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The Potential of Renewable Energy Green Financing through Carbon Taxation to Achieve Net-Zero Emissions Target

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ABSTRACT

Climate change is mostly caused by anthropogenic emissions of greenhouse gases like carbon dioxide. By establishing green financing initiatives and levying taxes on carbon pollution, green financing and carbon taxes are seen as viable policy tools for reducing harmful environmental externalities. This study examines the role of carbon taxes as an emerging source of renewable energy green financing to achieve net-zero emissions targets. Raising research questions such as: Can carbon taxation be employed as a means of offsetting carbon emissions? What is the people's perception of carbon tax? Can carbon taxation be a potential source of green financing for renewable projects? The study established that the implementation of a carbon tax has a significant effect in offsetting carbon emissions to a large extent. However, there are divergent views of people toward the implementation carbon tax as indicated by studies from different countries. The findings established that the revenue generated from carbon tax could be channeled towards the funding of renewable energy projects as obtainable in Japan and other countries.

Keywords: Carbon Taxation, Greenhouse Gases, Renewable Energy, Green Financing, Net-zero Emissions
JEL Classifications: Q2, Q3

1. INTRODUCTION

The global anthropogenic emissions of carbon dioxides (CO_2) have become a major source of concern due to their detrimental effects on the environment (Kuramochi et al., 2020; Liu et al., 2019). The quest to find a lasting solution to CO_2 emissions has intensified efforts from different stakeholders and policymakers globally. Recently at the 27th United Nation Climate Change Conference held in Egypt, a further commitment to the attainment of net-zero emissions by 2050 was unanimously made by the committee of nations (Handayani et al., 2022; Mohammad and Badawy, 2022). As reinstated, it is necessitated to reduce greenhouse gas emissions quickly, deeply, and consistently by 45% (relative to 2010 levels) by 2030 if we hope to meet this goal. As a measure to attain the net-zero emissions target by 2050, one of the key areas to address is the generation of electricity. According to the United States Energy Information Administration, around 4.11 trillion kWh of electricity was produced in the United States by utility-scale electric power plants in 2021, which led to the release of 1.65 billion metric tons of CO_2 (EIA, 2021). The CO_2 emissions from this were approximately 0.855 pounds per kWh. Therefore, there has been an increasing focus on the deployment of renewable energy sources to replace or complement the existing power generation (Li et al., 2022). In addition to the electricity generation sector, transportation is also of one the biggest dependency on fossil fuels, and in 2020, it was responsible for 37% of all end-use sector CO_2 emissions in the United States (EPA, 2020).

To mitigate the effects of CO_2 emissions from power generation and transportation there has been an increase in research and development to produce sustainable and renewable energy sources as well as clean fuel sources for transportation (Fadai, 2007; Shakeel et al., 2016; Tareen et al., 2018). The share of renewable energy in global power generation has increased gradually over the years (IEA, 2022a). According to the international energy agency (IEA), there was an increase in renewable energy consumption while other energy sources decreased (IEA, 2021). This can be attributed to the interest of the stakeholders to substitute the existing conventional electricity generation from fossil sources with renewable energy (IEA, 2021). Also, the interest in the industrial use of bioenergy has increased (IEA, 2022b). The demand for bioenergy in the world is predicted to increase by 6%, or 9,100 million liters per year, by 2022 (IEA, 2022b). The fostering regulations in the United States and Europe provided a thriving environment for renewable diesel which has contributed significantly to this growth over the past year. Demand in India and Brazil has been growing due to blending mandates and subsidies, and biodiesel use has increased in Indonesia due to a mandate that the country uses 30% blending biodiesel in its diesel.

In addition to the various policies promoting renewable energy as a substitute for power generation from fossil sources and transportation fuel, the carbon tax has been reported as a potential means of financing renewable energy projects (Di Cosmo and Hyland, 2013; Steenkamp, 2021). Fuel suppliers can be taxed based on the amount of carbon content in their products sold to consumers (Andersson, 2019). This tax applies to coal, oil products, and natural gas. They will, in turn, increase the prices of electricity, petrol, heating oil, and other commodities and services that rely on them to cover the cost of the tax. Producing and consuming parties alike receive incentives to cut back carbon emissions. Carbon taxes are simple to implement because they may be tacked onto preexisting fuel taxes, which can be easily collected by the government. Royalties from businesses like coal mining and oil/gas drilling have the potential to incorporate carbon taxes and energy consumption and make the switch to lower-carbon fuels or renewable energy sources.

