

# Balancing Inflation and Climate Action: Achieving a Sustainable Future

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*This paper explores the relationship between climate change, the economic challenges of combating inflation, and the implementation of effective climate actions. Climate change is a pressing threat that requires urgent action, and the economic implications of addressing it are paramount. By analyzing the global economic landscape, this paper aims to identify strategies for striking a balance between fighting inflation and taking appropriate climate actions. The analysis focuses on the recent surge in energy prices resulting from supply disruptions linked to the Russia-Ukraine war, highlighting the need to reduce greenhouse gas emissions and transition away from fossil fuels. The findings demonstrate that addressing climate change can help alleviate the difficulties of balancing inflation and climate action, emphasizing the importance of sustainable and climate-friendly policies.*

## **Introduction**

The ongoing Russia-Ukraine war has caused supply chain disruptions and, consequently, a surge in energy prices especially in Europe. As this escalation in energy costs poses a greater burden on the poor compared to the wealthy, governments worldwide are contemplating a range of measures to address this issue and alleviate its impact on vulnerable populations. These measures include fossil fuel subsidies, transitioning from cleaner energy sources to fossil fuels, and reducing carbon taxes. However, it is important to recognize that implementing such measures could potentially hinder global efforts to combat climate change. Consequently, striking a delicate balance between mitigating inflation and addressing the urgent threat

of climate change becomes increasingly challenging in this context.

This paper analyzes the complex interplay between economics and climate change and explores the challenge of striking the right balance between combating inflation and implementing necessary climate actions. It begins by providing an overview of the impact of climate change on society, including the global response to it, and the recent surge in energy prices due to supply disruptions caused by the Russia-Ukraine war. The paper then examines the current global inflation and global monetary tightening, and how it could affect climate actions. Finally, the paper presents implications and recommendations for achieving a balance between fighting inflation and taking appropriate climate action.

One of the most important international agreements in relation to climate change is the Paris Agreement, which was adopted in 2015 under the United Nations Framework Convention on Climate Change (UNFCCC). The agreement aims to limit the increase in global average temperature to well below two degrees Celsius above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5 degrees Celsius.<sup>1</sup> It also aims to strengthen the ability of countries to deal with the impacts of climate change through adaptation and resilience measures. Moreover, the Paris Agreement sets out a framework for countries to make voluntary pledges to reduce their greenhouse gas emissions and to report on their progress in meeting those pledges. The UN estimates that global emissions would need to drop by 7.6 percent each year between 2020 and 2030 to reach the targets set.<sup>2</sup> However, in 2020, when global economic activity came to a virtual standstill, emissions fell by only 5.8 percent.<sup>3</sup> This suggests that additional efforts and more substantial measures are required to effectively address climate change and achieve the emission reduction goals outlined in the Paris Agreement. It is also critical to acknowledge the economic threat of climate change. As noted in the Swiss Re Institute's 2021 annual report, climate change has the potential to wipe 18 percent of GDP off the global economy by 2050, if global temperature continues rising and reaches 3.2°C.<sup>4</sup>

Sources of uncertainty among the international community regarding the fight against climate change include questions such as: How can countries weigh up the economic cost of climate change measures (e.g., by transitioning from fossil fuels to cleaner energy) and the implications for international competitiveness?; how can

the burden of climate actions be shared within and among countries, or how can international policy cooperation along the principle of common but differentiated responsibilities be ensured?; how can the resulting first-mover disadvantage problem—countries wait-and-see, rather than act, given the positive externalities associated with climate actions (e.g., with decarbonization)—be overcome?; and how can the public be convinced about the benefit of climate actions which would accrue over a long period, given that climate change is such a slow-moving process? While each of these questions requires careful consideration and cannot be fully addressed in this paper, it's important to acknowledge how the threat of climate change has created a wide range of issues and areas of uncertainties which the international community continues to discuss and debate on. Lastly, it is crucial to acknowledge that climate change's causes, effects, and responses exist in larger social, political, and economic contexts. Oftentimes these issues can work to distract from, as well as hinder, climate action.<sup>5</sup>

