

Adoption of Green, Carbon and Environmental Taxation in Nigeria: Revenue Generation and Economic Benefits Perspectives

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Abstract

Tax revenue is one of the essential means through which the government controls the macroeconomy and plays a vital role in promoting environmental protection and sustainable development. This paper explores the adoption of green, carbon and environmental taxation in Nigeria: revenue generation and economic benefits perspectives. There is an uncertainty about the public acceptance of these taxes and subsequent difficulty in predicting the rate at which the pollution will fall if environmental taxes are implemented, it becomes expensive for governments to pursue environmental targets and thereby makes it difficult for firms and households to plan investment, production, and consumption activities. Regardless of this, it can be seen that environmental taxes are slowly gaining momentum in Nigeria. The main challenge is to design policy objectives and their instruments in such a way that the social costs of any inefficiency are minimized and a fair distribution of the burden are ensured. It is pointed out that Nigeria should introduce and develop the scope of taxation and adopt the method of "green tax" to cultivate taxpayers' green awareness. Thus, the policy framework needs to be systematically analysed for the successful design and implementation of environmental taxes. In conclusion, what can be said is that though the system of environmental taxation has turned quite a few heads in the direction of sustainable development in Nigeria, it is high time that a system of Green Tax is popularized in order to keep up with the global standards of environment protection.

Keywords: Green Tax System; Carbon Tax system; Environmental Tax System; Economic Benefits; Revenue Generation; Nigeria

JEL Classification Codes: H24, K32, Q48, Q56

1.0 Introduction

Environmental taxation policies are still in the initial stages in developing countries of the world, and many countries are already in the process of enacting environmental taxation. An inclusive environmental green tax is a tax levied on all expenses and income related to the environment to protect the environment and reduce the pressure on the general sector of

national revenue (Wang & Li, 2018). Green tax is levied on industry, corporations, and individuals who through carbon emissions, various chemical emissions, and various greenhouse gases emissions into the environment.

It is pretty evident that there is a huge hue and cry worldwide over climate change and environmental degradation and there is an urgent need for translating various treaties and conventions into committed actions after ratifying implementing Green Taxation. Different countries may have different carbon tax because they have a completely different set of socio-economic and political scenarios (Wang & Li, 2018). Keeping this in mind, it can be argued that a common Environmental Taxation System may not be ideal for worldwide implementation. However, a cross border adjustment of taxes may be legally done to sort out the differences under the initiatives of World Trade Organization (WTO). Even though, it is a complex and difficult task, yet it can be smoothly carried out if countries come forward and exhibit a collective political determination/will. The corporate social responsibilities (CSR) for various sectors, industries (which are major pollutant contributor) may also be considered as CSR will not only bring reduction in hazardous emissions but also create more opportunities for financial gains for the big giants in the form of tax incentive mechanisms and ethical rationales of saving the planet for the sake of humanity (László, 2021). The integrated approach offers immense scope for achieving the dual objective of conserving environment and earning a means against environmental Taxes.

Green taxation policies are yet to be implemented in all countries across the world, although their familiarity is increasing. The few countries that are using these policies to conserve the environment have not achieved their intended goals. One of the major problems is that green taxation also leads to economic problems such as the increase in the rate of unemployment that occurs when firms' profits decrease due to high taxes and they are unable to invest more hence leading to no job creation. Governments must find a balance between green tax reforms that will protect the environment and the economy as well. Industries, companies, and businesses do a lot of damage to the environment and should be held accountable for what they do. So, the tax system is one way that the government tries to stop activities that cause pollution or other pollutants that are bad for the environment (Wang & Li, 2018).

1.1 Objective of the Study

The objective of this research work is to formulate a specific tax plan in environment sectors and to work towards the implementation of the green tax. Keeping in view the environmental challenges as well as the development vision, it is time to transform Nigeria into a green economy. Because a green economy is an economic system that efficiently reduces the level of carbon emissions and helps to reduce the risk of future generations. However, the greening process faces many challenges. But to make it more sustainable considering the long-term interest, the green tax will work towards the formulation and implementation of a green economy plan in all environment-related sectors of Nigeria. In the background of green tax, the present research work has undertaken a green revenue which increases the economic stability and government revenue.