As shown in Table 1, various studies have investigated the impact of carbon taxes on mitigating carbon emissions. Sharma, and Venkataraman (Sharma and Venkataraman, 2022) employed a decentralized model to investigate how carbon taxation policy influences carbon emission reduction in the manufacturing sector. The study revealed that carbon reduction was significantly reduced upon the implementation of carbon tax. In Turner et al. (Turner et al., 2022), the broad impact of carbon tax implementation in the UK was investigated using general equilibrium analyses. The authors inferred that the use of carbon tax revenues to finance more emissions reductions might increase the government's debt. Yu et al. (Yu et al., 2022) examined the relationship between the intention to reduce carbon emissions and pricing decisions under the carbon taxation system. The study established that carbon taxes lowered carbon emissions and product prices for supply chain members. Zhang et al. (Zhang et al., 2021) performed a carbon taxation sentiment analysis using the bisecting k-means algorithm. The study showed that the attitudes towards carbon taxes were influenced by trust in government, education, and the effects of taxes on people and enterprises. Based on these premises, the present study is poised to answer the following questions:

i. Can carbon taxation be employed as a means of offsetting carbon emissions?
ii. What is the people's perception of the carbon tax?
iii. Can carbon taxation be a potential source of green financing for renewable projects?

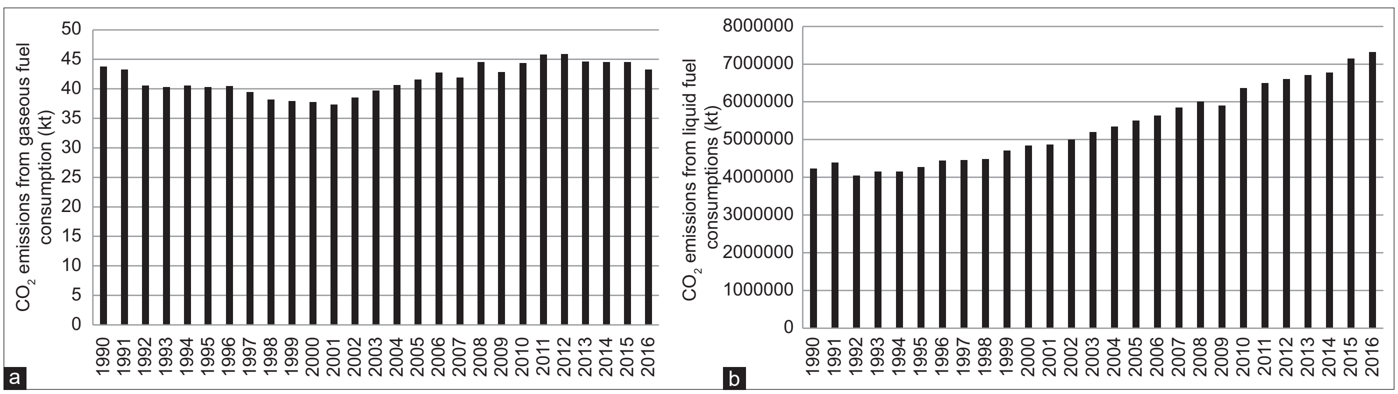
2. CARBON TAXATION AS A MEANS OF OFFSETTING CARBON EMISSIONS

As shown in Figure 1, the global CO_2 emissions from gaseous and liquid fuel consumption increased gradually between 2002 and 2016. More than 80% of all greenhouse gas emissions in the world were from CO_2 (largely from the combustion of fossil fuels) (Oertel et al., 2016). Most of the energy-related CO_2 emissions are produced at the point of combustion when fossil fuels, industrial waste, and nonrenewable municipal waste are burned to produce power and heat (Lin and Raza, 2019; Nataly Echevarria Huaman and Xiu Jun, 2014). Carbon tax has been widely acknowledged as one of the most efficient economic tools for decreasing carbon emissions while having only a minor impact on the economy, and it is highly supported by several economists and organizations (Ghazouani et al., 2020). Metcalf (2009) outlined a carbon tax-based strategy for lowering greenhouse gas emissions in the United States that is revenue and distributionally neutral. A distributionally neutral earned income tax credit for the environment was funded using the proceeds from the carbon tax. The credit was based on earned income and aids in reducing the carbon tax's regressivity. In addition to being revenue-neutral, the carbon tax reform plan avoids equating carbon policy with discussions over the proper size of the federal budget. The article offers a distributional analysis of the idea, outlined a variety of political, economic, and administrative reasons in support of a carbon tax, and addresses criticisms of the use of a tax-based strategy to reduce the United States. Emissions that have frequently been leveled against it. Lin and Li (2011) examined the genuine carbon mitigation impacts of Denmark, Finland, Sweden, Netherlands, and Norway through carbon taxation. The findings show that Finland's carbon price has a considerable, unfavorable influence on the rise in per capita CO_2 emissions. In the meantime, albeit not significantly, Denmark, Sweden, and the Netherlands were negatively impacted by the carbon tax. The effects of carbon taxes on global warming are mitigated by the fact that some countries have tax exemption regulations for certain industries that rely heavily on the use of energy. Despite this, the carbon taxes in Norway have not appreciably reduced CO_2 emissions, which have risen sharply in the oil and gas extraction and oil drilling industries as the nation has boosted its energy output. Besides, studies have shown that several countries, mostly in Europe, have developed a carbon price system that is relatively comprehensive. Di Cosmo and Hyland (2013) investigated different carbon tax scenarios and how they influence the Irish energy sector. Having ascertained the carbon tax baseline projections, two carbon tax scenarios were executed and their effects on energy consumption, carbon dioxide emissions, and tax revenue were evaluated. The findings revealed that if the

