KEYWORDS: Innovation Policy; Populism; Political Narratives; European Union; National Innovation Systems.

JEL CODES: 030; 038; H11

TABLE OF CONTENTS

Acknowledgments	viii
Glossary	iv
Abstract, Keywords and JEL Codes	v
Table of Contents.....	vi
Table of Figures.....	vii
1. Democracy, Distrust and Disruption: Innovation Policies at a Crossroads.....	9
2. Innovation’s Labyrinth: Political Power and National Systems.....	13
3.The Big Bad Wolf and the Challenge of Innovation	17
4.Crafting a Common Future: Innovation as the EU’s Path to Progress and Unity .	19
5. Methodology.....	23
5.1. Research Design	23
5.2. Data Collection Methods	24
5.3. Data Analysis Approach.....	25
5.4. Limitations.....	25
6.Results	26
6.1. Portugal and France: Statistical Profile on Innovation.....	26
6.2.EU, Portugal and France: Profile on Populism.....	29
7. Discussion.....	35
7.1. When Innovation Meets Populism	35
7.2. The Unstable Ground of Innovation Policy Under Populist Pressure	40
7.4. Final Reflection	42
8. The Battle For Innovation in a Politicized World	43
References	44
Appendices	55

TABLE OF FIGURES

Figure 1 – Evolution of Political Stability and Absence of Violence/Terrorism (2014-2023).....	28
--	----

ACKNOWLEDGMENTS

First, my deepest gratitude to Prof.^a Ana Moutinho for the invaluable guidance, encouragement and for everything I learned under her supervision.

To my parents and my sister, Madalena, thank you for your unwavering belief in me, for your patience on the hard days and for always being my safe place.

A special thank you to Margarida and Tiago, for making it possible for me to fully dedicate myself to this thesis. Your generosity and understanding meant more than I can put into words.

To my grandparents and my aunt Zeza, thank you for your endless support, your thoughtful feedback and for always being there, in ways big and small.

And finally, to everyone who has been part of this journey—whether through a kind word, a shared coffee or simply by reminding me to keep going—even if your name is not written here, know that my gratitude is immense.

1. DEMOCRACY, DISTRUST AND DISRUPTION: INNOVATION POLICIES AT A CROSSROADS

"As trust in European institutions wanes, the rise of populist movements signals a potential threat to the continent's innovative future." ¹

Innovation policy is an essential pillar for global progress, providing the foundation for nations to address urgent challenges while achieving sustainable development. In an increasingly interconnected world, these policies constitute drivers of economic growth, global competitiveness and quality of life (OECD, 2017). Notably, innovation policies are particularly important in addressing critical challenges like climate change, resource scarcity and public health crises. By fostering collaboration between governments, industries and research institutions, these policies drive forward-thinking solutions at the same time they ensure that these strategies translate into tangible outcomes that benefit society on a global scale. For example, renewable energy projects and breakthroughs in healthcare technology rely on carefully designed innovation systems that transform ambitious goals into practical results. In fact, none other is a better example of the importance of innovation policies than the COVID-19 pandemic where agile policy frameworks facilitated rapid technological progress and the efficient mobilization of resources (World Bank, 2022).

For these policies to succeed, they must be supported by strong and consistent trust in institutions as the foundation for effective collaboration and policy implementation (OECD, 2017). Trust is a cornerstone of institutional legitimacy and research has shown that public confidence in political, scientific and institutional frameworks is crucial for fostering environments fertile to innovation. For there to be collaborative efforts between societal and governmental systems, collective action and, consequently, economic and technological advancements, trust is a fundamental prerequisite. (Newton et al, 2018).

Innovation thrives within systems perceived as stable, reliable and supportive of progress. However, the erosion of trust creates an environment where scepticism stalls

¹ This statement is adapted from the overall context of the CEPR's report on the rise of populism and the decline of trust in European institutions. While the report does not explicitly link populism to a direct threat to innovation, it discusses how the erosion of trust in political institutions, especially in the aftermath of economic crises, creates a climate of instability. This instability, in turn, poses a challenge to the effective implementation of long-term policies, including those that foster innovation. The broader context of the report highlights how populist movements often exploit these insecurities, which can undermine institutional support crucial for driving forward innovation (Algan et al, 2017).

the progress essential for innovation policies to thrive. This connection is exemplified by France's Yellow Vest Movement, which highlighted the public's lack of trust in the government's intentions, regarding policies seen as disproportionately affecting low-income groups. The proposed fuel tax, intended to fund renewable energy development, was perceived as unfairly burdensome, leading to widespread protests. These protests caused major setbacks leading to the suspension of the proposed fuel tax hike (Williamson, 2019). This case is a prime example of how lack of trust can create substantial barriers to policy implementation.

Over the past decade, Europe has experienced a marked rise in populist political movements. Populism, as a political ideology, often claims to represent "the people" against a perceived corrupt or elitist establishment, arguing that politics should express the general will of the people (Mudde, 2019). This chameleonic ideology borrows elements from other political frameworks, enabling it to address context-specific grievances and interpret societal issues in a way that resonates with the public discontent. This capability makes populism a powerful yet contentious force in modern politics.

In modern populism, these movements have positioned themselves as defenders of the common citizen, challenging traditional political institutions by portraying them as detached from the needs of society. For instance, Italy's Five Star Movement has consistently portrayed the European Union as an out-of-touch elite, prioritizing bureaucratic interests over those of ordinary citizens. These framing fosters scepticism toward institutional authority through public discontent (Bickerton and Invernizzi Accetti, 2021). This distrust, while not new, has been exacerbated by global crises, that amplify vulnerabilities and uncertainties, such as the migration crisis, COVID-19 pandemic and climate change, economic inequality and the rapid dissemination of misinformation. In fact, during the pandemic, populist rhetoric often framed governmental measures as overreaching or ineffective, further eroding trust in institutions. Similarly, the urgency of climate change has been framed by some populist movements to dismiss international cooperation as elitist and disconnected from local priorities (Mudde, 2019; OECD, 2021).

Considering these factors that define the innovation landscape and the prevailing political climate, a pressing question emerges: To what extent do innovation policies face

disruption by the growing influence of populist movements across Europe? This examination is grounded in two observable realities—first, the intrinsic connection between trust in institutions and the effective implementation of innovation policies, and second, the rise of populism as a destabilizing force, often rooted in public distrust toward “the elite”².

The current state of knowledge reveals a complex interplay between innovation policies and political dynamics. However, a significant gap remains in understanding how populist narratives directly impact innovation policies. Most studies examine these factors separately, leaving the interconnected mechanisms through which populism influences policy frameworks unaddressed.

This thesis, focused on the period from 2014 to 2024, through a comparative analysis of Portugal, France and the European Union, explores how populist movements have leveraged crises to influence public discourse and reshape innovation policies. The research addresses the following questions:

1. How have populist political movements shaped public opinion and political discourse on innovation in Portugal, France, and the EU from 2014 to 2024?
2. Which innovation policies in Portugal and France are most vulnerable to populist influence, and what factors make them susceptible during this period?
3. How did populist movements leverage the COVID-19 crisis to reinforce their narratives on innovation policies, and what lasting effects did this have on policy direction?

This research addresses a relevant and timely topic by examining how populist narratives shape and influence political discourse around innovation policies. With the COVID-19 pandemic serving as a case study, it sheds light on the mechanisms through which populist dynamics disrupt innovation frameworks, contributing to the ongoing discourse on the vulnerabilities of innovation policies in contemporary political landscapes.

² The “elite” refers to those in positions of political, cultural or intellectual authority, that populist movements often frame as a homogeneous group of actors who prioritize their own interests over those of the general population. This rhetoric taps into the long-lasting resentment against evidence-based systems of governance and meritocratic structures that are perceived as exclusionary and unresponsive to the needs of ordinary citizens (Eatwell and Goodwin, 2018).

The primary objective is to explore the mechanisms through which populist movements create vulnerabilities in innovation frameworks, shedding light on how trust deficits and institutional weaknesses are exploited. On a practical level, by identifying specific vulnerabilities within these policies, it provides insights into how they can be made more resilient to political pressures. In an era of rising populism, it's crucial to understand just how this movements erode trust and increase public discontentment in with institutions. By examining how populist rhetoric influences policy direction, this study contributes to ongoing discussions on the role of political narratives in shaping views of progress.

2. INNOVATION'S LABYRINTH: POLITICAL POWER AND NATIONAL SYSTEMS

A National Innovation System (NIS) is a framework that conceptualizes innovation as the result of interactions and networks between various actors within a nation's economy. Pioneered by scholars such as Freeman (1987) and Lundvall (1992), the concept highlights how institutions, organizations and policies collectively influence the creation, diffusion and utilization of knowledge. Unlike isolated efforts, innovation thrives within a system of feedback loops, where actors engage in continuous learning and collaboration (Nelson, 1993). These systems are highly context-dependent, shaped by a nation's historical, cultural, economic and political circumstances. As such, populist movements have the potential influence the NIS and disrupt the collaborative learning networks that drive them.

In fact, the political power, as in the government, plays a pivotal role in moulding a nation's innovation system. As a policymaker, regulator, facilitator and investor, the government influences the functioning of all other actors and establishes the conditions under which innovation occurs (OECD, 2015). Governments create the legal and institutional environment that governs innovation activities. By enacting intellectual property (IP) laws, antitrust regulations and research funding policies, governments provide the structure within which innovation can thrive (Mowery et al, 1995). Policies such as R&D tax credits, direct grants and regulatory incentives encourage firms and research institutions to engage in innovative activities (Geuna et al, 2017). Moreover, governments often set national strategies or roadmaps that prioritize specific areas, such as digital transformation, sustainability or health innovation (Carayannis & Campbell, 2014).

Beyond regulation, governments act as facilitators of collaboration by implementing national innovation strategies that align the efforts of various ministries and stakeholders, through programs such as funding for collaborative R&D initiatives, establishing innovation hubs and clusters and creating platforms for cross-sectoral dialogue and resource sharing (Ahrweiler et al, 2011). These spaces often become focal points for narrative-driven initiatives, where governments emphasize shared national goals, such as green technology, to unify stakeholder efforts. Thus, governments align the efforts of various ministries to ensure coherence in their national strategies (OECD, 2019). Public

procurement policies often stimulate demand for innovative solutions, encouraging firms to invest in research and development (Edquist & Zabala-Iturriagoitia, 2015).

Public-private partnerships (PPP) represent a key mechanism through which governments stimulate innovation. Examples include collaborative initiatives like the European Green Deal, where governments and industries co-invest in sustainable technologies. These collaborations bring together academic researchers, industry leaders and public sector agencies to address shared challenges (Etzkowitz & Leydesdorff, 2000). Governments create incentives for such partnerships through competitive grant programs, mission-oriented innovation challenges and co-funded R&D projects (Carayannis & Campbell, 2019). However, these partnerships are increasingly shaped by political narratives, where government messaging emphasizes national priorities to align public perception with innovation goals. For example, during the COVID-19 pandemic, governments framed vaccine development as a collective societal mission, driving public trust and industrial cooperation. Often times, populist movements challenge such narratives with scepticism and resistance.

Furthermore, governments frequently assume the role of a risk taker by investing in high-risk, high-reward research areas that the private sector might avoid. This includes, amongst others, addressing societal challenges through mission-driven policies. For instance, during the COVID-19 pandemic, many governments accelerated vaccine development by providing upfront funding to pharmaceutical companies, illustrating their role in catalysing innovation during crises (OECD, 2017). Further details on the role of governments in the NIS can be found in Annex A.

Firms are the primary agents of innovation, developing new products, processes and services. However, their activities are heavily influenced by government policies that shape the business environment, such as tax incentives, trade regulations and antitrust laws (Lee & Malerba, 2016). As Lee and Malerba (2016) further highlight, firms often respond to government policies like public procurement, aligning their innovations to meet societal needs.

Universities and public research institutes serve as key contributors of knowledge and human capital within the NIS framework. They provide education, basic research and applied research outputs, which are vital for innovation. Governments play a significant

role in funding universities, establishing performance-based funding models, and incentivizing knowledge transfer through mechanisms such as technology transfer offices and patents (Geuna et al, 2017). These relationships often manifest through public–academic consortia, frequently supported by competitive grants that align academic research with national innovation priorities (Ahrweiler et al, 2011).

Intermediary organizations, such as innovation agencies, incubators and cluster organizations, play a crucial role in connecting actors within the NIS, enabling knowledge exchange, providing networking opportunities and facilitating the commercialization of research outputs (Cavallini et al., 2016).

The extended NIS framework, known as the Quadruple Helix, introduces the recognition of the role of civil society and end-users, which reveals increasingly important especially when debating the influence of populist movements on these systems (Carayannis & Campbell, 2014). Another extension of this framework, Quintuple Helix model, introduces the natural environment as a critical actor (Carayannis & Campbell, 2019).

Innovation systems are increasingly global, with multinational corporations operating across borders and knowledge flows transcending national boundaries (Lee & Malerba, 2016). Governments navigate these complexities by using transnational agreements and regional frameworks, such as the European Union’s Horizon Europe program, to foster innovation while protecting domestic priorities. At the same time, governance structures play a crucial role in balancing the interests of diverse stakeholders while responding to shifting political dynamics (e.g. the rise of populism) that influence innovation policies. Therefore, governments face the challenge of balancing national interests with global collaboration, to counteract the risk of governance dynamics further complicating the landscape of innovation ecosystems.