### **Economic Policies to Address Climate Change**

The combination of cost-effective price-based policies and quantity-based policies, along with financial regulations on climate-related risk-taking, represents a comprehensive approach adopted by countries worldwide to address the threat of climate change. Cost-effective price-based policies, such as carbon pricing, emission trading systems (ETS), and carbon taxes, aim to internalize the environmental costs of greenhouse gas emissions. These policies create a financial incentive for industries to reduce their emissions by assigning a price to every ton of CO<sub>2</sub> emitted. Carbon pricing mechanisms can be implemented through a cap-and-trade system, where a fixed number of emission permits are issued and traded among companies, or through a carbon tax, where a monetary value is placed on each unit of emitted carbon dioxide.<sup>6</sup> Quantity-based policies, on the other hand, include regulations that cap CO<sub>2</sub> emissions. These regulations set specific limits on the amount of greenhouse gases that can be emitted by industries or sectors. By imposing emission limits, countries ensure that pollution levels are kept below a certain threshold and encourage companies to adopt cleaner technologies and practices to comply with the regulations. Financial regulations on climate-related risk-taking encompass measures that govern the activities of financial institutions in relation to climate risks.

These regulations aim to promote sustainable finance and ensure that financial institutions consider climate-related risks and opportunities in their decision-making processes. These regulations can take various forms, including setting requirements for disclosing climate-related information, stress testing for climate risks, and imposing capital requirements for climate-sensitive investments. Such financial regulations on climate-related risk-taking can be seen in the European Union (EU).

The EU has been at the forefront of implementing sustainable finance regulations through its Sustainable Finance Action Plan.<sup>7</sup> One notable policy introduced by the EU is the EU Taxonomy Regulation, which establishes a classification system for sustainable economic activities. This regulation sets out criteria for determining whether an economic activity is environmentally sustainable and providing transparency to guide investors towards climate-friendly investments. Additionally, the EU has developed the Sustainable Finance Disclosure Regulation (SFDR), which requires financial market participants to disclose information on how they integrate sustainability factors into their investment decisions.<sup>8</sup> The SFDR aims to provide investors with consistent and comparable information on the environmental and social impact of their investments, promoting greater transparency and accountability in the financial sector. Therefore, by combining cost-effective price-based policies, quantity-based policies, and financial regulations on climate-related risk-taking, countries can create a comprehensive framework that addresses both the economic and environmental dimensions of climate change mitigation and adaptation.<sup>9</sup>

### **Current Inflation Trends**

Since 2021, energy prices have been on a steep rise. One reason for this is the surge in energy demand as countries worldwide recover from the impacts of COVID-19.<sup>10</sup> This is particularly true in the case of European countries. The Russian invasion of Ukraine further exacerbated the rising prices and overall inflationary pressures. Firstly, supply disruptions played a crucial role. The war resulted in the destruction of critical infrastructure, including transportation networks and production facilities. This disruption severely hampered the production and distribution of goods and services, leading to supply shortages. When supply is limited, and demand remains constant or increases, prices tend to rise as consumers compete for scarce resources. Secondly,

trade disruptions and embargoes exacerbated the inflationary effects. As tensions escalated, trade between Russia, Ukraine, and other countries involved became severely restricted. The imposition of trade barriers and embargoes limited the flow of goods, making it harder for businesses to access necessary inputs and materials. This scarcity of goods, coupled with reduced competition, resulted in price increases for both domestic and imported products. Furthermore, the depreciation of currencies in war-affected regions contributed to inflation. Geopolitical uncertainties and economic instability negatively impacted the value of local currencies. A depreciating currency makes imported goods more expensive, as it takes more units of the local currency to purchase the same quantity of foreign goods. This currency depreciation, coupled with limited access to international markets, further drove up prices. These combined effects of supply disruptions, trade restrictions, and currency depreciation created inflationary pressures across various sectors, particularly in Eastern European nations directly affected by the war.<sup>11</sup>