Table 1: Summary of selected studies on carbon taxation

S. No.	Objective	Study approach	Sector	Outcome	References
1	To investigate the impact of carbon taxation policy and on carbon emission reduction	Development of decentralized model	Manufacturing	Carbon reduction was significantly reduced using the decentralized model.	(Sharma and Venkataraman, 2022)
2	To determine the broad impact of carbon tax in the UK	General equilibrium analyses	Broad area	Suggested that the use of carbon tax revenues to finance more emissions reductions might increase government's debt.	(Turner et al., 2022)
3	To determine the effort in reducing carbon emission and pricing decisions under carbon taxation.	Competing supply chain model	Supply chain	Carbon taxes lowers carbon emissions and product prices for supply chain members.	(Yu et al., 2022)
4	Carbon taxation sentiment analysis	The bisecting k-means algorithm	Cross continental study	Attitudes for carbon taxes are influenced by trust in government, education, and the effects of taxes on people and enterprises.	(Zhang et al., 2021)

Figure 1: Global CO_2 emissions from (a) gaseous fuel consumptions (b) liquid fuel consumption between 1990 to 2016 (Data obtained from https://data.worldbank.org/)



carbon tax level is anticipated to follow the future price of carbon under the EU-ETS, it will increase from €21.50 per tonne of CO_2 in 2012 (the 1st year forecasted) to €41 in 2025. Compared to a scenario with no carbon tax, this one shows a reduction in total emissions of around 861,000 metric tonnes of CO_2 in 2025 and a revenue gain of almost €1 billion. Significant reductions in CO_2 emissions and a big increase in tax revenue are the key advantages of enacting this carbon tax. Andersson (2019) reported the inter-relationship between carbon tax and CO_2 emissions in Sweden. The study presents empirical evidence that carbon tax can effectively decrease CO_2 emissions by a substantial amount. CO_2 emissions from transportation in Sweden fell by an average of 11% per year after carbon tax was imposed on fuels used in transportation. This finding contradicts the findings of past empirical studies, which suggest that carbon taxes have little to no influence on emissions. The chosen method of identification involves meticulously constructing a control unit that did not apply a carbon tax or equivalent measures, but which otherwise had the same pre-treatment CO_2 emission level and trend. Synthetic Sweden, serving as the control unit, can reliably duplicate Sweden's data on several key predictors of CO_2 emissions from the transport sector and closely monitor emissions in the 30 years previous to treatment. Substitutions between transport fuels, such as from petrol to diesel, and between modes of transportation can be captured by using empirical data on the outcome variable. This is a step up from previous simulation studies that instead used variations in petrol consumption to infer shifts in transportation-related CO_2 emissions. Furthermore, the results gained hold up in a battery of placebo tests. The probability of attaining a posttreatment result as great as that for Sweden is just 0.067, as shown by randomly reassigning the treatment in the sample. Fu and Andrew Kelly (2012) examined the effects of carbon-related transportation taxes on CO_2 emissions mitigation in Ireland. The authors discover that the fuel-based carbon tax significantly reduces CO_2 emissions. The CO_2 reduction was dependent on the consumers choosing trips based mainly on current expenses and the availability of a significant capacity for replacement between public and private transportation. Nonetheless, carbon-related vehicle registration tax and motor taxes primarily encourage a transition in the fleet structure towards diesel and more fuel-efficient automobiles. This adjustment causes a little rise in NO_x emissions over a longer period of time. The fuel-based carbon tax was adjudged better than vehicle road tax for tax income, carbon emission reductions, and social welfare, but worse for home utility and production expenses. The highest CO_2 reductions were made possible by a combined policy package that changed the auto tax, fuel tax, and vehicle road tax. Based on the differences premises that has been discussed above, it can be inferred that carbon tax is employed as a means of offsetting carbon emissions which answers the first research question.