In fact, political uncertainty, in particular, creates systemic risks that can disrupt the collaborative and stable environment necessary for innovation to thrive. Edler and Fagerberg (2017) acknowledge that the governance structure is pivotal in ensuring the involvement of all stakeholders and civil society in innovation ecosystems. Consequently, the uncertainty surrounding politics and government as an actor (akin to any other) must

be given due consideration when analysing innovation policies, especially in the current world's political landscape.

Bhattacharya, et al. (2013) explore the impact of political uncertainty, particularly during national elections, on innovation. The study arrives at the conclusion that periods of political uncertainty, regardless of the prevailing political ideology, result in a substantial decline in innovation activities, as measured by patent-based indicators.

Further, Gao, et al (2017) analyse the effect of democracy on innovation, arriving to the conclusion that there is no statistically significant effect of democracy on innovation. The authors investigated a 'casual link' between innovation and democracy by analysing data to compare countries that have transitioned from autocracy to democracy on a global scale and those that have not. The authors concluded that democracy itself does not statistically increase innovation, contradicting Popper's hypothesis that democratic systems foster greater innovation than autocratic systems. Instead, they recognised that education levels and GDP were more strongly correlated with innovation.

Acemoglu, et al (2019) lend support to this theory and further explore the correlation between democracy and GDP, providing empirical evidence that transitions to democracy lead to significant increases in GDP per capita, with countries that democratise experiencing an approximate 20% higher GDP per capita compared to those that remain nondemocratic. This positive effect of democracy is consistent across countries with varying initial levels of development.

In addition, Helms & Ludger (2015) explore how democratic institutions influence innovation by shaping the environment in which economic agents operate. The authors emphasise that democracy fosters a culture of openness, transparency and inclusivity, which are conducive to innovation activities. This aligns with Edler and Fagerberg's (2017) emphasis on stakeholder inclusivity, suggesting that democratic institutions may play an indirect role in fostering innovation by providing a stable and participatory governance framework. The article further underscores that innovation is more prevalent in democratic countries, where there is an emphasis on individual freedom and participatory governance (Helmes & Ludger, 2015).

3. THE BIG BAD WOLF AND THE CHALLENGE OF INNOVATION

The rise of populist parties in Europe and globally, exemplified by the re-election of Donald Trump as U.S. president, signals a profound political shift in recent years. In fact, according to *The Populist Wave and Polarisation in Europe: 2024 Intelligence Forecast*, populist parties, both on the far-right and far-left, have seen a significant increase in support across Europe, driven by growing anti-establishment sentiment. By 2022, 32% of Europeans voted for populist parties, compared to just 12% in the early 1990s (Solace Global Risk, 2023, p. 2).

Populism, while not a new phenomenon, has resurged in waves throughout history, each adapting to its social and political context. The first major wave can be traced back to the rise of fascism in the early 20th century, when extreme ideologies infiltrated democratic systems under the guise of addressing public grievances (Brubaker, 2017). Today, we are experiencing what political scientist Cas Mudde describes as the fourth wave of populism, characterized by its global reach, technological sophistication and its ability to exploit crises such as the COVID-19 pandemic. In his book *Populism: A Very Short Introduction*, Mudde (2019) explains that this wave is not confined to the extremes of the political spectrum but has infiltrated mainstream parties, reshaping democratic norms and institutions.

Populism's interaction with innovation is marked by a duality that reflects broader ideological and practical tensions within populist movements. Scholars like Hadiz and Chrysogelos (2017) argue that while populist leaders often champion innovation as a tool for empowerment and local sovereignty, they simultaneously resist innovations associated with globalization, elite control or perceived cultural and economic destabilization. This tension is particularly relevant in the context of modern populism, where long-term vision, collaboration, and global problem-solving are essential to sustaining innovation. As Mudde (2019) notes, the current wave of populism has reshaped democratic norms and institutions, including those that underlie innovation frameworks, by exploiting public fears and grievances, further complicating efforts to drive progress through innovation.

But what exactly is populism? Definitions vary, reflecting its complex and evolving nature. According to the Encyclopedia Britannica (2024), populism is a political program

that champions—or claims to champion—the common person, often contrasting them favorably with a real or perceived elite or establishment. Its Latin roots, as noted in the Morais Dictionary, reflect sympathy for the people, yet its application has transformed over time. What once appeared as a doctrine advocating for the people has evolved into what many scholars now describe as a “thin-centered ideology” (Mudde & Rovira Kaltwasser, 2017), as it lacks a comprehensive worldview of its own. At its core, populism divides society into two opposing groups: “the pure people” versus “the corrupt elite,” arguing that politics should express the *volonté générale*—the general will of the people (Mudde, 2019). Left-wing populism emphasizes economic inequalities, portraying elites as exploiters of the working class, while right-wing populism focuses on cultural and national issues, framing elites as enablers of immigration, globalization, or moral decay (Norris & Inglehart, 2016). This ideological adaptability allows populism to borrow elements from other political frameworks and address context-specific grievances. As Moffitt (2016) observes, this flexibility, combined with populism’s resonance with public discontent, makes it a dynamic force in modern politics.

This adaptability is evident in the rise of euroscepticism, a recurring feature in populist rhetoric. The term has its origins in the 1980s, emerging as a critique of the European Economic Community (EEC) and concerns over the potential loss of national sovereignty. Over time, it has evolved into a broader narrative that challenges the legitimacy and effectiveness of the European Union (EU), frequently framing it as a detached and elitist institution that prioritizes bureaucratic agendas and disconnected from the lived realities of citizens across member states (Gabriel, 2018). Populist parties strategically leverage the range between hard and soft euroscepticism³ to tailor their messaging to their specific context. For instance, left-wing populists tend to emphasize economic sovereignty, while right-wing populists focus on migration and national identity (Rodrik, 2024).

This rhetoric often hinges on crises—economic downturns, migration waves or political instability—to amplify public dissatisfaction with European institutions. As Pirro, et al (2018) argue, moments of crisis provide fertile ground for populist parties to

³ Hard euroscepticism refers to the complete rejection of the European Union, while soft euroscepticism is concerned with the heavy criticism of certain policies and governance frameworks. (Populism Studies Vocabulary, 2024)

position themselves as the defenders of "the people" against a remote and ineffective Brussels bureaucracy.

For populist parties, Euroscepticism serves a dual purpose: it provides a critical lens through which to highlight the perceived failures of the EU at the same time it allows these movements to position themselves as visionaries. By framing the EU as a detached and ineffective institution, populist parties capitalize on public dissatisfaction during crises to reinforce distrust in supranational governance (Hobolt, 2018). Right-wing populist parties, such as Rassemblement National in France, draw on euroscepticism to advocate for innovation as a means to restore national sovereignty and rebuild state capacities, particularly in areas like economic development and migration control. As Gabriel (2018) notes, this flexibility enables euroscepticism to serve as both a critique of existing systems and a platform for proposing alternative approaches to governance.

Feelings of alienation and disillusionment with traditional political structures have driven many citizens to support populist movements, resulting in unexpected outcomes in legislative elections across Europe and the European Parliament (Rydgren, 2007). This growing trend can be understood as a reaction to intersecting disruptions in three primary domains: economic discontent mostly, cultural backlash and overall distrust in governance (Rodrik, 2018). Annex B provides additional context on the rationale behind populist support.

4. CRAFTING A COMMON FUTURE: INNOVATION AS THE EU'S PATH TO PROGRESS AND UNITY

The European Union (EU) has placed innovation at the heart of its strategic vision for a competitive and resilient future. In the mission letter to Ekaterina Zaharieva, newly-appointed *Commissioner for Startups, Research, and Innovation*, EU President Ursula von der Leyen emphasizes innovation as essential for driving economic competitiveness, scientific progress and the EU's ambitions for a cleaner and more digital economy (European Commission, 2024). Within this context, the EU regards "disruptive innovation" as particularly valuable, focusing on strategic sectors like environmental sustainability, economic resilience and security. The renaming of the commission as "**Startups**, Research and Innovation" reflects this sharpened focus, indicating a strategic alignment with Europe's evolving economic and technological priorities.

In the *Political Guidelines for the Next European Commission 2024–2029*, innovation is described as “a force for progress across multiple dimensions,” pivotal for Europe’s ambitions of environmental sustainability, technological leadership and security. Through programs such as Horizon Europe and frameworks like the European Research Area (ERA), the EU emphasizes innovation as a tool for addressing systemic global challenges and a foundation for its economic transformation (European Commission, 2024).

Horizon Europe (2021–2027) is the EU’s flagship innovation program, with a €95.5 billion budget aimed at advancing research excellence, societal impact and collaborative problem-solving. Structured around three pillars— “Excellent Science,” “Global Challenges and European Industrial Competitiveness,” and “Innovative Europe”—the program focuses on mission-oriented goals, including climate neutrality, health resilience and sustainable food systems. The European Commission (2021) underscores Horizon Europe’s role in fostering breakthroughs that align research with measurable societal benefits while building Europe’s competitive edge globally. This mission to drive innovation and societal impact is further contextualized by the European Commission’s *Align Act Accelerate: Research, Technology and Innovation to Boost European Competitiveness* (2024) report. Produced by the Horizon Europe expert group, this comprehensive analysis evaluates the program’s implementation, identifying its strengths while addressing systemic challenges and providing recommendations for improvement.

The report builds on Horizon Europe’s objectives, emphasizing the program’s critical role in bolstering Europe’s competitiveness in a rapidly shifting global RD&I landscape. It acknowledges the program’s success in fostering excellence through initiatives like the European Research Council (ERC) and the European Innovation Council (EIC) and in enabling multi-country collaboration on pressing societal challenges, such as climate change and health resilience. For more information on the ERC and the ERA, refer to Annex C.

Mariana Mazzucato’s *Mission-Oriented Research and Innovation in the European Union: A Problem-Solving Approach to Fuel Innovation-Led Growth* (2018) provides a framework for addressing societal challenges through missions—bold, inspirational goals that require focused, measurable and time-bound objectives aligned with societal needs.

These missions necessitate cross-sector collaboration among public, private and civil society actors in order to connect policy domains, engage citizens and ensure public buy-in as well as societal relevance. However, the report highlights two key challenges: the need for effective governance structures to coordinate diverse actors and ensure accountability and the importance of coherent funding mechanisms that leverage public funding to attract private investment. Furthermore, Mazzucato emphasizes the importance of aligning national and EU-level policies to support mission implementation. Drawing on examples such as the moon landing, the report illustrates how missions can unify public opinion and foster innovation. As Mazzucato states, "missions require putting innovation and outcomes at the centre of what we now think of economic growth."

The Letta Report on the Single Market and the Draghi Report on Competitiveness provide critical insights into the challenges faced by the EU's innovation agenda. While the Draghi Report emphasizes innovation as a tool for addressing Europe's technological and geopolitical challenges, the Letta Report shifts focus to structural reforms needed to strengthen the Single Market. Letta (2024) identifies the incomplete integration of the Single Market as a major obstacle to fostering growth and innovation, advocating for a "fifth freedom" centred on research, innovation and education. This vision aims to embed innovation drivers at the core of the EU's economic framework, enhancing cross-border collaboration and reducing reliance on external technologies. The report also underscores the importance of regulatory and financial integration, proposing the Capital Markets Union (CMU) as a critical mechanism for mobilizing private savings to support strategic transitions in sustainability and digitalization.

The Letta Report's vision for EU economic integration faces significant critiques, particularly regarding structural barriers like the absence of a common budget and taxation system, which hinder funding for large-scale projects (Banco de España, 2024). Regulatory contradictions, such as promoting the reduction of regulatory burdens while supporting complex digital regulations, impose high compliance costs on SMEs (Erixon, 2024). Proposals for deeper market integration and a "Savings and Investments Union" face resistance from Member States due to entrenched national interests and political inertia (Banco de España, 2024). Critics also highlight the unrealistic nature of pooling state aid, the lack of actionable measures to strengthen innovation as a "fifth freedom," and the overambition of creating a Transatlantic Single Market, given political and

structural challenges (Erixon, 2024; Banco de España, 2024). Annex D provides the explanation of the main critics in detail.

The Draghi Report underscores the role of innovation as central to addressing Europe's growing challenges, including climate change, geopolitical tensions and digital transformation. Draghi (2024) frames innovation as a strategic tool for reducing dependencies and fostering resilience, highlighting that "Europe largely missed out on the digital revolution" and lags significantly behind global leaders like the United States and China (Draghi, 2024, p. 4). For instance, the report highlights that the EU is home to only four of the world's top 50 tech companies, and high energy costs are identified as a factor affecting its competitiveness. The report argues for accelerated investments in key technologies, such as artificial intelligence, renewable energy, and quantum computing, to close this innovation gap. Beyond technology, Draghi emphasizes education and skills development as essential to the EU's innovation strategy, calling for strengthened programs like Erasmus+ and European University Alliances to create a unified research and professional ecosystem across Member States.