In particular, food inflation, which is observed in the EU but has more significant impact on war-affected Eastern European nations, can be attributed to the supply disruptions caused by the Russia-Ukraine war. The conflict resulted in various factors that contributed to the increase in food costs across the region. Firstly, the Russia-Ukraine war led to disruptions in agricultural production and supply chains. The conflict disrupted farming activities, including cultivation, harvesting, and transportation of crops, leading to a decrease in overall food production. This reduced supply of food created a scarcity in the market, causing prices to rise. Secondly, the war created trade disruptions and limited access to essential resources for agricultural production. The conflict resulted in the imposition of trade barriers, restrictions, and embargoes, affecting the flow of agricultural goods across borders. The disruption of trade routes and logistical networks hindered the timely and efficient distribution of food, exacerbating supply shortages and further driving up prices. Thirdly, the social and economic instability caused by the war had a negative impact on the local economies of war-affected Eastern European nations. Economic instability and uncertainty can weaken the local currency and reduce people's purchasing power. When the value of the currency depreciates, it can lead to higher import costs, including food imports, which are then passed on to consumers in the form of increased prices. The combination of these factors resulted in higher food costs in

the EU, with an average increase of 7.1 percent overall and a significant inflation rate of around 20 percent in war-affected Eastern European nations. In comparison, Western Europe experienced relatively lower food inflation at around 6 percent, indicating a lesser direct impact of the war in those regions. It is important to note that the increase in food costs was not the sole consequence of the Russia-Ukraine war. Other factors, such as global supply and demand dynamics, weather conditions, and market fluctuations, also contribute to food price volatility. However, in the context of the war, the disruptions caused by the conflict played a significant role in exacerbating food inflation in the EU.<sup>12</sup>

### **Central Banks' Response and Monetary Policy Tightening**

In response to the challenges of inflation and the urgent need to address climate change, central banks have taken measures to target and control inflation through the rapid tightening of monetary policy. These measures aim to address the rising prices of goods and services and maintain economic stability. For example, through fuel subsidies various governments have attempted to artificially lower the cost of energy to lead to increased consumption and higher demand. By reducing these subsidies, various countries such as Egypt have sought to align fuel prices with market rates, which can help reduce excess demand, control inflationary pressures, and ensure more efficient resource allocation.<sup>13</sup> Moreover, some governments facing inflationary pressures have encouraged a temporary substitution from cleaner energy sources to fossil fuels. This can be a response to disruptions in the supply chains of cleaner energy technologies or an attempt to mitigate higher costs associated with renewable energy sources. By promoting the use of more readily available and relatively cheaper fossil fuels, several governments have aimed to stabilize energy prices and alleviate inflationary pressures in the short term.<sup>14</sup> Another measure governments have employed to address the inflation is the lowering of carbon taxes. Carbon taxes are levied on carbon-intensive activities to internalize the environmental costs associated with greenhouse gas emissions. However, during this period of inflation, some governments have chosen to reduce the burden on businesses and consumers by temporarily lowering carbon taxes in order to alleviate cost pressures on industries heavily reliant on fossil fuels and ease the overall inflationary impact.<sup>15</sup>

It is important to note that high and rising energy prices are

expected hit the poor disproportionately more than the rich and that, in the long-term, developing countries could be severely impacted by the trend of inflation, sluggish growth, decreasing productivity, and increased interest rates. For example, Nigeria is highly dependent on oil exports, and any increase in energy prices can significantly impact its economy. Inflationary pressures can erode purchasing power, leading to decreased productivity and sluggish economic growth. The country's reliance on imported energy resources and limited diversification in its energy mix can make it vulnerable to supply disruptions and price volatility. Additionally, as one of the world's fastest-growing economies, India's energy demand is substantial. Any surge in energy prices can have a cascading effect on various sectors, including manufacturing and transportation, leading to inflationary pressures. India's high dependency on fossil fuels and limited progress in transitioning to cleaner energy sources make it susceptible to the impacts of energy price shocks.