3. PEOPLE'S PERCEPTION OF CARBON TAX

Although employing carbon taxes to curb CO_2 emissions has shown a promising effect, they have recently proven too unpopular to be put into operation in some countries. Umit and Schaffer (2020) use data from the European Social Survey to show that people in 23 countries, the vast majority of which have never been studied before, supported higher taxes on fossil fuels as a means of combating climate change. The findings suggest that many people feel negatively about carbon taxes. But the situation becomes direr when consumers, especially those with significant energy needs, consider the whole impact of taxes on their budgets. On the other hand, it rises with external political efficacy and political trust, both of which reduce anxiety over new policies. Zhang et al. (2021) in their study revealed that public support for carbon taxes is highest among those who have high levels of trust in the government, high levels of education, and favourable opinions about the effects of taxation on both individuals and corporations. These factors are each predicted to be 35%, 24%, 22%, and 17% important, respectively. While analyzing public opinion, it becomes clear that most of the countries studied have negative feelings toward carbon prices. Feelings towards the components are negative as well. Moreover, there is a favourable link between perspectives on these elements and perspectives on carbon taxation. Correspondence analysis confirms that the degree of correlation is accurate. In countries where these taxes cost more and trust in government is poor, views about them tend to deteriorate. The study demonstrated the need for improved citizen consultation and interest assurance before implementing carbon taxes and highlights the significance of social media as a real-time source of data for environmental policy input. Povitkina et al. (2021) employes actual survey data on why people believe carbon taxes are unjust. The authors analyzed the multidimensional meaning of injustice as it is understood by the United States public using structural topic modelling. According to the findings, people believe carbon taxes based on gas prices are unfair because they believe gas prices are already high, they must drive, they are unfair to the poor or rural population, they lack faith in the government, or they believe the tax's intended purpose is unjustified. These results aid in the development of a more complex policy framework to address concerns about fairness raised by carbon taxes. McLaughlin et al. (2019) examined how accountants view carbon taxes as a means of combating climate change. The study aimed to better understand the views of accountants on carbon taxes and how energy firms have changed their business practices in response to the introduction of carbon taxes. The authors used formal interviews with a regional finance director of a large multinational energy company as well as survey data from Scottish accounting professionals with experience in energy financing. The results show that although accountants favour the carbon price because of its positive environmental consequences, they oppose the corresponding rise in power costs. Nonetheless, the carbon price is seen negatively from the perspective of the energy business due to its effects on energy customers. Kumarasiri and Lodhia (2020) investigated the perceptions of Australian emission-intensive industries on the implementation of carbon tax as a method for regulating carbon emissions and as a tool for accountability. The study also examined how internal carbon emissions management techniques and the reasons behind them were affected by views of the new tax. The findings indicated that the carbon tax, seen by the high-emitting corporations as a hefty financial burden, had a significant impact on moderating organizational legitimacy seeking behaviour. It is clear that the carbon price requirement, which addresses transaction cost concerns, has shifted the emphasis from just reporting to external stakeholders. Companies were encouraged to alter their behaviour in an effort to internalize the past externalities of carbon emissions. The report emphasizes the crucial components of any efficient emissions policy intended to motivate corporations to take serious emissions control efforts. Against popular belief, it is clear from the study's findings that the carbon tax was a very successful instrument for promoting emission control efforts. Marcos et al. (2023) used online United States population panel data for two survey experiments to determine how incompatible Democrats' and Republicans' positions on carbon taxes are. The findings indicate that whereas sentiments of the fairness of the carbon taxes were already split at the implicit level, the largest disparity arose at the explicit level. Framings increased Democratic support for policies while decreasing Republican support, further polarizing reactions. Regarding negotiating identity-based polarization, the consequences of communicating climate policy were addressed. To better understand public resistance to carbon taxes, Levi (2021) compile and organize 28 possible triggers to resistance to carbon taxes, ranked them according to how important they were on their own for forecasting opposition to carbon tax, and examine the precise way in which they do so. The study uses information from over 44,400 people across 23 different countries in Europe. To estimate independent prediction effects, a machine-learning technique called the random forest model was used. The findings show that the most crucial factor in predicting resistance to carbon prices and attitudes towards other climate initiatives was a sense of personal responsibility for attempting to slow down global warming. Contrarily, political trust substantially predicts resistance to carbon taxes but not attitudes toward other climate initiatives, suggesting that a lack of political trust may be the cause of the odd public aversion to carbon taxes. There were relatively modest gains in public approval of greater carbon taxes that are related to returning carbon tax income to families, a strategy that is frequently seen as essential for winning over the populace. The findings also show that resistance to a carbon price is associated in a non-linear way with age, market liberal ideals, and good governance. Gupta (2016) uses primary data gathered from three separate metropolitan cities in India namely Delhi, Mumbai, and Bangalore to provide the contingent valuation analysis of people's willingness to pay in order to determine the efficacy of carbon taxes in Indian road passenger transport. To analyze the data, probit and tobit regression models were employed. Results indicate that Indians were willing to pay carbon taxes imposed on passengers using road transportation. The study presented a macroeconomic policy suggestion for using fiscal tools like taxes to address environmental externalities. Also, the contingent valuation technique was useful for analyzing sustainability-oriented behaviour in terms of society's willingness to pay to avoid environmental dangers. Gevrek and Uyduranoglu (2015) employed a choice experiment to examine public preferences for carbon tax characteristics in the context of emerging nations. The findings consider preference variability and demonstrate that Turkish citizens favour a progressive carbon tax over one with a regressive cost distribution. The chance of choosing the tax is negatively impacted by the private cost. Revenues from the carbon tax may be set aside, which makes the tax more popular. A carbon tax that raises people's awareness of climate change was also preferred. Based on the various studies that has reported the people's perception of carbon tax, it can be inferred that there are divergent perceptions which is dependent on the prevailing political and economic clime in such country which answers the second research question.