The Draghi Report faces significant critiques for its state-driven policies, such as subsidies and industrial strategies, which conflict with the market-driven principles of EU Treaties and risk distorting competition (Weck, 2024). The proposition of extending QMV to streamline decision-making is seen as contentious, particularly among smaller Member States (Foundation Robert Schuman, 2024). Critics also highlight the burden of large-scale public funding, and question public institutions' ability to allocate resources efficiently (Weck, 2024). Overregulation in key sectors like finance, digital economy and sustainability is another point of concern, with calls for reducing regulatory fragmentation to enhance market-based innovation (Weck, 2024). Furthermore, von der Leyen's administration's focus on prioritizing "strategic sectors" is criticized for potentially undermining competition enforcement and politicizing decision-making (Scott Morton, 2024). Lastly, rigid lifecycle emissions criteria are seen as a barrier to low-carbon fuel investments, with experts advocating for more flexible regulations to support sustainable transitions (Burchill, 2024). See Annex E for further details on critiques of Draghi Report.

5. METHODOLOGY

This study employed a primarily qualitative approach to explore the ways in which populist narratives influenced innovation policies in Portugal, France and the broader EU context. By integrating thematic analysis to identify recurring patterns within populist discourse and policy analysis, complemented by relevant statistical indicators, this approach balanced narrative exploration with innovation-focused evaluation. The methodology was exploratory to uncover underlying patterns while remaining descriptive to provide a detailed examination of the impacts on innovation frameworks, ensuring alignment with the study's focus on innovation policy within a complex political landscape.

5.1. Research Design

A qualitative research design was adopted due to its suitability for analysing complex social and innovation-focused phenomena. This design was chosen to explore how innovation policies are influenced by broader social and political contexts, particularly through populist narratives. The study aimed to uncover the underlying themes and connections that affect innovation strategies and policy implementation. The inclusion of indicators and hard data from Portugal and France was instrumental in providing a quantitative perspective on innovation metrics. These data points helped contextualize the broader analysis by linking narrative trends with measurable impacts on innovation ecosystems. By comparing these indicators across Portugal and France, the study analysed how populist influence were associated with changes in innovation outcomes, such as research and development investments, policy shifts and measurable impacts on innovation ecosystems. This approach ensured that the analysis went beyond qualitative insights, offering a balanced evaluation of the interplay between political discourse and innovation performance.

Portugal and France were selected as the focus of the study due to the familiarity with these countries, including cultural and linguistic knowledge, as well as their contrasting innovation ecosystems and political contexts. Portugal's innovation landscape, characterized by significant investments in research and development and a strong emphasis on international collaborations, offered insights into how innovation policies are shaped within a political context where populist pressures are relatively recent but

growing. The rise of an extreme right-wing populist party, now the third-largest political force in the country, highlighted how these pressures might increasingly influence policy decisions in the coming years. France, with its well-established innovation sector and longer-standing populist movements, allowed for a clearer analysis of the impacts on innovation policy. The RN's sustained influence over several years has made it easier to trace and evaluate specific policy shifts linked to populist pressures. This combination of a robust innovation ecosystem and the prolonged presence of populist forces enabled a nuanced understanding of how innovation systems respond to entrenched political dynamics and external pressures. The timeframe of 2014 to 2024 was selected to capture the evolution of innovation policies and their interaction with populist narratives during a critical period that includes the rise of populist movements, their responses to the COVID-19 pandemic and other significant crises and moments that shaped the future of innovation policies, such as the growing urgency of the climate change crisis, the rapid evolution of data technologies, the 2015 migration crisis and economic challenges. These events not only influenced the development and strategies of populist movements but also acted as pivotal points for innovation priorities and policy adjustments within the EU.

5.2. Data Collection Methods

Data for this study was collected from secondary sources to ensure a comprehensive dataset encompassing both formal and informal narratives. The use of secondary sources was justified by their ability to provide established records of political discourse, policy development and the evolution of innovation strategies. Key sources included political party manifestos, which offered insights into how populist movements framed innovation policies and outlined their priorities, and European Union policy documents, which were analysed to assess the alignment or divergence of EU innovation strategies with populist narratives. Scholarly studies were also reviewed to incorporate previous research findings, providing a theoretical and empirical foundation for the analysis. These studies were particularly valuable in contextualizing the role of innovation policies in response to broader socio-political challenges. Additional perspectives were derived from news articles, research journals and reputable publications, offering diverse and up-to-date context. For the COVID-19 case study, the analysis focused on materials published between 2020 and 2024, including pandemic-specific reports, news articles and studies, capturing the peak of the pandemic's impact on innovation policy discourse. This

timeframe allowed for an in-depth exploration of how populist narratives adapted to the crisis and shaped policy discourse on innovation. The reliance on secondary sources allowed for a cost-effective and efficient analysis of diverse data as well as ensuring a robust integration of academic and practical insights.

5.3. Data Analysis Approach

The analysis process involved three key steps: analysing key EU innovation reports, creating a statistical profile for each country and comparing political programs against EU innovation priorities. The first step focused on key EU reports to understand the current state of innovation and areas for improvement. The second step created a statistical profile for Portugal and France, examining innovation indicators and innovation policy performance over the past decade. This provided a quantitative foundation to contextualize qualitative findings. The third step analysed the political programs of populist parties in Portugal and France, comparing their alignment with EU-defined innovation objectives. This structured approach ensured a balanced and comprehensive analysis of how populist narratives align or conflict with innovation goals within the EU framework.

5.4. Limitations

This study was not without its limitations. The focus on Portugal and France, while offering valuable contrasts, limited the generalizability of the findings to other EU countries. These two cases provided important insights but did not capture the full diversity of populist movements across the EU. The study's timeframe (2014-2024), while comprehensive, may have excluded relevant historical narratives that could provide additional context. The reliance on secondary sources introduced potential biases, as the interpretation of narratives and policies depended on the availability and framing of the data. Additionally, the analysis of narratives across different countries posed challenges related to linguistic and cultural nuances, which may have been lost or misinterpreted during thematic analysis. Ethical considerations were carefully addressed throughout the research. Proper citation practices were followed to maintain transparency and academic integrity. The analysis was conducted with a commitment to neutrality, aiming to minimize bias in the interpretation of narratives and their consequences.

6.RESULTS

6.1. Portugal and France: Statistical Profile on Innovation

To analyse the influence of populist parties on innovation policy, it is crucial to consider the macroeconomic environment and aggregate innovation performance in the selected countries. Table 1 outlines Portugal and France's broader economic context, including key indicators such as population size, GDP per capita (PPP), and Global Innovation Index rankings (2014–2024). The analysis uses GDP per capita (PPP) to adjust for cost-of-living differences and Real GDP per capita to track economic growth per person over time. Combining both provides a clearer picture of living standards and real progress. The Overall Global Innovation Rank, reported by WIPO with Cornell University, evaluates 133 countries based on multiple sub-indicators, including input and output scores, each with respective rankings.

TABLE I

CONTEXT AND OVERALL INNOVATION PERFORMANCE (2014 – 2024)

	Portugal		France		EU	
Time Frame	2014	2024	2014	2024	2014	2024
Income Group	High Income		High Income		-	
Region	Europe		Europe		-	
Population Size	10 444 092	10 639 726	66 165 980	68 401 997		
GDP per Capita (PPP)	23 068.4	45 277	35 784.0	58 765	37,800	58 892.40
Real GDP per Capita	16 950	20 090 (2023)	32 990	35 090 (2023)	36,562	45,240
Overall GII Rank	32	31	22	12	-	
Input Rank	36	31	20	17	-	
Output Rank	36	27	26	10	-	

Both Portugal and France are classified as high-income countries (World Bank, 2024), but exhibit clear differences in population size, economic performance and innovation rankings. France, with a significantly larger population of approximately 68 million in 2024, grew by 3.38% from 2014. In contrast, Portugal's population remained relatively stable at relatively 10 million, increasing by just 1.87% since 2014. Economic indicators show a marked difference, with Portugal's GDP per capita (PPP) nearly doubling from 2014 to 2024. However, France maintained a higher GDP per capita overall, increasing significantly during the same period. Overall, France, with its bigger market size, has a more developed and robust economy when compared to Portugal. However, a deeper

analysis of GDP per capita reveals that Portugal experienced significant economic recovery in the years following the COVID-19 pandemic, which contributed to a quicker rebound in GDP growth compared to France. While Portugal's GDP per capita increased by 10.8% during this period, France exhibited slower growth, reflecting the lingering economic effects of the pandemic.

In terms of innovation performance, overall, France outperformed Portugal. France improved its Global Innovation Index (GII) rank from 22nd in 2014 to 12th in 2024, while Portugal made modest progress, moving from 32nd to 31st. While the GII rankings indicate an improvement for both France and Portugal between 2014 and 2024, it's important to consider the reduction in the number of countries ranked during this period. To gain a better understanding of each country's performance, we can refer to the European Innovation Scoreboard (EIS) 2024, which provides detailed performance indicators, from 2017 to 2024. According to the EIS, France ranks among the stronger innovators in the EU, consistently outperforming the EU average across various dimensions. As for Portugal is generally classified as a moderate innovator in the EIS (European Commission, 2024). As represented in Table 2, the rankings for human capital and research have remained relatively stable, but the overall ranking for institutions has declined, reflecting the broader trend of decreasing trust in institutional frameworks.

TABLE 2
INPUT INDEX FOR PORTUGAL, FRANCE AND THE EU(2014;2024)

	Portugal		France		EU	
Time Frame	2014	2024	2014	2024	2014	2024
Human Capital and Research Rank	21	21	15	16	-	
R&D Expenditure (% of GDP)	1.5%	1.7%	2.3%	2.2%	2.1%	2.2%
Researchers (per million)	9 477	5 744	5 327	5 085	2 918	4 790
Institutions Rank	28	37	25	29		
Political Stability Score ⁴	84.0	42.0	79.2	59.4	-	
Regulatory Quality	70.0	61.9	77.8	73.1	-	

⁴ From the 2014 report to the 2024 report, the score for political stability changed from “Political Stability Score” to “Political Stability for Business”. For the purpose of this comparative analysis, both are considered at the same ground since they result from the same survey question.

In Portugal, R&D expenditure has increased, whereas France has experienced a decrease. This aligns with the European Innovation Index (EII), which highlights one of Portugal's strongest improvements as being the increased direct and indirect government support for business R&D. However, the number of researchers has declined in both countries, with a more pronounced reduction in Portugal.

Political stability scores have also decreased in both countries, indicating rising instability, particularly in Portugal. Similarly, regulatory quality has seen an overall decline, underscoring ongoing challenges in governance and policy effectiveness. The decline in institutional rankings and political stability in both countries coincides with the rise of populist parties during this period, but this alone does not justify it, nor is it necessarily the cause.

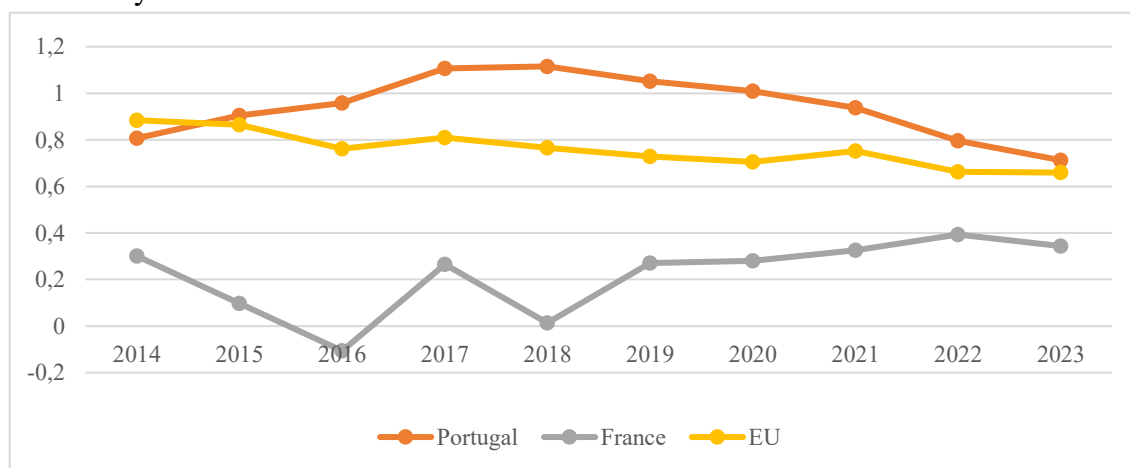


Figure 1 – Evolution of Political Stability and Absence of Violence/Terrorism (2014-2023)

The graph in Figure 1 illustrates the Political Instability and Absence of Violence/Terrorism index for Portugal and France between 2014 and 2023, and further confirms the political stability score from the Global Innovation Index (WIPO, 2024).