2.0 Theoretical Review

2.1 Concept of Green Tax

Also known as an ecological taxation system, the green taxation system is a general term of various taxation systems levied by a country to achieve specific ecological environmental objectives, raise ecological and environmental protection funds, and regulate

the corresponding behaviors of some specific individuals. Green Tax is the result of taxing activities and goods that harm the environment by their very nature or the way they are made. Environmental taxes has become more frequently used in recent years as a tool for authorities to address the unpleasant consequences of economic activities (such as pollution) (Maxim & Zander, 2020).

Green taxation helps the government for monitoring the country's carbon emissions to set a standard taxation system for various carbon-emitting companies or industries. Green taxation plays an important role for developing countries by keeping their environmental pollution and implementing green taxes (Deng & Wang, 2013).

The current academic understanding of "green tax", based on different research perspectives, mainly has three views, including, narrow green tax, middle green tax and broad green tax. More specifically, the narrow sense of green tax, known as the traditional sense of environmental protection tax, is mainly a special tax levied by the state to limit the scope of environmental pollution, reduce the degree of environmental pollution, and guide the economic entities that cause environmental pollution. Middle green tax refers to a form of tax levied or remitted by the state on all units and individuals who utilize the environment and develop natural resources according to the exploitation intensity, resources and environment utilization and the environmental damage degree. Besides, covering two main types of tax, natural resources and environmental protection, it is specifically designed as a consumption tax. Referring to various taxes and tax purposes related to rational exploitation of resources and effective protection of the environment in the tax system, generalized green tax, on the one hand, includes environmental pollution tax, natural resources tax, consumption tax, enterprise income tax and other taxes; on the other hand, it includes tax-collecting funds to achieve the purpose of resources and environment, as well as other tax means of the government to influence the nature and scale of economic activities related to resources and the environment.

Carattini *et al.* (2017) defined green taxes as excise taxes on environmental contaminants or on goods and services whose use contributes to pollution. Green taxes, also known as environmental, pollution, eco and carbon taxes, are meant to advance the environment. Environmental taxation is of great importance in environmental policies. The taxation is used mainly to discourage negative impact on the environment which occurs from the activities of businesses. Due to the dangers of global warming, corporations, governments, and consumers among other stakeholders are becoming aware of the impact of business activities on the environment (Labeaga & Labandeira, 2020).

There are issues in applying environmental taxation especially is a developing country as it has possible threat of affecting the developmental rates and it is least likely that it will be welcomed by the concerned people. However, it must go a long way if human civilization is to be saved from environmental catastrophe of climate change which is likely to happen because of industrial effluents including emission of GHGs, carcinogenic and other pollutant entry or rapid loss of biodiversity. The current rapid degradation of environment scenario demands novice legislation and stringent laws to enhance the compliance of various parties including industries and people. There are several heavy industries such as iron, steel foundries, electrical appliances, steel alloys, cement industries etc. that have ever lasting impacts on environmental health. The policy of GT can be exploited to its full potential as a tool to curb and mitigate the hazardous impacts. The approach may be used for various other industries like medical industry in terms of environmental damages caused by the medical waste to find out its environmental impact or for the ill effects of nuclear waste generated. The policies could be and should be

designed to bring out optimal contribution of these industries towards generating resources for socio-economic growth.

2.2 Concept of environmental tax

Environmental tax is the total of environmental tax, resource tax, and other taxes related to the environment levied on market entities to promote environmental protection, rationally develop and utilize natural resources, and maintain ecological balance (Deng & Wang, 2013). According to the intensity and purpose of taxing environmental protection, environmental taxes can be divided into broad and narrow statistical dimensions. The general environmental tax policy was not initially set up to protect the environment, but it has an environmental protection function. The narrow environmental tax policy refers to the taxes with obvious pertinence to the environmental function for environmental protection, such as energy tax, transportation tax, and carbon tax. Given the short implementation period of China's environmental protection tax, the narrow environmental tax cannot meet the requirements of long-term data series analysis. This study, instead, chooses a generalized environmental tax system based on the ideas of (Deng & Wang, 2013). Generally speaking, the taxes that help prevent pollution and reduce resource waste include consumption tax, resource tax, urban maintenance and construction tax, vehicle purchase tax, vehicle and vessel tax, urban land use tax, cultivated land occupation tax, and sewage charges.