4. AN OVERVIEW OF CARBON TAX IMPLEMENTATION GLOBALLY

As shown in Figure 2, carbon tax has been implemented in several countries. The carbon tax initiative was championed earlier by most countries in Europe. Poland, Spain, Finland, Netherlands, Norway, and Denmark were the first among countries in Europe to implement carbon tax in 1991 and 1992 (Agostini et al., 1992). The tax calculations in those countries were mostly based on carbon content. In most European countries, the carbon tax covers fuel derived from coal, natural gas, aviation gasoline, jet fuel, light fuel, heavy fuel oil, diesel, and gasoline. The greenhouse gas (GHG) emissions covered by the carbon tax implementation are depicted in Figure 3. It can be seen that Japan has the highest GHG emissions covered estimated as 952 $MtCO_2e$. (Gokhale, 2021). In addition to the carbon tax, the emissions-weighted carbon price has also been implemented in several countries as depicted in Figure 4. The emissions-weighted carbon price is calculated based on the entire economy of the country according to the contribution of each sector to CO_2 emissions (Dolphin and Xiahou, 2022).

A carbon tax simply placed a price on carbon by taxing either carbon emissions or, more commonly, the carbon content of fossil fuels (Hájek et al., 2019). In contrast to an emission trading system, a carbon tax has a variable impact on emissions, but the price of carbon is fixed (Cadavid-Giraldo et al., 2020). The strategies to be employed for carbon taxation will depend on the economic situation in each country. Other indirect strategies for more appropriate pricing of carbon include the elimination of fossil fuel subsidies, the implementation of fuel taxes, and legislation that may take the "social cost of carbon" into account (OECD, 2021) . Another strategy for pricing carbon emissions is payments for emission reductions (Qin et al., 2020). To finance mitigation activities through results-based financing or to make up for their emissions, private companies or sovereigns may purchase emission reductions (referred to as offsets).