Portugal consistently exhibits higher stability compared to France throughout the period, reflecting fewer political disruptions and a stronger absence of violence or terrorism. Its index peaks in 2017, followed by a gradual decline to approximately 0.70 in 2023. This trend aligns with the country's delayed populist trend already seen across Europe. Up until 2019, Portugal's governance landscape was binary, with mainly two parties alternating in governance. In contrast, France demonstrates a more volatile trajectory. Its index drops significantly below -0.10 in 2016, corresponding to the impact

of major terrorist attacks during that period. Despite some recovery in subsequent years, France's index remains lower than Portugal's, reflecting ongoing challenges with political instability and terrorism. These external shocks, combined with a more fragmented political landscape, may have intensified France's susceptibility to populist movements.

TABLE 3

OUTPUT INDEX FOR PORTUGAL, FRANCE AND THE EU (2014;2024)

	Portugal		France		EU	
Time Frame	2014	2024	2014	2024	2014	2024
Knowledge and Technology Outputs Rank	46	33	20	16	-	-
Patents filed per Capita	2.5	2.3	6.5	6.6	0.29	0.44
High Tech Exports (% GDP)	2.3	3.4	14.3	10.4	2.0	3.0

In terms of knowledge and technology outputs, both Portugal and France have seen an improvement in their rankings. However, patent activity shows a contrasting trend: Portugal experienced a slight decrease in the number of patents, while France saw a modest increase. High-tech exports have followed an opposite trajectory, with Portugal recording an increase and France experiencing a decline. These patterns reflect varying national strategies and capacities in leveraging innovation for economic outputs.

6.2.EU, Portugal and France: Profile on Populism

European Union

Established in June 2024, Patriots for Europe (PfE) rapidly ascended to become the third-largest faction in the European Parliament, securing 84 Members of the European Parliament (MEPs) from 12 countries. The alliance includes prominent right-wing parties such as Hungary's Fidesz, France's National Rally (RN), Austria's Freedom Party (FPÖ), Italy's Lega and Portugal's Chega, reflecting a broader European trend of rising sovereigntist and nationalist movements (Cox, 2024). Despite its rapid rise, PfE has faced criticism for policies perceived as exclusionary and against liberal democratic norms. The

alliance’s prominence has sparked significant debate about the future of European integration and the resilience of democratic values in the EU (Rankin, 2024).

POLICY INFLUENCE

TABLE 4

Patriots for Europe Position regarding innovation policy areas (2014-2024)

Policy Area	Specific Legislation/Program	PfE's Position	Outcome
European Green Deal	Comprehensive strategy to make the EU climate-neutral by 2050 (European Commission, 2019)	Strong opposition, arguing it harms traditional industries, leads to job losses, and imposes economic constraints. Calls for suspension or reassessment of its implementation. (Eder, 2025)	The Green Deal remains central to EU policy, but debates continue over the pace and scope of its implementation.
Circular Economy Action Plan	Initiative to promote the development of a circular economy. Part of the European Green Deal initiatives. (European Commission, 2020)	Against the plan, claiming it could lead to increased costs for businesses, disrupt existing industrial processes and result in job losses in certain sectors. (Eder, 2025)	The action plan was implemented, focusing on sustainability and resource efficiency, while addressing concerns about economic impacts.

PORTUGAL

Since its founding in 2019 by André Ventura, Chega has experienced a meteoric rise, securing 18.06% of the vote and 50 parliamentary seats by 2024, making it the third-largest party in the Assembly of the Republic (Chamusca, 2024). The party’s platform is characterized by a blend of anti-elitist, nationalist and exclusionary rhetoric that resonates strongly with regions facing economic stagnation and marginalization (Chamusca, 2024; Gianolla et al., 2024). Chega’s discourse reflects broader European trends in radical-right populism, challenging liberal democratic norms through emotion-driven narratives (Manucci, 2024).

CHEGA’S POLITICAL PROGRAM – VIEWS ON INNOVATION

Chega describes innovation as a pragmatic and instrumental tool. In their political agenda for the 2024 legislative elections, the word “innovation” appears 42 times, primarily as a synonym for improvement, modernization, or updating. The agenda does not provide a robust definition of innovation, nor is there a dedicated section addressing innovation or science. Instead, innovation is referenced across various sections, often as

part of administrative management and bureaucratic streamlining. This focus on operational improvements reveals the party's emphasis on addressing immediate administrative concerns, sidelining innovation's potential as a driver of systemic change. The use of innovation within Chega's agenda aligns with its central narrative. The five most frequently used words - "Portugal," "Chega," "Nacional," "Contra," "Socialista" - reflect the party's ideological focus on national identity and opposition to external or perceived political adversaries. The agenda notes: "We are committed to fighting Socialist policies that have hindered Portugal's competitiveness, advocating for a forward-thinking approach to administrative modernization" (Chega, 2024, p. 7).

In the healthcare sector, innovation is addressed through proposals such as the implementation of artificial intelligence, telemedicine and the creation of a centralized digital health record system, the *Registo Único de Saúde do Cidadão*. This platform aims to "facilitate integrated health services by offering secure access to comprehensive patient data, reducing redundancies and improving medical decision-making" (Chega, 2024, p. 29). These initiatives align with the party's broader goal of simplifying bureaucratic processes. The agenda also emphasizes public-private partnerships (PPPs) as a strategy to support infrastructure and healthcare modernization, stating that "collaborations with private entities are essential to improving the quality of public services without increasing financial burdens on taxpayers" (Chega, 2024, p. 90).

From an economic perspective, Chega's agenda references the role of innovation in creating competitive advantage in the global market. It draws on historical allusions, such as invoking the *Descobrimentos Marítimos Portugueses* (Portuguese Maritime Discoveries) of 500 years ago, to highlight the nation's historical capacity for innovation. The agenda declares: "Portugal must embrace the innovative spirit of the Discoveries, reclaiming its role as a global leader in technological advancements and economic excellence" (Chega, 2024, p. 496). Despite emphasizing the value of talent, particularly youth talent, there are no concrete policies to support research and development (R&D) or retain skilled professionals. Additionally, there is little mention of incentives to prevent brain drain, an issue related to the retain skilled professionals.

While Chega's program outlines various technological and administrative innovations, it notably lacks a clear focus on environmental policies connected to

innovation. Even though it includes measures like reformulating the National Strategy for the Sea 2030 to link defense, marine conservation and energy production, implementing a National Plan to Combat Water Loss, publishing the delayed ProSolos legislation for soil protection, revising the Waste Management Tax to encourage recycling, eliminating excessive environmental taxes, and auditing the Portuguese Environment Agency (APA) for transparency, it lacks a systematic and comprehensive approach to innovation policies regarding sustainability.

POLICY INFLUENCE

TABLE 5

Chega’s Position regarding innovation policy areas (2014-2024)

Policy Area	Specific Legislation	Chega’s Position	Outcome
Renewable Energy Development	National Strategy for Hydrogen (EN-H2) (Resolution of the Council of Ministers No. 63/2020))	Scepticism about the economic viability and prioritization of hydrogen investments over traditional energy sectors. (Diário de Notícias, 2024; Chega, 2024)	The strategy was approved, but ongoing debates influenced by opposition have led to delays in implementation and funding allocations.

FRANCE

Founded in 1972 by Jean-Marie Le Pen as the National Front (Front National), the Rassemblement National (RN) has evolved from a fringe far-right movement to a significant force in French politics. Initially associated with xenophobia and anti-Semitism, the party has undergone a process of "*dédiabolisation*" under the leadership of Marine Le Pen, who succeeded her father in 2011. This rebranding⁵ effort aimed to soften the party's image and broaden its appeal (Encyclopaedia Britannica, 2025). In the 2024 European Parliament elections, the RN achieved a historic victory, securing 31.36% of the vote, which led to the dissolution of the National Assembly and subsequent snap legislative elections.

⁵ Critics like Mondon (2013) have noted, however, that this rebranding reflects strategic positioning rather than a substantive ideological shift, suggesting that enduring radical elements may remain embedded in its agenda. In fact, the pursuit of a more moderate image risks alienating both the RN’s traditional voter base and the moderate electorate it aims to attract.

RN'S POLITICAL PROGRAM – VIEWS ON INNOVATION

The Rassemblement National (RN) frames innovation as a tool to reinforce national sovereignty and economic independence, positioning it as a mechanism to advance reindustrialization and reduce reliance on global supply chains. Their emphasis on "technologies of tomorrow," including nuclear energy, hydrogen and artificial intelligence, reflects their broader ambition to strengthen France's industrial base and secure its economic future (Rassemblement National, 2024, p. 14). These technologies are presented as essential to achieving energy independence and revitalizing domestic industries, an objective underscored by their call for competitive, decarbonized and abundant energy sources, which they argue are necessary for fostering a robust technological ecosystem (Rassemblement National, 2024, p. 8). Their approach positions local and European technologies as key drivers of national resilience, focusing on reducing France's dependency on international supply chains while bolstering its global standing. The RN's proposals to protect energy infrastructure, such as "protecting hydroelectric dams" and "a relaunch plan for nuclear energy," further align with their emphasis on localized energy production (Rassemblement National, 2024, p. 14). Youth and entrepreneurship are central to the RN's proposals for economic revitalization.

Measures such as tax exemptions for young people and incentives for new businesses highlight their intention to stimulate job creation and economic activity among the younger generation. For instance, the RN proposes to "exempt companies created by a young person under 30 from corporate taxes for five years" and to remove income tax obligations for individuals under 30 (Rassemblement National, 2024, p. 19). These policies aim to encourage entrepreneurship, retain young talent and mitigate economic stagnation. The RN situates their innovation strategy within a narrative of national resilience, often highlighting external challenges, particularly in relation to the European Union. Proposals such as "exiting the European rules for energy pricing" and prioritizing local production underscore their broader skepticism of globalization and EU regulations (Rassemblement National, 2024, p. 14). Their position emphasizes economic self-sufficiency, aligning innovation with goals of energy independence and industrial revival. (Rassemblement National, 2024, p. 14) The "Marie Curie Plan" for nuclear energy, aimed at revitalizing France's nuclear infrastructure, exemplifies their vision for long-term energy solutions (Rassemblement National, 2024, p. 14). However, the RN's opposition

to certain environmental policies, which they term "ecology punitive," reflects a more cautious approach to ecological transitions (Rassemblement National, 2024, p. 12). While they emphasize the importance of green energy, their proposals often prioritize affordability and energy security over comprehensive climate-oriented strategies. For instance, they oppose restrictions such as "the prohibition of thermal engine cars by 2035," advocating instead for affordable clean technology development (Rassemblement National, 2024, p. 12).

Central to the RN's strategy has been its ability to leverage crises as opportunities to amplify its narratives. De Nadal (2024) highlights the party's adept use of the COVID-19 pandemic to advance its concept of "green nationalism," a blend of nativist and environmental themes. By framing globalization as a threat to both environmental sustainability and cultural identity, the RN crafted a narrative that resonated with public anxieties about climate change and societal stability. This integration of environmentalism into its nationalist agenda, which De Nadal (2024) terms "green patriotism," positions the RN as a defender of local solutions and traditional values in the face of global challenges.

POLICY INFLUENCE

TABLE 6

RN'S POSITION REGARDING INNOVATION POLICY AREAS

Policy Area	Specific Legislation	RN's Position	Outcome
Wind Energy	Law No. 2019-1147 of 8 November 2019 on Energy and Climate (Présidence de la République Française, 2019).	Against the expansion of wind energy, citing concerns over landscape impact and economic efficiency. (Rose,2021)	While the law was enacted, RN's opposition contributed to local resistance and slowed the deployment of new wind projects.
Green Energy Subsidies	Financial Support Mechanisms for Renewable Energy Projects (Présidence de la République Française, 2023)	Criticises subsidies for renewable energy, arguing they lead to higher consumer costs and benefit foreign manufacturers. (Guillou & Piquard, 2024)	The government-maintained subsidies, but RN's stance influenced public opinion, leading to increased scrutiny and calls for policy reviews.
Carbon Tax	Proposed Increase in Carbon Tax under the Finance Act (Rocamora, 2017)	Against the increase, claiming it disproportionately affected low-income households and rural communities. (Rocamora, 2017)	The proposed increase faced significant protests (e.g., Yellow Vests movement) and was eventually suspended. (BBC News, 2018)

Artificial Intelligence Development	National AI Strategy (2018)	Criticized the strategy, expressing concerns over foreign influence and the displacement of French workers. (Guillou & Piquard, 2023)	The strategy was adopted. Public concerns over foreign labor in tech sectors gained more visibility. (Greenacre, 2024)
Green Technologies Investment	Energy Transition Law for Green Growth (Law No. 2015-992) (République Française, 2015)	Opposed the law, arguing that investments in green technologies were economically unsound and threatened traditional industries. (Le Monde Editorial, 2024)	The law was passed, setting ambitious targets for renewable energy adoption and carbon emission reductions.
Foreign Investment and Economic Stability	General Stance on Foreign Investment Policies (2024)	Scepticism towards foreign investments, particularly from non-EU countries, citing concerns over national sovereignty and economic independence. (Le Monde Editorial, 2024; Greenacre, 2024)	This position contributed to increased political instability and apprehension among foreign investors regarding France's economic direction.

7. DISCUSSION

7.1. When Innovation Meets Populism

Innovation depends on interconnected systems, long-term planning and trust in both science and political institutions. However, the findings demonstrate how populist movements in Portugal and France have influenced political discourse and contributed to systemic vulnerabilities, though other factors may also play a role. These disruptions stem from the ideological discrepancies between populism's nationalist, short-term focus and innovation's inherently collaborative and future-oriented nature.