Environmental tax or green tax is not only levied for the purpose of charging the firms and organizations for damage they are causing by harmful emissions but also, to prevent them from adopting such methods and regulate the same by encouraging them to come up with new products that would involve lesser rate of emission or cause less harm to the environment (Deng & Wang, 2013). Thus, the tax rate must be predictable enough to generate such environmental improvements.

Moreover, the amount of tax levied must be proportional to the rate of environmental damage encountered and should ideally cover the entire scope of it. Therefore, the levying of the tax must be reasonable keeping in mind the pollution rate. Further, it should not appear as an unnecessary burden on firms and enterprises to generate excess revenue for the state. Apart from this, green tax should not be imposed specifically on any industry or market player, however, large or small (Deng & Wang, 2013). Such tax should be implemented targeting only the pollutant or polluting behaviour. Hence, any firm or industry as long as it qualifies for the threshold for such levy, will come within the jurisdiction of such a tax regardless of the share or size of a firm.

2.3 Pigouvian Taxes Theory

Pigou, a British economist, is the first person who began to study the theoretical issues concerning environment and taxation. He pointed out in his representative work Welfare Economics theory of the appropriate allocation of social resources. More specifically, the theory illustrated that when the marginal private net output value of a factor of production equals its marginal social net output value, then this factor of production will have different production uses (Yu *et al.*, 2021) The green tax system, guided by environmental protection and the sustainable use of resources, is the process of "greening" the tax system. Particularly, the coordinated and sustainable development of resources, environment and economy can be realized through levying green taxes under the guidance of green tax policies (Yu *et al.*, 2021). Besides, "environment-related taxation", a concept similar to the "green tax system", is defined by the Organization for Economic Co-operation and Development (OECD) as being

“compulsory, unpaid and general” and imposed by the government on tax bases associated with specific environments.”

In fact, the negotiations between the government on behalf of the injured party and the polluters can help explain the occurrence of the Pigouvian tax. It is a trading system, an institutional choice for saving transaction costs in the case where the injured party negotiates with the polluter market in terms of expensive transactions. Environmental taxation has been applied in changing the burden of taxation from growth-oriented factors to help in reducing the depletion of natural resources and pollution (Andreoni, 2019).

Green taxation has been implemented in many countries although it is yet to attain its intended purpose (Tran *et al.*, 2019). As governments seek to lessen the negative effect on the environment, there is a need to build support tools to enable firms to be sustainable at still make profits. This research attempts to understand green taxation by evaluating how governments are implementing green taxation, the challenges and risks they face and recommendations on how governments and organizations can effectively use green taxation policies to achieve both their goals.

2.4 Empirical Studies on Impact of Green Taxation on the Economy

Kuralbayeva (2019) studied the outcomes of environmental tax reforms for unemployment and welfare in developing nations that are experiencing large informal rural to urban migration. Governments in developing nations considered if environmental taxes would in addition to helping achieve the environmental goals, also enable the attainment of other socio and economic targets such as reduction of the rate of unemployment. Kuralbayeva (2019) also argued that in the past, policies meant to minimize the rate of unemployment tend to have a negative impact on other policy objectives since they reduce private incomes, especially for the people on state benefits. Therefore, it is politically hard to implement environmental policies. However, to make the green tax reform socially acceptable, complementary policies such as public spending cuts must be minimized to reduce the burden of green tax on the private sector. Kuralbayeva (2019) concluded that green taxes led to the reduction of social welfare.

Tran *et al.* (2019) argued that while carbon tax leads to a decrease in profits, firms can assess an additional amount for investment budget for increasing their profits. The authors proposed a decision-making support model that can help firms and the government appropriation tax policy to achieve environmental development goal. Since the profit value of a firm is ascertained by its taxation level and investment choices, the taxation policy of the government will have a direct impact on firm profitability. Too high carbon tax policies will reduce profits generated by firms and discourage investment which will, in turn, lead to high unemployment levels. Similar sentiments were expressed by Tran (2019) who also came up with a model to support firms in making decarbonization investment decision-making by balancing environmental protection, carbon tax and company profits. Tran (2019) argued that a growing company’s environmental conservation awareness and altering taxation rates have an effect on the firm’s investment decision (Stathopoulou & Gautier, 2019). However, a corporation that is ready to spare more investment budget, is likely to generate higher profits. However, it is also up to the government to ensure carbon tax not only protects the environment but also promotes economic growth.