A new corporate carbon tax has been adopted by the Danish parliament, and it's expected to be the highest in Europe (Ellerbeck, 2022). By the year 2030, Denmark plans to have reduced its greenhouse gas emissions by 70% from their 1990 levels. Companies inside and outside of the European Union's carbon quota system are both targets of the Danish government's plans. The EU ETS is the largest ETS in terms of the total number of sectors. It serves all EU member nations, plus the UK, Norway, Iceland, and Liechtenstein, and comprises 11,000 power stations and industrial facilities. The "cap and trade" idea mandate a ceiling on pollutant emissions while allowing for intra-zone trading of emission permits.

A carbon market three times the size of the European Union's was introduced in 2021 by the world's greatest emitter of CO_2. To begin with, coal and gas-fired power stations were included in China's ETS's cap-and-trade framework (IEA, 2020). With the addition of manufacturing and heavy industries, the program would cover more emissions than all other carbon markets in the world combined. The country aims to achieve net-zero emissions by the year 2060 and reach peak emissions by the year 2030.

The United States is a major contributor to global CO_2 levels, although there is no nationwide carbon price in place (Goulder et al., 2019). Nonetheless, some states have implemented carbon pricing schemes to address emissions within their borders (Dumortier and Elobeid, 2021). These states include California, Oregon, Washington, Hawaii, Pennsylvania, and Massachusetts. President Biden has promised to reduce greenhouse gas emissions by half by 2030 and to

