The Impact of Global Climate Change Policy on Employment—Environmental Regulation in the Context of Just Transition

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Abstract. The air temperature has gradually grown since the globe entered the industrial period, leading to several issues, including global warming. The worldwide community has been debating the climate change extensively for more than ten years. The international community has also taken numerous actions on this problem, including the adoption of the "Paris Agreement," the "Kyoto Protocol," and the "United Nations Framework on Climate Change." This paper investigates how the environment and jobs are affected by global climate change under the context of just transition. According to the study, climate change has prompted the creation of new energy sources. Amidst the backdrop of climate change, variables like international standing and GDP will have an impact on the economic standing of many nations. Climate change affects not only the economy but a variety of other fields as well. It has made some areas of the world hostile, and also led to the vanishing of certain cultures. Moreover, it has an impact on employment. Global climate change initiatives have not generated a lot of jobs, and they have both positive and negative impacts on employment.

1 Introduction

The temperature of the atmosphere has gradually risen since the start of the industrial period, causing several issues, including global warming. The international community has taken numerous actions to address climate change, including the signing of the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the Paris Agreement. For more than a decade, climate change has been one of the most hotly debated global issues. However, it is not just a climate concern; the energy and economic sectors are also affected. The complexity of the global climate change issue will be discussed, and both a realist and a social constructionist viewpoint will be used to examine how global climate change policies are created. Then, the author analyses the policies that have both positive and negative impacts on employment. This paper aims to assess the viability of existing policies and try to propose ways to address the employment problems caused by climate change.

2 Complexity of the Global Climate Change Issue

Despite the fact that climate change is primarily a scientific phenomenon, it should be viewed as a problem that needs attention and a governmental response due to its complexity, which also includes changes in energy, the economy, and culture. Global warming is most likely caused by the burning of fossil fuels. The worldwide community [1] proposes restructuring the energy mix and creating new energy sources. Significant energy producers like Saudi Arabia are however impacted by this trend. This is the reason Saudi Arabia has adopted an adversarial position in the global efforts to tackle climate change. The UNFCCC, according to Saudi Arabia, is not an energy treaty [2], and the country bases its climate change policy more on economic than environmental reasons. Apart from economic factors, Saudi Arabia contends that climate change such as extreme weather events, safeguarding biodiversity, and ensuring cultural survival is a secondary concern that should not receive any national policy attention. Deborah McGregor [3] introduced the concept of traditional ecological knowledge (TEK) in 2004. TEK is viewed as the process of participating fully and responsibly in such relationships, rather than specifically as the knowledge gained from such experiences. Climate change poses a challenge to the ability to perpetuate knowledge and culture due to its pervasive effects on the ecological connections that tie TEK [4]. Since the global climate situation is much more complicated than initially imagined, there are no such policies that can meet all development needs.

3 Construction of the Global Climate Change Policy

Realism and social constructivism are two essential perspectives on climate issues.
3.1 Policy Construction from the Perspective of Realism

First of all, realism emphasises the identification of a problem based on science and objective inquiry Through collecting the evidence that the problem exists, related policies can be made. Therefore, from a realist standpoint, there is a need to adjust the global climate change policy according to the nature, severity, and causes of climate change. Global warming is the most noticeable issue of climate change. Since 1950s, the increase in the average temperature worldwide has been particularly evident. Natural systems such as glaciers, permafrost, snow, hydrology, vegetation, and fauna are all displaying traits that are compatible with a warming climate. Because of this, nations signed the UNFCCC in 1992 as a response to global warming. Since then, they have implemented policies aimed at lowering greenhouse gas emissions caused by human activity in an effort to stop climate change.

3.2 Policy Construction from the Perspective of Social Constructivism

Secondly, from a social constructivist perspective, political and legal rights-based games between social forces representing diverse interests are how climate challenges, like other social issues, are socially built rather than largely on the basis of scientific data. When discussing global climate politics, it is unavoidable to include rights analysis and an issue-oriented discussion of things such as a country's share of global greenhouse gas emissions or its share of the global GDP to gauge its capacity to combat climate change[5]. Being established in 2015, the historic Paris Agreement strengthened the global climate crisis and had far-reaching effects. The ability to emit less is gradually becoming a significant source of power and influence in the concept of a low-carbon or even decarbonized development. With low carbon emissions, countries can both profit economically and advance the global economy. In conclusion, while social constructionism favours the adoption of scientific research ideas, neither realism nor social constructionism contest the biophysical nature of environmental challenges. Contrarily, constructivism concentrates on analysing the social causes of people's ideas about environmental change on a global scale [6].

4 The Impact of Global Climate Change Policy on Employment

To figure out weather the impact of climate policies is positive or negative on employment, Pollitt et al. used the macro econometric simulation model E3ME to conclude that the projected decline in the working-age population across Europe would lead to a slow decline in employment after 2020, while the rate of decline is expected to accelerate after 2025 (see Figure 1).