Political instability is a well-documented barrier to innovation (Edler & Fagerberg, 2017), as it disrupts the continuity and coherence needed for long-term innovation strategies. Research highlights how periods of heightened political uncertainty, result in a marked decline in innovation activities, evidenced by reductions in patent-based indicators (Bhattacharya et al, 2017). In fact, it is the uncertainty regarding potential policy changes that proves most damaging, disrupting the stability required for sustained innovation efforts (Bhattacharya et al, 2017). In both Portugal and France, the growing influence of populist parties may have contributed to the instability, evidenced by declining indices in both nations from 2014 to 2024. The results reflect this rise in political instability: Portugal's political stability index dropped from 28 to 37, while France's fell from 25 to 29 (WIPO, 2024). This decline coincides with the growing influence of populist parties such as Chega and the Rassemblement National (RN).

Populist movements also shape political discourse by redefining the roles of key actors within national innovation systems, including governments, companies and public institutions. In Portugal, the government formed in 2024 merged the Ministry of Education (*Ministério da Educação*) with the Ministry of Higher Education, Science and Innovation (*Ministério do Ensino Superior, Ciência e Inovação*). While this decision is not inherently populist in origin, it reflects shifting governmental priorities and raises concerns about the diffusion of focus on innovation and universities. By consolidating these areas, the structural emphasis on advancing research and fostering innovation ecosystems may diminish, potentially undermining Portugal's ability to position itself competitively in the global innovation landscape.

Traditionally, governments within these systems play multifaceted roles: they act as facilitators by funding research and fostering public-private collaborations, regulators by establishing frameworks for technological development and enablers of inclusivity by addressing regional and social disparities. Companies, on the other hand, often function as implementers of innovation policies, translating research outputs into marketable technologies, while academia contributes as knowledge producers. Public perception serves as the glue that fosters trust and collaboration between these stakeholders. However, populist rhetoric frequently narrows these roles, portraying governments as overly bureaucratic and complicit in serving elite interests, while positioning corporations as symbols of globalization's excesses. This reframing shifts public perception of the government's role from a system-wide integrator to a more limited, transactional actor and casts companies as adversaries to national interests. This often overlooks the complex reality in which large corporations, particularly in technology and energy sectors, play a dual role in populist dynamics. Populist parties criticize multinational companies for representing globalization's excesses; on the other hand, evidence shows that some of these same companies provide financial support to populist movements, leveraging their political influence to weaken regulatory frameworks and foster favourable market conditions (Matelly et al., 2024). For example, during the Green Deal negotiations, the influence of green lobbies was cited to criticize sustainability policies, while simultaneously receiving funding from corporate actors opposed to stricter environmental regulations.

The results also indicate that populist positions have had a significant influence on public discourse in innovation, with implications for both Portugal and France. Chega's approach to public investment in innovation proposes targeted public spending on digitalization and administrative modernization, such as implementing technologies to streamline services and reduce bureaucracy. Public-private partnerships (PPPs) are highlighted as a key strategy to enhance public services, particularly in healthcare and infrastructure, while minimizing financial burdens on taxpayers. However, the agenda lacks concrete measures to support research and development (R&D) or to address systemic issues like brain drain and sustainability. Chega critiques past policies for inefficiency in public spending but offers limited detail on how their proposals would ensure Portugal's innovation ecosystem evolves beyond operational improvements. It should be noted, however, that, while constructive policies and measures exist, with regard to the innovation policy area, there's no party with a structural well-defined focus on R&D and innovation policies.

Similarly, the Rassemblement National (RN) in France has historically exhibited ambivalence toward public investment in innovation. While the party has not prioritized technology and innovation, it has expressed support for enhancing national competitiveness through strategic investments. For instance, the RN's economic program emphasizes growth and production, proposing a combination of public and private investments to bolster these areas. However, the RN's approach also lacks a long-term framework for addressing systemic innovation challenges. This rhetoric undermines the foundational role of public investment in fostering long-term innovation systems, as highlighted by the European Commission's emphasis on public-private collaboration to drive sustainable growth. By deprioritizing public funding, populist narratives weaken the capacity of national innovation systems to address systemic challenges, such as climate change and technological advancement.

In addition to targeting government and corporate roles, populism disrupts the alignment between national innovation systems and broader frameworks. By manipulating public perception—a key component of the quadruple helix model of innovation (Carayannis & Campbell, 2012)—populist parties erode trust in the interconnected relationships essential for innovation. This erosion is particularly significant as public perception acts as a bridge between governments, academia industry

and civil society, ensuring the inclusivity and collaboration needed to address systemic challenges. For instance, public scepticism fuelled by populist narratives often leads to reduced adoption for international collaborations or environmental policies, as these are framed as elitist or detrimental to local priorities. For example, in France, the analysis results of policy influence highlighted how RN's opposition to certain policies especially the wind energy expansion led to local resistance and slowed the adoption of the new wind energy projects. Also, famously, the carbon tax implementation, which RN opposed on the justification that it affected significantly low-income households and rural communities, faced significant public scrutiny (e.g. Yellow Vests Movement).

Beyond discourse, populism disrupts innovation pathways. Brexit serves as a stark example. The United Kingdom's withdrawal from the European Union, propelled by populist rhetoric emphasizing sovereignty and independence, initially resulted in its exclusion from EU innovation programs like Horizon Europe. This detachment hindered access to essential funding, research networks and expertise, challenging UK-based institutions' global competitiveness. However, after a re-evaluation, the UK secured associate membership, allowing it to buy back participation, though with reduced influence over program priorities. Despite regaining access, structural barriers remain, limiting seamless collaboration. By prioritizing nationalist goals, the UK's innovation landscape has become less resilient, struggling to adapt to the demands of a globalized world (The Royal Society, 2019; Forster-van Aerssen, 2023).

In the United States, populism under Donald Trump, in 2016, created an environment of uncertainty that drove innovators and entrepreneurs to seek more stable conditions abroad. The emphasis on nationalist policies, coupled with anti-globalization rhetoric, undermined trust in institutions and diminished the appeal of the U.S. as a hub for innovation during his presidency. In response, numerous American entrepreneurs sought refuge in more stable and inclusive environments, with Portugal emerging as a preferred destination. The country's favourable tax policies, relative political stability and quality of life attracted U.S. citizens seeking a secure base for innovation and business ventures. For instance, inquiries from U.S. citizens about relocating to Portugal increased following Trump's re-election in 2024, reflecting a growing demand for alternative innovation hubs (Gouveia, 2024). This influx, however, highlights vulnerabilities in both nations—while Portugal's openness allowed it to capitalize on this migration, it also exposed systemic

weaknesses in retaining and fostering long-term domestic innovation ecosystems (Norris & Inglehart 2016).

As innovation hubs are shaped by external trends, local systems may become overly dependent on transient expatriate contributions rather than sustainable domestic development. Critics have noted that the increased demand for residency programs and investment opportunities in Portugal, driven in part by U.S. innovators, has further exacerbated local inequalities, particularly in housing markets and access to resources. These trends reflect how populism, even when affecting other countries, creates ripple effects that can destabilize the broader global innovation landscape, leaving nations like vulnerable to external shocks (Mudde, 2019; Norris & Inglehart, 2016).

The findings also expose Europe's persistent innovation gap, a constant reoccurrence in the European Union reports, particularly the discrepancy between input investments and output valorisation. While Portugal's R&D expenditure rose to 1.7% of GDP, its patent activity declined, reflecting inefficiencies in translating inputs into tangible outcomes. In contrast, France demonstrated stronger alignment between its input and output metrics, with R&D expenditure at 2.2% of GDP in 2024 and a slightly higher patent activity over the analysed period, despite a notable decline in high-tech exports from 14.3% of GDP in 2014 to 10.4% in 2024. This trend highlights a significant gap between innovation inputs and their effective valorisation in global markets, a recurring issue emphasized in the Draghi and Letta reports as one of Europe's critical weaknesses compared to competitors like China and the United States. This "innovation gap" signals underlying structural inefficiencies, including the inability to fully capitalize on R&D investments, as well as challenges in scaling innovative outputs to meet international demand.

As I write this discussion, news, all over the world, are dominated by the inauguration ceremony of the new U.S. president, Donald Trump, a populist leader, attended by the owners of three of the world's largest high-tech companies: Amazon, Meta and X. This event exemplifies the deep interplay between populism and innovation. It showcases the strategic visibility that such alliances bring, highlighting how these technological giants, known for monopolistic practices, align themselves with populist leaders to further their market dominance. This alignment also underscores the disproportionate influence these

companies wield over innovation systems, not only by dominating markets but also by shaping public discourse through their control of social media platforms. The presence of these monopolistic corporations at such a politically charged event reveals how populism exploits innovation systems to entrench power, while also serving as a declaration of resistance against the EU's push for data privacy reforms, antitrust regulations and restrictions on disinformation (European Commission, 2023).

Also, as social media platforms, ideally, should maintain a neutral position and adhere to truth, functioning as impartial conduits of information. However, this deviation from neutrality exacerbates the influence of populist rhetoric, which thrives on exploiting these information ecosystems to shape public perception and entrench power. The situation evokes the words of George Orwell in *1984*, a book ironically facing bans in the U.S.: "But if thought corrupts language, language can also corrupt thought." This quote resonates deeply in this context, as it underscores how the manipulation of communication shapes public thought in ways that corrupt the language used to debate and evaluate truth, fostering environments where opinions overshadow verified facts and further entrenching their power.

7.2. The Unstable Ground of Innovation Policy Under Populist Pressure

Innovation policies aimed at addressing climate change and fostering international collaboration are particularly vulnerable to populist opposition. The results show that most policies targeted by populist parties in Portugal and France negate climate change and are against EU-led collaborative initiatives. For example, Chega lacks any substantive climate change policies, while RN frames EU environmental efforts as punitive and economically harmful, promoting nationalist alternatives instead. Among the key policies that faced significant opposition were those linked to the European Green Deal, including emissions reduction targets, renewable energy mandates and carbon pricing mechanisms. These policies were criticized by populist parties as imposing disproportionate economic burdens on ordinary citizens and as prioritizing elite or international interests over local concerns. Climate innovation policies face significant resistance due to their perceived economic costs and the lifestyle changes they impose, which are often exaggerated in populist rhetoric to fuel public anxieties.

Populist parties strategically leverage these concerns by framing green initiatives as punitive measures rather than transformative opportunities. The RN's concept of "green nationalism" reframes sustainability through a nationalist-driven lens, emphasizing domestic control over resources and localized environmental strategies. This approach not only resonates with public anxieties but also redirects attention away from the collective responsibility of addressing global environmental challenges (De Nadal, 2024).

During the Green Deal negotiations, extreme-right parties frequently cited the influence of green lobbies as evidence of elitist manipulation, framing environmental initiatives as tools for corporate enrichment rather than collective progress. This critique strategically undermines public confidence in sustainability policies, redirecting focus from the long-term benefits of green innovation—such as renewable energy adoption and emissions reductions—to immediate economic concerns, such as rising energy costs and perceived threats to traditional industries. By framing these policies as elitist-driven agendas disconnected from the realities of ordinary citizens, populist movements successfully impact the social license required to implement transformative environmental strategies (Rassemblement National, 2024). This framing not only weakens the EU's ability to enforce climate policies but also amplifies scepticism toward international collaboration, further isolating national innovation systems from global efforts to address climate change effectively. Climate change represents the next critical crisis humanity must confront (IPCC, 2023) and the European Union has been resolute in prioritizing this challenge through innovative green policies. Yet, the findings highlight how populist parties, as climate change negationists, simultaneously undermine these efforts while exploiting them to fuel elitist narratives. By framing environmental policies as punitive and disconnected from national interests, these movements erode public support for collective action. A final question arises: will populist parties sustain their denialist rhetoric and continue to, opportunistically leverage this crisis, as they have done with others, to amplify their influence? Is climate action destined to become the next pandemic-like battleground, mired in polarized narratives?

In fact, the COVID-19 pandemic was not just a biological crisis but an information crisis—where misinformation spread faster than the virus itself. In a world where viral tent shapes public perception more than evidence-based knowledge, the next great battle

may not be against a pathogen but against the manipulation of truth itself. Annex E presents a focused case study that illustrates these dynamics in practice.

7.4. Final Reflection

As I bring this discussion to a close, I can't help but find myself reflecting on the journey this thesis has taken me on. To study such recent and still-changing topics and events was both a challenge and a privilege. Knowing that this topic is something we're all still living through made it hard to step back at times. These issues carry weight and irrevocably evoke opinions and emotions. When I started this work, I was so connected to the weight of the topic and my own emotions regarding it that it felt almost impossible to distance myself and stay objective. But I would say it was precisely that actuality that pushed me to grow, set aside my own biases and let the data and analysis speak for themselves. Over time, I learned how to approach the information with a clearer and more analytical lens – sidelining my instincts and letting the conclusions drive themselves from the evidences. And that shift was about both personal growth and academic development. It taught me how valuable the vulnerability that comes with questioning one owns assumptions and trusting the critical thinking process is. This work has been a lesson in humility, adaptability and the necessity of continuous learning. It has reminded me that research is as much about understanding and growth as it is about producing knowledge, and I hope this work reflects that journey as clearly as it tries to reflect the topic it seeks to explore.