Figure 2: Years of carbon tax implementation in various countries

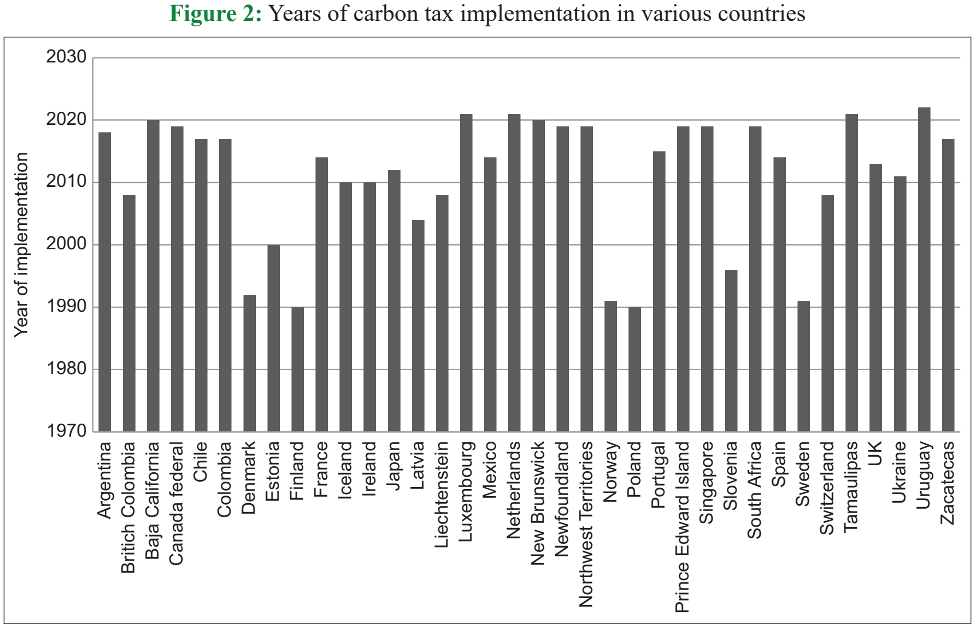


Figure 3: The GHG emissions covered by the carbon tax implementation

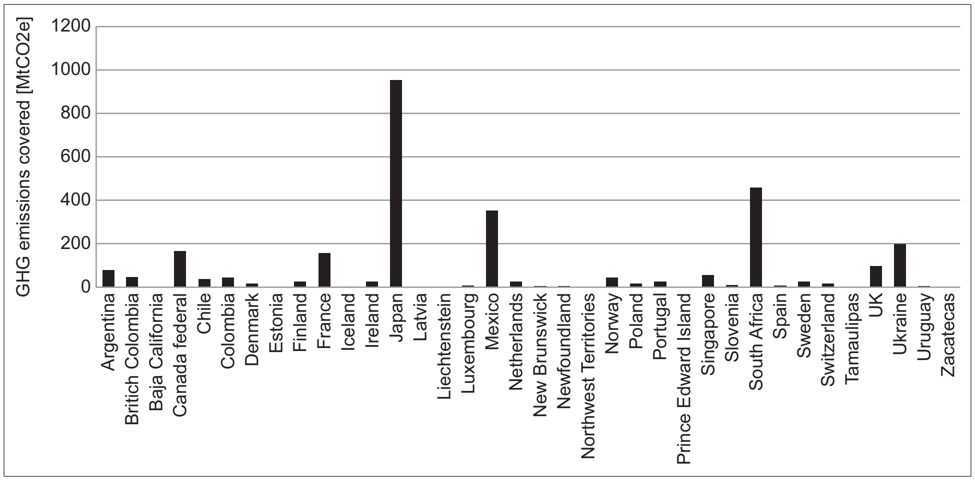


Figure 4: Emissions-weighted carbon price of various countries

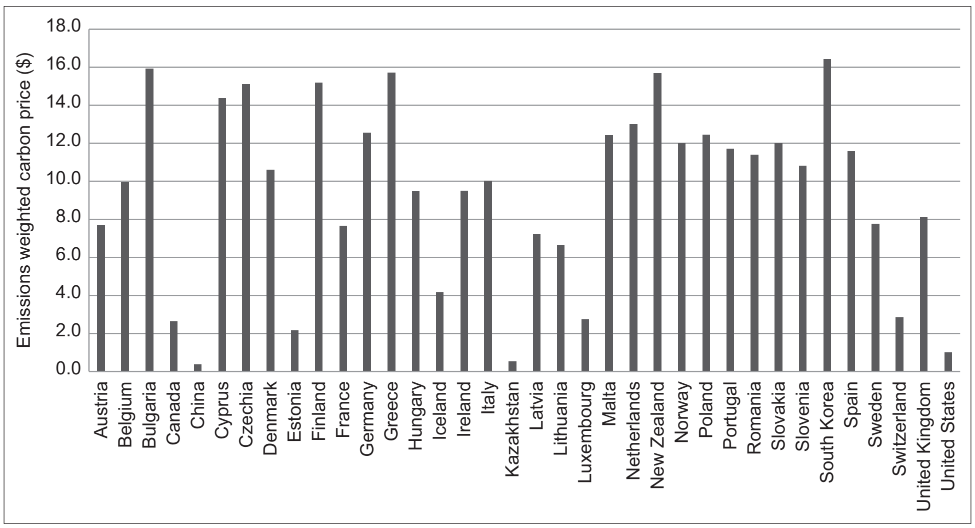
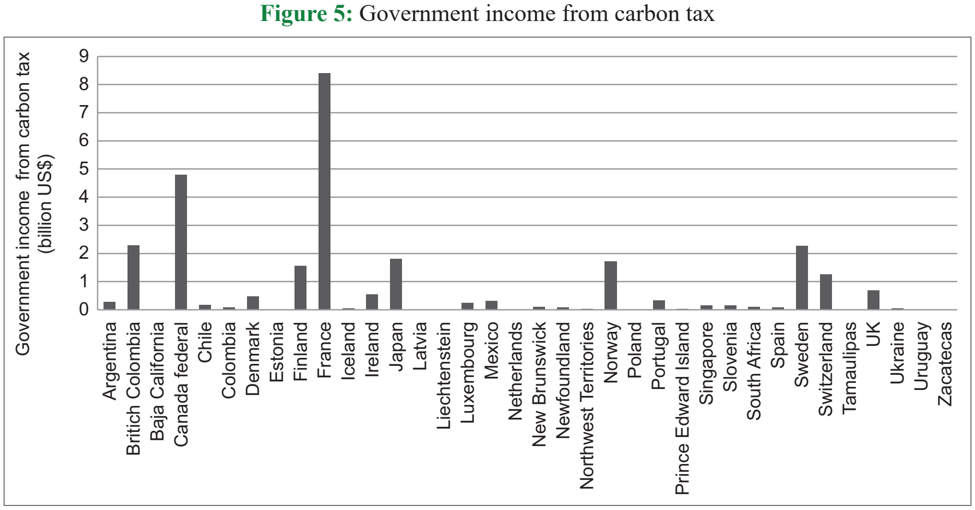


Figure 5: Government income from carbon tax



reach net zero by 2050. His administration views the idea of a carbon price as too controversial to pass in the United States Congress.