### **Implications**

It is understandable that nations may take relief measures such as in tax or charges to ease the burden in the short-term. However, shifting from cleaner energy sources to fossil fuels contradicts the broader goal of transitioning to a low-carbon economy. Further, questions surrounding the effectiveness of the actions of governments and central banks have been raised by various economists.<sup>16</sup>

Analysis of past instances of broad-based and untargeted fossil fuel subsidies indicates that universal fossil fuel subsidies and untargeted price controls or tax breaks fail not only to benefit the poor but are harmful to public finances, as well as the energy sector and environment. As noted by the Organization for Economic Co-operation and Development (OECD) Secretary-General Mathias Cormann, "significant increases in fossil fuel subsidies encourage wasteful consumption...while not necessarily reaching low-income households."<sup>17</sup> While fossil fuel subsidies aim to make energy more affordable, they can have unintended consequences. Subsidies often lead to higher fuel consumption and wasteful practices, as artificially low prices encourage excessive use. Since fossil fuels are major contributors to climate change, air pollution, and other environmental problems, increased wasteful use translates into increased greenhouse gas emissions and environmental degradation.<sup>18</sup>

Substituting cleaner energy with fossil fuels can also undermine efforts to reduce greenhouse gas emissions and achieve sustainability targets. Lowering carbon taxes may limit the funds available for investments in renewable energy, energy efficiency, and climate change mitigation measures.<sup>19</sup> Fossil fuel subsidies can strain government budgets and hinder the development of cleaner and more sustainable energy alternatives.

It is crucial to prioritize the adoption and promotion of renewable energy sources to mitigate climate change and improve environmental outcomes.<sup>20</sup> Carbon taxes are designed to internalize the environmental costs associated with greenhouse gas emissions. Lowering or eliminating carbon taxes reduces the financial incentives for businesses and individuals to reduce their carbon footprint. This can hinder progress in transitioning to cleaner energy alternatives and achieving emission reduction targets.

Further, in low-middle-income countries, these measures could lead to several adverse effects. A paper by the Dutch economist Servaas Storm explains how monetary tightening could have negative consequences in low-middle-income countries.<sup>21</sup> When central banks implement monetary tightening, such as raising interest rates or reducing liquidity, it aims to control inflation and stabilize the economy. Higher interest rates can increase borrowing costs for businesses and individuals, making it more challenging for them to invest, expand, or access credit. This can hinder economic growth and job creation, particularly for small and medium-sized enterprises that are crucial for employment and poverty reduction. Moreover, monetary tightening can attract foreign investors seeking higher returns on their investments due to increased interest rates. While this may seem beneficial, it can lead to currency appreciation, making exports more expensive and reducing competitiveness in international markets. This can negatively impact industries reliant on exports, which are often vital for the economies of low-middle-income countries. Additionally, monetary tightening measures can disrupt financial markets and increase the risk of financial instability. Higher interest rates can lead to capital outflows, creating liquidity pressures and volatility in domestic markets. This can exacerbate existing vulnerabilities in the financial system and potentially trigger economic downturns or financial crises.<sup>22</sup>



## Recommendations

Given the implications mentioned, the following recommendations could help strike the right balance between fighting inflation and pursuing climate action.

### *1. Incorporating Climate Change in Monetary Policy*

There has been a lot of debate and discussion regarding whether monetary policy should even take climate change into account, stemming from the traditional mandate in place that the central bank's only aim should be to maintain the stability of price levels and the financial system. Hence, by engaging in the climate change agenda, central banks would not only stray from their original mandate but also violate their market neutrality principle and overburden their policy tools. Yet, the reality is that it's impossible to unlink climate change and monetary policy. For instance, climate change may increase the risk factors related to assets stored on central banks' balance sheets, which could result in financial losses. Furthermore, the ability of counterparties, issuers, and other debtors to meet their obligations may be affected by the risks associated with climate change, which can translate into higher credit risk. Moreover, due to its impact on the banking industry and financial markets, climate change may make it more difficult for monetary policy to be transmitted. For instance, the financial sector could suffer losses and financing flows to the real economy. This could be hampered by the stranding of assets and abrupt repricing of climate-related financial risks. Therefore, central banks must evaluate how climate change may affect the economy and the prospects for inflation.