8. THE BATTLE FOR INNOVATION IN A POLITICIZED WORLD

This thesis explored how populist political movements can disrupt and shape political discourse around innovation policies with specific focus in Portugal and France. While it is clear that populist forces have shaped discourse around innovation policies, the extent of their direct impact on innovation policymaking remains complex and difficult to quantify in the short term. The differences between France and Portugal, particularly in economic structure and institutional resilience, further complicate the picture, making it clear that populism's influence is not uniform across contexts.

Given the recency of these developments, establishing immediate causal links between populist rhetoric and policy outcomes is challenging. While this study identifies vulnerable areas and emerging patterns, an approach with more depth is necessary to fully understand the long-term consequences of populist disruption on innovation. The way these narratives evolve, the policy shifts they provoke and the broader implications for Europe's innovation landscape remain crucial topics for future research—ones that demand continued attention as the political climate continues to shift.

Ultimately, innovation has always been a battleground between progress and resistance. Whether Europe's future will be defined by its ability to push forward or by the weight of political hesitation depends on the stories we choose to believe—and, more importantly, the ones allowed to shape policy.

REFERENCES

- Acemoglu, D., Naidu, S., Restrepo, P., & Robinson, J. A. (2019). Democracy does cause growth. National Bureau of Economic Research.
- Ahrweiler, Petra & Pyka, Andreas. (2011). A New Model for University-Industry Links in Knowledge-Based Economies*. *Journal of Product Innovation Management*. 28. 218 - 235. 10.1111/j.1540-5885.2010.00793.
- Algan, Y., Guriev, S., Papaioannou, E., & Passari, E. (2017). Europe's Trust Deficit: Causes and Remedies. Centre for Economic Policy Research.
- Arendt, H. (1962). *The origins of totalitarianism* (Meridian ed.). Meridian Books. Retrieved from <https://cheirif.wordpress.com/wp-content/uploads/2014/08/hannah-arendt-the-origins-of-totalitarianism-meridian-1962.pdf>
- Athey, S., Conti, R. M., Fiedler, M., Frank, R. G., & Gruber, J. (2022). The economic case for federal investment in COVID-19 vaccines and therapeutics remains strong. Brookings Institution.
- Balfour, R. (2020). Why populism can survive the pandemic. Carnegie Endowment for International Peace.
- Banco de España. (2024). Europe's Economic Challenges and Policy Recommendations. Official Report.
- BBC News. (2018). France protests: What's behind the 'yellow vest' demonstrations? BBC News.
- Betz, H.-G. (2018). *The New Politics of Resentment: Radical Right Populism in Western Europe*. Palgrave Macmillan.
- Bhattacharya, Utpal & Hsu, Po-Hsuan & Tian, Xuan & Xu, Yan. (2013). What Affects Innovation More: Policy or Policy Uncertainty? *SSRN Electronic Journal*. 10.2139/ssrn.2368587.
- Bickerton, C. J., & Invernizzi Accetti, C. (2021). *Technopopulism: The new logic of democratic politics*. Oxford University Press.
- Brubaker, R. (2017) Why populism? *Theor Soc* 46, 357–385. <https://doi.org/10.1007/s11186-017-9301-7>

Burchill, R. (2024). Op-ed: Low-carbon fuels are the shortcut the EU needs to hit its climate goals. The Parliament Magazine.

Carayannis, E. G., & Campbell, D. F. J. (2012). *Mode 3 Knowledge Production in Quadruple Helix Innovation Systems: 21st-Century Democracy, Innovation, and Entrepreneurship for Development*. Springer.

Carayannis, Elias & Campbell, David (2014). Developed Democracies versus Emerging Autocracies: Arts, Democracy, and Innovation in Quadruple Helix Innovation Systems. *Journal of Innovation and Entrepreneurship*, 3(1), 12.

Carayannis, Elias & Campbell, David. (2019). Smart Quintuple Helix innovation systems: How Social Ecology and Environmental Protection are Driving Innovation, Sustainable Development, and Economic Growth. *Journal of the Knowledge Economy*, 8(1), 1–24.

Chamusca, P. (2024). Discontent, Populism, or the Revenge of the “Places That Don’t Matter”? Analysis of the Rise of the Far-Right in Portugal. *Societies*, 14(6), 80. <https://doi.org/10.3390/soc14060080>

Cox, D. (2024). Patriots for Europe: Jordan Bardella, Viktor Orbán, Marine Le Pen. *Politico*.

Cullen International. (2024). *EU Policy Analysis: Competition and Market Regulation*.

De Nadal, L. (2024). Climate Change: Bad News for Populism? How the Rassemblement National Used COVID-19 to Promote Its Environmental Agenda. *Nationalities Papers*, 52(2), 414–429. doi:10.1017/nps.2022.104

Diário de Notícias. (2024). Chega vai propor inquérito aos negócios do hidrogénio e do lítio. *Diário de Notícias*.

Direction générale des Finances publiques (DGFIP). (2023). *Crédit d’impôt au titre des investissements en faveur de l’industrie verte (C3IV)*. impots.gouv.fr.

Dixon, H. (2024). The European Union Risks a Sad, Bad Future. *Political Opinion Journal*.

Draghi, M. (2024). *Competitiveness and Innovation: A Strategic Vision for Europe*. EU Expert Group Report.

- Dutta, S., Lanvin, B., & Wunsch-Vincent, S. (2014). The global innovation index 2014: The human factor in innovation. World Intellectual Property Organization.
- Eatwell, R., & Goodwin, M. (2018). National Populism: The Revolt Against Liberal Democracy. Penguin Books.
- Eder, F. (2025). Let's kill the EU Green Deal together, France's far-right leader tells center-right. Politico.
- Edler, J., & Fagerberg, J. (2017). Innovation policy: What, why, and how. *Oxford Review of Economic Policy*, 33(1), 2–23.
- Edler, J., & Fagerberg, J. (2017). Policy and uncertainty in innovation. *Oxford Review of Economic Policy*, 33(1), 2–23.
- Edquist, C. and Zabala-Iturriagagoitia, J.M. (2015), Is PCP a demand- or a supply-side innovation policy instrument? *R&D Manage*, 45: 147-160. <https://doi.org/10.1111/radm.12057>
- Elliott, Tim & LeMay-Boucher, Philippe. (2018). Straight talk on trade: ideas for a sane world economy, by Dani Rodrik. *Canadian Journal of Development Studies / Revue canadienne d'études du développement*. 39. 1-2. 10.1080/02255189.2018.1542293.
- Encyclopaedia Britannica. (2025). National Rally (Rassemblement National).
- Encyclopedia Britannica. (2024). Definition of Populism. Online Encyclopedia.
- Erixon, F. (2024). The Letta Report – the Good and the Bad!. European Centre for International Political Economy (ECIPE).
- Etzkowitz, Henry & Leydesdorff, Loet. (2000). The Dynamics of Innovation: From National Systems and “Mode 2” to a Triple Helix of University–Industry–Government Relations. *Research Policy*. 29. 109-123. 10.1016/S0048-7333(99)00055-4.
- European Commission. (2019). The European Green Deal (COM/2019/640 final).
- European Commission. (2020). A new Circular Economy Action Plan For a cleaner and more competitive Europe (COM/2020/98 final).
- European Commission. (2021). Emergency research funding during COVID-19 and its impact on innovation systems.

European Commission. (2023). Data privacy reforms: Challenges and progress in 2023. Brussels: European Commission.

European Commission. (2023). Green Deal and economic policies: Ongoing debates. Brussels: European Commission.

European Commission. (2024). Align Act Accelerate: Research, Technology and Innovation to Boost European Competitiveness.

European Commission. (2024). European Green Deal and energy transitions. Brussels: European Commission.

European Commission. (2024). European Innovation Scoreboard 2024. European Commission.

European Commission. (2024). Horizon Europe Program Overview and Expert Report.

European Committee of the Regions: Commission for Social Policy, Education, Employment, Research and Culture, Cavallini, S., Soldi, R., Friedl, J., & Volpe, M. (2016). Using the quadruple helix approach to accelerate the transfer of research and innovation results to regional growth, European Committee of the Regions. <https://data.europa.eu/doi/10.2863/408040>

Fauci, A. S., Lane, H. C., & Redfield, R. R. (2020). Covid-19 — Navigating the Uncharted. *The New England Journal of Medicine*, 382, 1268–1269. <https://doi.org/10.1056/NEJMe2002387>

Forster-van Aerssen, K., & Spital, T. (2023). The impact of Brexit on UK trade and labour markets. *ECB Economic Bulletin*, (3).

Freeman, C. (1987). *Technology policy and economic performance: Lessons from Japan*. Pinter Publishers.

Fukuyama, F. (2018). *Identity: The Demand for Dignity and the Politics of Resentment*. Farrar, Straus and Giroux.

Gabriel, S. (2018) "Euroscepticism - The New Policy Of The European Populists," *Annals - Economy Series*, Constantin Brancusi University, Faculty of Economics, vol. 6, pages 184-189, December.

- Gao, Yanyan & Zang, Leizhen & Roth, Antoine & Wang, Puqu. (2017). Does democracy cause innovation? An empirical test of the popper hypothesis. *Research Policy*. 46. 1272-1283. 10.1016/j.respol.2017.05.014.
- Geuna, A., et al (2017). *The university and the economy: Pathways to growth and economic transformation*. Edward Elgar Publishing.
- Gianolla, C., Mónico, L., & Cruz, M. J. (2024). Emotion narratives on the political culture of radical right populist parties in Portugal and Italy. *Politics and Governance*, 12(1), 1–12. <https://doi.org/10.17645/pag.v12i1.8556>
- Glenza, J. (2021). US surgeon general: Covid misinformation 'spreading like wildfire'. *The Guardian*.
- Gómez-Reino, M., & Plaza-Colodro, C. (2018). *Left-Wing Populism and Euroscepticism in the Iberian Peninsula*. Palgrave Macmillan.
- Gouveia, G. (2024). More Americans are finding Portugal an expatriate's paradise. *Westfair Online*.
- Greenacre, M. (2024). French researchers warn against restricting immigration. *Science|Business*.
- Hadiz, Vedi & Chrysogelos, Angelos. (2017). Populism in world politics: A comparative cross-regional perspective. *International Political Science Review*. 38. 399-411. 10.1177/0192512117693908.
- Haileamlak A. (2021) The impact of COVID-19 on health and health systems. *Ethiop J Health Sci*. Nov;31(6):1073-1074. doi: 10.4314/ejhs.v31i6.1. PMID: 35392335; PMCID: PMC8968362.
- Harari, Y. N. (2018). *21 Lessons for the 21st Century*. Spiegel & Grau.
- Hawkins, K., et al. (2019). *The Ideational Approach to Populism: Concept, Theory, and Analysis*. Routledge.
- Helms, Ludger. (2015). Democracy and innovation: from institutions to agency and leadership. *Democratization*. 23. 1-19. 10.1080/13510347.2014.981667.
- IPCC, 2023: Sections. In: *Climate Change 2023: Synthesis Report*. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental

Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 35-115, doi: 10.59327/IPCC/AR6-9789291691647

Jensen, E. A., & Pflieger, A. (2022). What is the support for conspiracy beliefs about COVID-19? A mixed-methods approach. *Frontiers in Psychology*, 13, 855713. <https://doi.org/10.3389/fpsyg.2022.855713>

Kates, J., Cox, C., & Michaud, J. (2023). How much could COVID-19 vaccines cost the U.S. after commercialization? KFF.

Ken Newton, Dietlind Stolle, Sonja Zmerli. (2018) *Social and Political Trust*. Oxford University Press. *The Oxford Handbook of Social and Political Trust*, pp.37-56, 9780190274801.

Kluger, J. (2025). What to know about the CIA's conclusion that COVID-19 came from a lab leak. *Time*.

Kosic et al (2023). The relationship between populism and attitudes on vaccine against COVID-19: Trust in institutions as a moderation factor. *Wiley Online Library*.

Kriesi, H., & Pappas, T. S. (2015). *European Populism in the Shadow of the Great Recession*. ECPR Press.

Lantz, B., Wenger, M. R., & Mills, J. M. (2023). Fear, Political Legitimization, and Racism: Examining Anti-Asian Xenophobia During the COVID-19 Pandemic. *Race and Justice*, 13(1), 80-104. <https://doi.org/10.1177/21533687221125817>

Law No. 2015-992. *Energy Transition Law for Green Growth*. *Journal Officiel de la République Française*, Series I, 2015.

Law No. 2019-1147 of 8 November 2019 on Energy and Climate. *Journal Officiel de la République Française*, Series I, 2019.

Le Monde Editorial Board. (2024). The Rassemblement National and environmentalism are incompatible. *Le Monde*.

Guillou, C., & Piquard, A. (2023). French far-right leader seeks to take advantage of AI debate. *Le Monde*.