Around 7% of global CO_2 emissions come from India, making it the third-highest contributor after China and the United States (Huang et al., 2021). Since 2010, the country has imposed a tax on both imported and locally generated coal despite not taxing carbon emissions directly. Moreover, half of the nation's electricity comes from coal (Bhat and Mishra, 2020).

5. CARBON TAXATION AS A SOURCE OF GREEN FINANCING FOR RENEWABLE PROJECTS

Green financing and investment in renewable energy are often faced with several challenged as reported by Taghizadeh-Hesary and Yoshino (2020). Some of the challenges identified by Taghizadeh-Hesary and Yoshino (2020) include lack of long-term financing, the existence of various risks, low rate of return, and lack of capacity among market players. One of the key strategies suggested by the authors is injecting the carbon tax revenue obtained from polluting companies and businesses into green initiatives to raise the rate of return on those investments. As shown in Figure 5, different countries have implemented revenue generation from carbon tax. Promoting carbon tax legislation will compel polluting companies to switch to cleaner technology while attracting private investment in green initiatives. Although this strategy may initially result in higher manufacturing costs and price levels, it will stimulate research activities and spending on these technologies in the medium term due to the increased demand for green technology, hence lowering prices via technical advancement.

Tong et al. (2022) in their study revealed that carbon taxes will be necessary for China to attain a peak in carbon emission reduction, but this might consequently lead to an exorbitant tax burden for the carbon emitters responsible for the payment of the carbon taxes. The tax burden can be alleviated to some extent by the use of a service-oriented green finance model. While the production sector bears just 0.2% of the tax cost, the efficiency of carbon prices may be maximized through a guidance-oriented green finance strategy. The responsibilities of supporting green industries and directing green investments are combined in a strategy for green finance that is guidance oriented. Assuming environmental responsibilities, encouraging the optimal allocation of capital and environmental resources, and achieving carbon reduction and green transformation are all necessary components of a guidance-oriented green finance approach that will help financial institutions achieve their functional positioning goals. According to Peng et al., (2022), green financing could be employed to establish renewable resources under carbon emission regulation. The study opined that carbon emission quota mediates the effect of green financing interest rates on the investment in generating renewable resources. It is interesting to note that when the cap on carbon emissions is mild, investments in additional renewable resources will increase as the cost of green financing decreases. Based on these premises, it can be inferred that carbon taxation could be a significant source of green financing for renewable projects which answers the third research question.

6. CONCLUSION AND STUDY IMPLICATION

Investment and employment in the renewable energy sector, as well as its ancillary industries, will rise as a result of the implementation of carbon tax. Although this might not be instantly compensated for reduced spending on fossil fuels. In the short term, there will be supply and demand imbalances. One of the major limitations in the current international legal framework for climate mitigation is the potential for carbon leakage, which may be addressed by a wide-reaching carbon tax. When one country's climate policy results in increased amounts of greenhouse gas emissions in other nations, this is known as carbon leakage. It can be triggered by the migration of domestic firms to jurisdictions with no (or reduced) carbon pricing or by an increase in demand for carbon-intensive goods from such countries. The typical tactic employed by nations to manage this risk has been to offer preferential treatment to carbon-intensive companies. In the European Union, for instance, the EU Emissions

Trading Scheme provides free permits to businesses that are assessed to be at risk of carbon leakage. The carbon price signal they would have received as a result of this is dampened. Carbon border adjustment mechanisms are an option that has recently been presented in the EU. Certain carbon-intensive imported goods are subject to a carbon price. This system is meant to fine-tune carbon pricing such that foreign companies pay the same rate as local ones. If countries can agree on consistent carbon pricing, carbon leakage risks can be addressed. The Paris Agreement's bottom-up strategy would be undermined by the imposition of a worldwide carbon tax. Countries are obligated to take climate change mitigation actions that are "maximum feasible ambition" given their individual situations, under the terms of the Paris Agreement. The Agreement does not mandate that nations implement a clear carbon tax. Instead, they might choose to take action to reduce greenhouse gas emissions by adopting regulations or outlawing carbon-intensive enterprises (for example, a ban on coal fire power stations). By necessitating consensus amongst nations to implement a carbon tax at the same rate, a global carbon tax would represent a dramatic departure from this bottom-up strategy. To preserve some leeway for countries to set their carbon pricing policy, several sorts of international accords on carbon pricing might be envisioned.

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