By considering the environmental risks and costs associated with climate change, central banks can implement measures that promote sustainable and low-carbon economic growth while addressing inflationary pressures. The Swedish Central Bank, Sveriges Riksbank, has been at the forefront of integrating climate change considerations into its monetary policy framework aiming to address climate-related risks by considering sustainability aspects in its asset purchases and collateral framework. Sweden's approach demonstrates a proactive stance in aligning monetary policy with climate goals, highlighting the recognition of the need to address climate risks within the context of monetary decision-making.<sup>23</sup> Monetary policy measures can include incentivizing investments in renewable energy, promoting energy

efficiency, and integrating climate-related considerations into risk assessments and lending practices. By aligning monetary policy with climate objectives, central banks can contribute to mitigating climate change while maintaining price stability and fostering a more sustainable economy.

## *2. Transparent and Targeted Fuel Subsidies*

It remains essential that any subsidy measure to ensure fuel, electricity, and gas remain affordable in response to a crisis needs to be transparent, restricted, and time-bound, as well as appropriately budgeted.<sup>24</sup> Examples throughout history where this became apparent include the Arab Spring (2010–2012) when in response to social unrest and rising energy prices, some governments in the Middle East and North Africa region implemented fuel subsidy programs to maintain social stability. Yet, the long-term sustainability of these subsidies was questionable, leading to fiscal imbalances and economic challenges in the aftermath. Moreover, during the global financial crisis (2008), several countries implemented subsidy measures to support their economies and mitigate the impact on vulnerable populations. However, the lack of transparency and oversight in some cases led to the misuse of funds and inefficient allocation of subsidies.

Further, it has become apparent over time that fossil fuel subsidies intended to support those with a low income should be replaced with more targeted forms of support to ensure they don't favor wealthier households. Broad-based price fossil fuel subsidies are less effective in reaching those who are most poor and vulnerable. When there are no sufficient social protection mechanisms to allow for targeted support, and a lack of regulation of electricity or gas retail prices, tariff design can allow policymakers to meet the requirements of households through judiciously chosen lifeline rates that still allow for expense recovery. Hence, transparent and targeted subsidies can work to provide financial support to specific sectors or activities that contribute to climate mitigation and adaptation efforts while minimizing the risk of inflationary pressures.

By carefully designing and implementing subsidies, governments can direct financial resources towards renewable energy projects, energy-efficient technologies, and sustainable practices. Transparent subsidies, coupled with effective monitoring and evaluation mechanisms, ensure

that funds are allocated efficiently and effectively to achieve climate goals. By targeting subsidies to sectors that have the most significant potential for emissions reduction and sustainable development, governments can encourage the transition to low-carbon economies without compromising price stability and exacerbating inflationary pressures.<sup>25</sup>

### *3. Adapting Monetary Policy to Changing Energy Price*

Adapting monetary policy to changing energy prices can play a crucial role in striking the right balance between fighting inflation and taking effective climate action. In economic terms, energy prices have significant implications for both inflation and economic stability. Fluctuations in energy prices directly impact production costs, transportation expenses, and consumer spending patterns, which can consequently influence inflationary pressures. By incorporating these dynamics into monetary policy decisions, central banks can effectively respond to mitigate the potential inflationary effects of energy price fluctuations. Moreover, adapting monetary policy to changing energy prices also addresses the long-term goal of climate action. Recognizing the urgent need to transition to sustainable and low-carbon energy sources, monetary policy can support climate action by incentivizing investments in renewable energy, promoting energy efficiency, and encouraging the adoption of environmentally friendly technologies and practices. By doing so, monetary policy can contribute to reducing greenhouse gas emissions and mitigating climate-related risks.<sup>26</sup>

Some recommended models that can be looked to in order to strike the right balance between fighting inflation and climate actions include the work in the EU with the Social Climate Fund.<sup>27</sup> The fund intends to alleviate the social effects of increasing energy prices stemming from the suggested broadening of the ETS's scope towards the building and transportation sectors, both of which will have an especially negative impact on households.<sup>28</sup> Another appropriate model is a scheme which allows EU nations to buy strategic gas reserves together to use in the case of a supply shortage such as the one with the Russia-Ukraine war. In fact, capacity utilization of gas storage facilities in Europe is just below two-thirds, almost 20 percent below seasonal norms.<sup>29</sup>