Le Monde Editorial Board. (2024). The Rassemblement National and environmentalism are incompatible. *Le Monde*.

Guillou, C., & Lesueur, C. (2024). Far right wants to ban hiring a foreigner in case French candidate applies to same job. *Le Monde*.

Lee, Keun & Malerba, Franco. (2016). Catch-up cycles and changes in industrial leadership: Windows of opportunity and responses of firms and countries in the evolution of sectoral systems. *Research Policy*. 46. 10.1016/j.respol.2016.09.006.

Letta, E. (2024). The Single Market and Innovation: Addressing Fragmentation. *European Policy Report*.

Lundvall, B.-Å. (1992). National systems of innovation: Towards a theory of innovation and interactive learning. Pinter Publishers.

Manucci, L. (2024), Introduction to the special issue: “Portuguese populism: People, parties, and politics”. *Análise Social*, 251, lix (2.º), pp. 2-11.
<https://doi.org/10.31447/202200>

Matelly, S., & Nguyen, P.-V. (2024). The European Green Deal in the Face of Rising Radical Right-Wing Populism (Policy Paper No. 296). Jacques Delors Institute.
https://institutdelors.eu/wp-content/uploads/2024/02/PP296_Populisme_Thalberg_EN_2.pdf

Mazzucato, M. (2021). Mission-oriented innovation policy and the challenge of urgency: Lessons from Covid-19 and beyond. *Technovation*, 107.
<https://doi.org/10.1016/j.technovation.2021.102274>

Mazzucato, M. (2018). Mission-Oriented Research & Innovation in the European Union: A problem-solving approach to fuel innovation-led growth. European Commission.

McKee, M., de Ruijter, A., & Hervey, T. (2024). The Role of Health in Europe’s Innovation Agenda. *European Health Policy Journal*.

McVeigh, K. (2021). Class cancelled: How Covid school closures blocked routes out of poverty. *The Guardian*.

Moffitt, B. (2016). The Global Rise of Populism: Performance, Political Style, and Representation. Stanford University Press.

Mondon, Aurelien. (2013). The mainstreaming of the extreme right in France and Australia: A populist hegemony?. 1-233.

- Morais Dictionary. (2024). Populism Etymology and Usage.
- Mowery, David C & Oxley, Joanne E. (1995) "Inward Technology Transfer and Competitiveness: The Role of National Innovation Systems," *Cambridge Journal of Economics*, Cambridge Political Economy Society, vol. 19(1), pages 67-93, February.
- Mudde, C. (2019). *The Far Right Today*. Polity Press.
- Mudde, C., & Rovira Kaltwasser, C. (2017). *Populism: A very short introduction*. Oxford University Press.
- Müller, J.-W. (2016). *What Is Populism?* University of Pennsylvania Press.
- Nelson, R. R. (1993). *National innovation systems: A comparative analysis*. Oxford University Press.
- Norris, P., & Inglehart, R. (2019). *Cultural Backlash: Trump, Brexit, and Authoritarian Populism*. Cambridge: Cambridge University Press.
- OECD (2015), *OECD Science, Technology and Industry Scoreboard 2015: Innovation for growth and society*, OECD Publishing, Paris, https://doi.org/10.1787/sti_scoreboard-2015-en.
- OECD (2017), *Trust and Public Policy: How Better Governance Can Help Rebuild Public Trust*, OECD Public Governance Reviews, OECD Publishing, Paris.
- OECD. (2019). *Digital science and innovation policy (DSTI/STP(2019)17)*. Organisation for Economic Co-operation and Development.
- Orwell, G. (2021). 1984. Penguin Classics.
- Parker, Richard & Ferraz, Dulce. (2021). Politics and pandemics. *Global Public Health*. 16. 1131-1140. 10.1080/17441692.2021.1947601.
- Partido Chega. (2024). Programa eleitoral: Soberania energética. Partido Chega.
- Paunov, C., & Planes-Satorra, S. (2021). Science, technology and innovation in the time of COVID-19. *OECD Science, Technology and Industry Policy Papers*, No. 99. Organisation for Economic Co-operation and Development.
- Phillips, T. (2020). Brazil's Jair Bolsonaro says coronavirus crisis is a media trick. *The Guardian*.

Pirro, A. L., Taggart, P., & van Kessel, S. (2018). The populist politics of Euroscepticism in times of crisis: Comparative conclusions. *Politics*, 38(3), 378-390. <https://doi.org/10.1177/0263395718784704>

Portugal Pathways. (2024). Migration and innovation: Portugal as a global hub.

Présidence de la République Française. (2019). Loi n° 2019-1147 du 8 novembre 2019 relative à l'énergie et au climat. *Journal Officiel de la République Française*, n° 0259 du 9 novembre 2019, texte n° 1.

Présidence de la République Française. (2023). Loi n° 2023-1322 du 29 décembre 2023 de finances pour 2024. *Journal Officiel de la République Française*.

Presidência do Conselho de Ministros. (2020). Resolução do Conselho de Ministros n.º 63/2020. *Diário da República* n.º 158/2020, Série I de 2020-08-14.

Rankin, J. (2024). Far-right alliance challenges EU democratic norms amid growing support. *EUobserver*.

Rassemblement National. (2024). Political Agenda for the 2024 Elections. RN Official Publication.

République Française. (2015). Loi n° 2015-992 du 17 août 2015 relative à la transition énergétique pour la croissance verte. *Journal Officiel de la République Française*.

Rocamora, A. R. (2017). The Rise of Carbon Taxation in France: From Environmental Protection to Low-Carbon Transition. *Institute for Global Environmental Strategies*.

Rose, M. (2021) France's Le Pen says she will take down wind turbines if she is elected. *Reuters*.

Rydgren, Jens. (2007). The Sociology of the Radical Right. *Annual Review of Sociology*. 33. 10.1146/annurev.soc.33.040406.131752.

Sabow, A., Heller, J., Conway, M., & Poetes, R. (2024). Beyond the pandemic: The next chapter of innovation in vaccines. *McKinsey & Company*.

Scott Morton, F. (2024) 'The three pillars of effective European Union competition policy', Policy Brief 19/2024, Bruegel.

Solace Global Risk. (2023). The populist wave and polarisation in Europe: 2024 intelligence forecast. *Solace Global*.

Statement on Defending Democracy in Europe. (2024). European Commission.

The Royal Society. (2019). Brexit: The impact on UK science. The Royal Society.

The Times. (2023). It's now or never to reap the benefits of Horizon Europe.

Tordoir, S., et al. (2024). Draghi's Plan to Rescue the European Economy. Policy Research Article.

Trump, D. J. (2025). Executive Order on Withdrawing the United States from the World Health Organization. The White House.

Tyson, A., & Kennedy, B. (2024). Public trust in scientists and views on their role in policymaking. Pew Research Center.

Weck, T. (2024). EU Competitiveness at a Crossroads: Why the Draghi Report Falls Short, and the EU Treaties Offer a Solution. *EconPol Forum*, 25(6), 26–29.

Williamson, V. (2019). What France's Yellow Vest protests reveal about the future of climate action. Brookings Institution.

World Bank Group. (2022). Navigating multiple crises, staying the course on long-term development: The World Bank Group's response to the crises affecting developing countries. Global Crises Response Framework Paper, July 2022.

World Bank. (2023). Worldwide Governance Indicators 2023: Political Stability and Absence of Violence/Terrorism. Washington, D.C.: The World Bank.

World Bank. (2024). World Bank country classifications by income level for 2024-2025. World Bank.

World Health Organization. (2022). COVAX: The challenges of equitable vaccine distribution.

World Health Organization. (2024). Coronavirus (COVID-19) situation in Europe. WHO Regional Office for Europe.

World Intellectual Property Organization (WIPO). (2024). Global Innovation Index 2024: Unlocking the Promise of Social Entrepreneurship. WIPO. <https://doi.org/10.34667/tind.50062>

Wouters, O. J., Shadlen, K. C., Salcher-Konrad, M., Pollard, A. J., Larson, H. J., Teerawattananon, Y., & Jit, M. (2021). Challenges in ensuring global access to COVID-19 vaccines: Production, affordability, allocation, and deployment. *The Lancet*, 397(10278), 1023–1034. [https://doi.org/10.1016/S0140-6736\(21\)00306-8](https://doi.org/10.1016/S0140-6736(21)00306-8)

Yanyan Gao, Leizhen Zang, Antoine Roth, Puqu Wang. (2017). Does democracy cause innovation? An empirical test of the popper hypothesis. *Research Policy*, 46(7).

APPENDICES

Annex A – Governments role in National Innovation Systems

Governments utilize a variety of instruments to support NIS, often framing these tools within broader narratives that resonate with public and political agendas. For instance, mission-oriented policies not only set targets for innovation but also create compelling stories that justify investments in specific sectors, such as clean energy or digital transformation. Financial instruments such as R&D tax credits, subsidies, and grants incentivize private sector investment in research, while venture funds and government-backed initiatives support start-ups (OECD, 2015). Regulatory instruments, including IP laws and standards, provide benchmarks for technological development (Mowery et al, 1995). Demand-side instruments such as public procurement position governments as early adopters of innovative technologies, while institutional instruments, such as national innovation agencies and science and technology councils, ensure cross-sectoral coordination and policy alignment (Edquist & Zabala-Iturriagagoitia, 2015). Evaluating the effectiveness of government interventions remains complex, as traditional metrics such as patent counts and R&D spending may not fully capture the systemic nature of innovation (OECD, 2019).

Annex B – Populist Support

Economically, the forces of globalization and neoliberal policies have exacerbated inequalities, leaving segments of the working class—particularly those without higher education—grappling with stagnant wages, precarious employment, and declining real incomes (Rodrik, 2018). This economic discontent fosters "status anxiety," especially among men in declining industries who perceive their social standing as eroding. Many of these individuals view the economic system as failing them, fuelling resentment toward globalization, which they associate with benefiting elites and outsiders at their expense (Betz, 2018). Culturally, the rapid pace of social change has provoked a backlash among those who feel alienated by increasing immigration, multiculturalism, and the rise of progressive values. This reaction, particularly pronounced among older and more traditionalist voters, reflects a perceived loss of cultural homogeneity and the undermining of established norms (Kriesi & Pappas, 2015). For these individuals, cultural transformation is experienced as displacement rather than progress, heightening their sense of cultural insecurity. This perception drives support for political movements that pledge to protect their way of life and preserve traditional societal structures. In terms of governance, distrust in traditional political institutions and elites has emerged as a significant factor among populist party supporters. This scepticism stems from the belief that mainstream political systems are corrupt, self-serving, and detached from the needs of ordinary citizens (Hawkins et al., 2019). Years of perceived governmental unresponsiveness have fostered a sense of betrayal, prompting voters to reject established parties in favour of alternatives that appear more aligned with their concerns. These economic, cultural, and governance-related grievances provide the foundation for populist parties to craft messages that resonate across diverse voter groups, often positioning these three areas as central to their platforms.

Annex C – European Research Area and European Innovation Council

The European Research Area (ERA) complements Horizon Europe by fostering cross-border collaboration and addressing disparities in research capacity among Member States. ERA's vision of a unified research space is grounded in reducing fragmentation, improving the mobility of researchers, and integrating national research efforts into a cohesive European ecosystem. The European Innovation Council (EIC), a key component of Horizon Europe, bridges the gap between research and market deployment. By supporting high-risk, high-reward projects, particularly in small and medium-sized enterprises (SMEs), the EIC enables transformative innovations that might otherwise struggle to attract investment. Through programs such as the Pathfinder and Accelerator, the EIC demonstrates the EU's commitment to translating scientific discoveries into economic growth and tangible societal benefits (European Commission, 2021).

Annex D – Critiques to Letta Report

Critiques of the Letta Report focus on its ambitious goals and the political and structural barriers that hinder their implementation. Following the Draghi Report's examination of Europe's innovation landscape, the Letta Report shifts the focus to broader economic and market integration, highlighting overlapping challenges while proposing distinct approaches. This transition underscores the interplay between governance, market dynamics, and policy cohesion in shaping the EU's innovation strategy. The Banco de España (2024) highlights the absence of a common EU budget and taxation system as a critical limitation. While Letta's priorities for fostering innovation and reducing fragmentation are well-defined, this fiscal fragmentation hampers the EU's ability to finance large-scale projects, particularly in defence and public procurement (Banco de España, 2024).

The article *Europe Suffers from Its Incomplete Union Between States That Share the Euro But Not Their Budget or Taxation* expands further on this by identifying Europe's incomplete economic union as the deeper structural cause behind the fragmentation highlighted in the Letta Report. While Letta emphasizes the need for a Capital Markets Union to retain European savings and investments, critics argue that the real issue lies in Member States' political unwillingness to integrate budgetary and fiscal policies (Banco de España, 2024; Erixon, 2024).