It is thus clear that the impact of the climate policy on employment is negative. The concept of just transition is a "tool the trade union movement shares with the international community, aimed at smoothing the shift towards a more sustainable society and providing hope for the capacity of a 'green economy' to sustain decent jobs and livelihoods for all" [8]. The concept of just transition then helps people to find solutions to the employment problems caused by climate change policies. The just transition's main objective is to generate new energy sources while also producing green jobs. According to Alison Bailie et al. (2001) [9], the Climate Protection Programme would raise national GDP and income while creating 700,000 new jobs by 2010 and 1.3 million new jobs by 2020. Construction, transportation, automotive, manufacturing, services, and agriculture are among the industries that are impacted. This is so that the program's execution, along with the commercialization of clean technology, carbon allowances in the electricity sector, and the recycling of tax income from permits in the trading system, will all promote more cost- and energy-effective and efficient energy use.

However, a just transition has not been achieved by many climate measures. In its first ten years of operation, the Kyoto Protocol and other regulations that limit greenhouse gas emissions caused a 4% decline in the US GDP, primarily as a result of the rise in business unemployment that these regulations caused [10]. While economically revolutionary responses to the climate crisis, nuclear energy, incineration, and fracking will only worsen global warming. Low-income communities, indigenous communities, and communities of colour suffer as a result of the extraction, transportation, processing, and use of these technologies. According to Ferris (2017) [11], environmental laws brought on by climate change policies may have an indirect negative

![Figure 1. EU28 total employment in the reference case and decarbonization scenarios [7].](image-url)
impact on local labour markets, resulting in lower wages and employment. In the 1990s, through adopting conservation measures for the northern spotted owl in the Pacific Northwest, he investigates the effects of environmental restrictions on regional forestry employment and wage levels. As a result, it is found that for every percentage point increase in the protected area, employment in the forestry industry fell by 0.09 percentage points. Employment in industries that produce pollution was also impacted at the same time. The Paris Agreement specifically mentions the need for a "just transition of labor" in its preamble, probably referring to employees in polluting companies who will be laid off as a result of climate policies. Although the overall effects of climate policies are unquestionably favorable for health, there will surely be a large loss of employees in polluting industries. Some people lost their jobs as a result of increased regulatory pressure on air quality brought on by the Clean Air Act Amendments (CAA), which toughened emission regulations in the US at the beginning of the 1990s. Studies have indicated that the new laws will cause a long-term drop in employment. Employment in the industries that produce pollution has decreased by 15% in ten years after the regulatory adjustments. A decomposition of the overall employment impact shows that employment losses were mostly because of higher rates of job destruction in the regulated sector. Because of the CAAA of the 1970s, there was a loss of over 590,000 jobs in non-attainment counties (which are more highly regulated) relative to attainment counties for pollutants [12]. Consequently, due to the environmental regulations, workers may suffer significant costs related to involuntary job loss. The results also suggest that sectors regulated for violations of ozone, particulate matter, and sulphur dioxide standards face the greatest employment losses in the long term.

But the harm to the jobs can be repaired. An illustration is the carbon tax that British Columbia (BC) enacted in 2008 that is revenue-neutral. In most carbon-intensive and trade-sensitive industries, the employment decreased with the tax. However, in the cleaning and housekeeping industry, the health care services sector saw the largest increase of 18% in employment, even though all industries appear to have benefited from the redistributed tax revenues [13]. By aggregating the sectors, Yamazaki found that the carbon tax in BC increased the employment rate by an average of 0.74% per year between 2007 and 2013. Additionally, Horbach and Rennings (2013) [14] use an econometric analysis to discover that innovative enterprises generally exhibit more dynamic employment development and that stimulating innovation can boost employment in a direction that is environmentally friendly. For example, process innovation brought on by the adoption of clean technology increases employment within the company. This is because the cost savings caused by this type of process innovation increase the competitiveness of the company. It has a positive effect on the demand and therefore increases the opportunities for employment. It can thus be seen that not all the results of climate change policies are in line with the aims of a just transition, but the negative results caused by the policies can be compensated for to some extent.

5 Conclusion

In summary, this paper focuses on the fact that climate issues are far more complex than one might think. The economic status of different countries in the context of climate change can be influenced by factors such as the international status and GDP. Climate change policies can be seen from two perspectives, realism, which develops policies in response to the evidence, scale, and determinants of climate change, and social constructionism, which looks at the outcomes of games between social forces representing various stakeholders. However, these policies are not entirely compatible with the concept of a just transition, and some may even pose a threat to employment. This paper lacks the support of relevant practical experience and part of the research can only be based on the data from many years ago, hence more in-depth research on the relationship between the climate policy and employment could be conducted in the future.

The current global climate change confronts all countries with the consensus issue of climate policy. Every year, extreme climate issues of all kinds become more prevalent and cause greater and greater harm on all fronts. Only seems like people are taking the problem seriously. The international community will eventually focus on and respond to the global catastrophe of climate change as its effects become obvious since the grounds for a global climate policy within the UN framework are firmly established.

REFERENCES