### *4. Investing in Clean Energy Technology and Infrastructure*

The most important long-term recommendation to address climate

change and handle the current global energy crisis by reducing high fuel costs for consumers with a rise in investment in clean energy technology and infrastructure.<sup>30</sup> This can work to make sure that short-term policies don't undermine energy efficiency and conservation efforts and hence protect consumers from such shocks. Governments must work to advance the energy transition while simultaneously protecting the poor and vulnerable. Central banks must work to effectively understand how addressing climate change threatens price stability and how, given their price stability mandates, inflation targets can be tolerated by this rise in energy prices.

Promoting research and development (R&D) for ecological transitions is an essential part of investing in clean energy technology and infrastructure. By allocating resources towards R&D, governments and stakeholders can drive innovation and accelerate the development of sustainable solutions to address climate change. Investing in clean energy technology not only reduces greenhouse gas emissions but also fosters economic growth and job creation.<sup>31</sup> Furthermore, R&D efforts can lead to breakthroughs in energy efficiency, renewable energy generation, and energy storage systems, which contribute to the overall decarbonization of the economy. By supporting R&D initiatives, governments can drive down the costs of clean energy technologies, making them more accessible and cost-effective. This, in turn, helps strike the right balance between fighting inflation and taking effective climate action, as it enables the transition to a low-carbon economy while stimulating economic development and enhancing energy security.

### *5. Understanding the Link Between Climate Change and Inflation*

A final recommendation would be for countries to understand how climate change itself can directly cause inflation. For instance, the frequency of extreme weather events such as fires and floods can have a significant effect on the cost of some products.<sup>32</sup> While the need for infrastructure upgrades and adaptation measures to mitigate climate change impacts can further up the inflationary pressures, its impact would be temporary. The European Central Bank has noted in recent research how inaction on climate change can result in inflation of up to half a percentage point yearly. An ecological transition which is carefully managed would reduce the inflationary effects of global warming as the impact would be temporary and the number of extreme events would

go down, decreasing the mitigation costs associated.<sup>33</sup> By recognizing the direct link between climate change and inflation, policymakers can develop comprehensive strategies that address both challenges simultaneously, such as investing in resilient infrastructure, promoting sustainable agriculture practices, and incentivizing the transition to clean energy sources. This integrated approach allows for a more balanced and effective response to the dual challenges of inflation and climate change.

## **Conclusion**

This paper demonstrated that the difficulties in striking the right balance between fighting inflation and fighting the grave threat of climate change can be mitigated through climate action. The paper analyzed how climate change is being addressed (rather, is failing to be addressed) in the backdrop of a recent surge in energy prices due to supply disruptions related to the Russia-Ukraine war. This has reinforced the necessity for us to fight against greenhouse gas emissions and reduce our dependence on fossil fuels. Undoubtedly, the transition towards less carbon-intensive fuels will require time. During this transition, higher tax rates across a range of fossil fuels, rising carbon prices and elastic energy demand has the potential to cause pressure on consumer prices and, thereby, impact the success of monetary policy implementation. This paper assessed the persisting global inflation and the global monetary tightening measures in response to it. It was also noted how monetary policy cannot look through the increase in energy prices, considering they have the potential to risk medium-term price stability, for instance, in case where increased energy prices cause a de-anchoring of inflation expectations. Understandably, nations may take relief measures such as tax reductions or charges to ease the burden on those who are poor and vulnerable in the short-term. Yet, it is important to continue to strive towards large-scale long-term climate goals. It is also important to note that to effectively strike the right balance between fighting inflation and climate actions, it is necessary to accelerate research and investment in green technologies, nuclear energy, renewable sources, and sustainable biofuels, as well as research into the extent to which climate change may become more of a direct cause of inflation.

## Notes

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