Critiques also focus on regulatory contradictions in Letta's proposals. While he advocates for reducing regulatory burdens to foster innovation, his support for extensive EU digital regulations such as the GDPR, AI Act, and Digital Services Act creates a complex and legally uncertain framework (Erixon, 2024; Banco de España, 2024). These regulations impose significant compliance costs, particularly on SMEs, stifling entrepreneurial growth and innovation (Europe Suffers from Its Incomplete Union, 2024). The Banco de España (2024) critiques this inconsistency as emblematic of the broader challenge of balancing open-market principles with strategic interventions. Furthermore, the practice of "gold plating," where Member States add extra requirements to EU directives, exacerbates regulatory fragmentation, increasing complexity and undermining cohesion (Erixon, 2024).

Letta's proposal to transform the Capital Markets Union into a "Savings and Investments Union" also faces scepticism. Critics argue that mobilizing Europe's savings for innovation and strategic transitions, such as the green and digital revolutions, requires addressing significant political inertia and integrating divergent national systems (Banco de España, 2024). Proposed EU-wide pension products, for instance, are met with resistance due to potential conflicts with existing national frameworks (Banco de España, 2024). Moreover, reversing capital outflows to the US would necessitate structural shifts, such as increasing domestic consumption rather than savings, which casts doubt on the report's underlying assumptions (Erixon, 2024; Banco de España, 2024).

The Letta Report identifies fragmentation in strategic sectors such as finance, energy, and telecommunications as major barriers to global competitiveness. While deeper market integration is a central recommendation, critics highlight the entrenched national interests that make these proposals politically unviable (Banco de España, 2024; Erixon, 2024). Heterogeneous energy policies and concerns over creating "too-big-to-fail" entities in banking further complicate efforts to implement meaningful reforms (Banco de España, 2024).

On state aid and industrial policy, Letta's suggestion for pooling subsidies for pan-European projects is seen as bold but unrealistic. Larger Member States, such as France and Germany, disproportionately benefit from the current system and are unlikely to support such a shift, while market-liberal countries like the Netherlands and Sweden remain opposed to subsidies altogether (Erixon, 2024). Without resolving these divides, the report's vision for funding strategic goals like the green and digital transitions remains largely aspirational (Banco de España, 2024).

The report's concept of innovation as a "fifth freedom," elevating research, knowledge, and education to the same level of importance as goods, services, labor, and capital, is ambitious. However, critics argue that the proposal lacks practical measures to address the balance between open access to knowledge and intellectual property protection, which could disincentivize innovation in high-tech industries (Erixon, 2024). The absence of actionable steps to strengthen Europe's underdeveloped capital markets further limits the ability of SMEs and scale-ups to access financing (Europe Suffers from Its Incomplete Union, 2024; Banco de España, 2024).

The Letta Report's emphasis on strengthening US-EU economic ties through a Transatlantic Single Market has been described as overly ambitious and "far-fetched." Critics note the stagnation of initiatives like the EU-US Trade and Technology Council and the difficulty of achieving even basic trade agreements, highlighting a disconnect between aspirational goals and political realities (Erixon, 2024; Banco de España, 2024).

Annex E – Critiques to Draghi Report

Critiques of the Draghi Report reveal tensions in its proposed strategies, particularly in the context of EU governance and economic integration. These critiques are relevant because they highlight the structural and policy limitations that directly impact the EU's ability to leverage innovation as a tool for addressing broader challenges, such as economic resilience and geopolitical shifts. The Foundation Robert Schuman (2024) describes the report as diplomatic, strategically avoiding direct criticism of EU governance and policies. By framing Europe's challenges through the lens of competitiveness, the report aims to foster cooperation and unity among Member States. However, competitiveness inherently reflects the divergent economic capacities, policy priorities, and historical tensions within the Union. The report's recommendation to extend the scope of qualified majority voting (QMV) to replace unanimity is highlighted as a strategy to streamline decision-making and prevent stagnation. While intended to enhance cohesion, this approach may face resistance from smaller states or dissenting voices, reflecting ongoing challenges in balancing unity and diversity within the EU.

Weck (2024) critiques the Draghi Report's reliance on state-driven policies, such as subsidies and industrial strategies, arguing that these measures conflict with the market-driven principles enshrined in the EU Treaties, which emphasize undistorted competition and the role of market forces in driving innovation. He suggests that promoting national champions and state intervention risks distorting markets, undermining competition rules, and creating inefficiencies. Weck also raises concerns about Draghi's proposal for large-scale public funding—estimated at 750–800 billion euros annually—highlighting the potential burden on taxpayers and the limited capacity of public institutions to efficiently allocate resources, which could lead to suboptimal outcomes in the EU's innovation ecosystem.

Additionally, Weck underscores the importance of strengthening the internal market and addressing regulatory fragmentation as an alternative approach. He identifies finance, the digital economy, and sustainability as areas particularly affected by overregulation, which hinders the EU's ability to compete globally. Weck advocates for a more robust implementation of existing EU mechanisms to reduce regulatory barriers and enhance market-based innovation (Weck, 2024).

The tension between industrial policy and competition policy is also evident in the critique of von der Leyen's administration, in its approach outlined in Competition Policy in the EU: The Draghi Report's Legacy, which incorporates several ideas from the Draghi Report. While the administration supports addressing killer acquisitions, which refer to acquisitions made by dominant firms to stifle potential competitors, and strengthening competition enforcement through tools like the Foreign Subsidies Regulation, Fiona M. Scott Morton (2024) warns that von der Leyen's directive to review Horizontal Merger Control Guidelines and prioritize "strategic sectors" risks undermining competition enforcement. Morton argues that prioritizing industrial policy over competition could harm consumers, stifle innovation, and politicize decision-making. Further emphasizes that defining "strategic sectors" should be left to independent authorities, not competition specialists, to maintain the integrity of the process.

Burchill's op-ed in The Parliament Magazine (2024) offers a complementary perspective by critiquing the EU's stringent lifecycle emissions criteria. He argues that these rigid regulations hinder investment in low-carbon fuels, aligning with Draghi's call for a more flexible regulatory approach. Burchill advocates for phased targets and adjusted emissions thresholds to facilitate smoother transitions to cleaner energy.

COVID-19: CATALYST FOR NARRATIVE WARFARE

“In times of crisis, the populace clings to leaders who promise simplicity, even at the cost of progress.”

– Adapted from Political Philosophy⁶

The COVID-19 pandemic began quietly, with reports emerging from Wuhan, China, in late 2019 about a novel virus causing pneumonia-like symptoms (Fauci et al, 2020). What initially seemed a localized outbreak soon spiralled into a global crisis that tested the resilience of systems and societies worldwide. On March 11, 2020, the World Health Organization officially declared COVID-19 a pandemic, marking it as a worldwide crisis of unprecedented scale and urgency (World Health Organization, 2024). Questions about the virus’s origins added to the turmoil, with theories ranging from zoonotic transmission at a seafood market to the possibility of a laboratory accident (Kluger, 2025). The uncertainty of the time became a fertile ground for division. Populist movements seized on the ambiguity, using it as a tool to sow distrust in experts and institutions. Simultaneously, the pandemic exposed issues of systemic racism. Misinformation and xenophobic rhetoric directed at Asian communities surged, fuelled by leaders and media figures referring to COVID-19 in racialized terms (Lantz et al., 2021). This stigmatization exacerbated divisions, leading to increased discrimination at a time when solidarity was most needed.

As the virus spread, the cracks in global systems began to show. Hospitals were overwhelmed as waves of patients required critical care, forcing healthcare workers to operate beyond their limits, and facing shortages of ventilators and personal protective equipment (Haileamlak, 2021). Economically, the pandemic unleashed a recession of historic proportions. Businesses shuttered, unemployment soared and industries such as tourism faced near-total collapse (World Bank, 2022). Global supply chains faltered,

⁶ This statement draws on a common theme from political philosophy, particularly inspired by the works of Hannah Arendt (1962) and Jan-Werner Müller (2016), who explore the tendency of populist leaders to capitalize on societal fears during crises.

leaving shelves empty of essential goods. Meanwhile, the abrupt closure of schools widened educational inequalities, with millions of children left behind due to a lack of access to digital resources (McVeigh, 2021). Social isolation and economic stress pushed mental health to the forefront of public concern, as anxiety and depression increased across all demographics.

Despite the chaos, innovation systems responded with remarkable speed and adaptability. Vaccine development, which historically required years if not decades, was achieved in under a year (Sabow et al., 2024). The role of private companies in this process is an example of the interplay of public good and economic incentives. Pharmaceutical giants like Pfizer, Moderna and AstraZeneca, mobilized vast financial and research resources to accelerate vaccine development (Athey et al, 2022). The high economic stakes tied to vaccine discovery, including patent ownership and profits from global distribution, underscored how scientific knowledge became a coveted asset during a global crisis (Kates & Michaud, 2023). This period marked an unprecedented shift in the commercialization of research, where rapid innovation met geopolitical competition. The race for vaccine development was not just a scientific endeavour but a contest of influence, with companies and governments negotiating deals that shaped global health access (Wouters et al., 2021).

At the same time, governments launched massive funding programs, such as the European Union's emergency research grants, to facilitate fast-tracked development and production (European Commission, 2021). The U.S. government allocated over \$18 billion to Operation Warp Speed, a program designed to accelerate vaccine development (Athey et al., 2022). Public-private collaborations became essential, demonstrating how crisis-driven innovation could yield remarkable results. However, these efforts also exposed inequalities: wealthier nations dominated vaccine procurement, using pre-purchase agreements to secure vast quantities, while lower-income countries struggled to obtain doses (Wouters et al., 2021). COVAX, the global initiative aimed at equitable vaccine distribution, faced logistical and political hurdles, leaving many developing nations dependent on donations or delayed shipments (WHO, 2022). This disparity in access not only reflected the broader commercialization of scientific knowledge but also showcased the influence of corporations in shaping public health outcomes, as major

pharmaceutical companies retained control despite calls for a more equitable distribution model (Wouters et al., 2021).

These efforts, though impressive, were not immune against the tide of misinformation and scepticism. Populist movements were quick to exploit the pandemic's challenges to advance their agendas. In Brazil and the United States, leaders like Jair Bolsonaro and Donald Trump downplayed the severity of the crisis, with Trump famously calling it the "China Virus" and later dismissing it as a Democratic hoax (Parker & Ferraz, 2024). Bolsonaro, in turn, encouraged mass gatherings while rejecting scientific guidance (Phillips, 2020). Their rhetoric dismissed expert advice and championed unproven treatments, such as hydroxychloroquine, despite studies debunking its efficacy, creating confusion and increasing conspiracy theories. Trump's stance escalated to political action when he attempted to withdraw the United States from the World Health Organization (WHO) in 2020, citing claims that the organization had mishandled the pandemic and was covering for the Chinese Communist Party. While Joe Biden reversed the decision upon taking office, reinstating U.S. participation, Trump followed through on his original intent upon returning to office this year, officially severing ties with the WHO in one of his first executive actions (Trump, 2025).

Populist narratives framed vaccines as tools of a global elite, reinforcing conspiracy theories about government overreach and population control (Jensen & Pfleger, 2022). The infamous "plandemic" conspiracy, which suggested that COVID-19 was deliberately engineered to enrich pharmaceutical companies and establish a new world order, gained traction in far-right circles, amplified by social media algorithms favouring inflammatory content. These narratives significantly impacted public health measures and vaccine uptake rates. In Brazil, Bolsonaro actively discouraged vaccination, stating, stoking fears about vaccine safety (Kosic et al, 2023). As a result, public health campaigns had to combat not only the virus but also the deeply entrenched distrust sown by these conspiracy theories, which often proliferated unchecked through social media platforms and lead many people to abstain from vaccination.

This environment made it increasingly challenging for governments and health organizations to achieve the widespread compliance needed for immunity. Social media

became a battleground, with platforms like Twitter and Facebook amplifying misinformation at unprecedented speeds (Glenza, 2021).

In Sweden, the approach to COVID-19 stood in stark contrast to much of the world—not out of populist defiance but as an extension of its different cultural and political background. Unlike Brazil and the United States, Sweden chose not to enforce lockdowns, relying instead on voluntary measures and personal responsibility. However, this approach was met with mixed results: while the economy suffered less than in other European nations, Sweden recorded significantly higher mortality rates than its Nordic neighbours. Right-wing populists in Sweden, however, capitalized on this strategy, opposing any future restrictions and casting public health measures as authoritarian overreach. The criticism extended to global efforts like the World Health Organization's COVAX initiative, which was derided as ineffective or biased, further undermining international collaboration (Balfour, 2020).

The consequences of these narratives were far-reaching. Public trust in scientific institutions and government agencies eroded, making it harder to achieve compliance with health measures (Tyson & Kennedy, 2024). This erosion of trust was not confined to health; it seeped into other areas, complicating efforts to address systemic challenges such as climate change. The pandemic's politicization, fuelled by populist rhetoric, left innovation systems vulnerable to interference and scepticism.

Yet, amid these challenges, there were moments of clarity. Policymakers began to recognize the value of mission-oriented frameworks, championed by figures like Mariana Mazzucato, which emphasized using innovation to address societal challenges such as health crises and environmental sustainability (Mazzucato, 2021). For instance, the European Union's Horizon 2020 program shifted its focus during the pandemic to prioritize health-related projects, funding collaborative research into vaccine development and healthcare technologies. These initiatives demonstrated the potential of mission-oriented policies to mobilize resources and achieve impactful results in response to global crises.