Tsai (2018) also noted that the Taiwanese government is controlling carbon emission using a carbon tax system and requiring all affected corporations to pay the carbon tax. The carbon tax will minimize overall social-environmental costs and grow the competency of reducing

carbon emission. The goal of corporations is to maximize their profits. Therefore, when governments are increasing tax, it interferes with this goal (Alhadhrami & Nobanee, 2019).

However, Tsai (2018) argued that corporations can still maximize their profits even with the enactment of the carbon tax by using the appropriate strategies to improve competitiveness and applying capacity expansion to increase their abilities to generate profits. Rengs *et al.*, (2020) argued that supply-oriented subsidy from green innovation, backed by revenues coming from carbon tax results in a substantial decrease of carbon emissions without producing any negative impact on employment. Conversely, subsidies for implementing greener technologies originating from the demand side and funded in a similar manner, had no none or substantially lesser reduction in carbon emissions and led to higher rates of unemployment (Rengs *et al.*, 2020). Based on the above findings, governments that want to stimulate green innovation should concentrate on supply-side subsidies and not the demand side ones. Moreover, Haryati *et al.* (2018) argued that every region in the world could be used as a source of income without injuring individuals and the environment. The author concentrated on the exploitation of public space as a media campaign or for advertisements. The active outer space is a potential for government income in terms of taxes that can be used in funding other projects such as green initiatives. Just like green taxation, the government can benefit from taxing promotions and advertisements in public spaces.

While green taxation seems like the most effective method of conserving the environment and which most countries are implementing, a few have not mitigated the risks that come with taxation. Maxim and Zander (2020) noted that in international trade, corporations tend to transfer their businesses to countries that have more favorable tax policies. The same will apply to green taxation. While conserving the environment is important for every nation, it is only successful if implemented by all countries across the world. The sustainability threats facing business can be managed through the ease of implementing planned sustainability risk.

Organizations with effective financial management systems are better positioned to handle different aspects of decision-making entailing those relating to sustainability (Islam *et al.*, 2022). Therefore, governments must ensure their green taxation policies are strong enough and are able to mitigate the risk of transfer of the business to their areas. and had more impact on endogenous public spending. Therefore, minimized public spending as a complementary policy to advance the labour market effects of green tax reforms in developing countries will be unsuccessful. Therefore, policymakers in these nations must look for other ways to help them reduce the green tax burden on labor which will, in turn, enable them to implement the environmental tax reforms.

3.0 Potential areas of environmental taxes.

Green taxes are charges on fuel petroleum products, fossil fuels, and gasoline. It charges on the ticket per passenger. Green taxes are charges on nuclear, coal, hydroelectric power, wind power, solar energy, bottles, plastics, leather, paper & pulp, and other chemical industries. Green taxes are charges on fertilizer, fisheries, forest and other agricultural industries (Labeaga & Labandeira, 2020); Green taxes are charges on various greenhouse gas and carbon emission. It charges on drugs & medicine, soaps, and cosmetics industries. It charges on natural gas and oil and registration charges on imported vehicles (Md *et al.*, 2023)

3.1 The tax base – what would be taxed in green, carbon and environmental systems?

Any assessment of the revenue and distributional effects of a tax must be predicated on a choice of what the base of the tax would be and at which points the tax would be collected. We divide

the potential tax base into three categories: (i) fossil fuel emissions; (ii) including industrial process and product use emissions, emissions of fluorinated gases, and other emissions not counted as fossil fuel emissions; and (iii) biomass fuels such as ethanol. Non based energy sources such as nuclear, wind, solar, and geothermal do not emit greenhouse gases and would not be taxed. Although land use-based and other non-point emissions, such as from management, livestock, or deforestation, might eventually be covered in some way by a carbon tax system.

The CO₂ contents of the following are subject of carbon taxation: Natural gas and coal (Upstream or midstream approach); Natural gas; Anthracite; Bituminous; Sub-bituminous; Lignite; Petroleum; Midstream approach; (representative fuels): Gasoline; Diesel, home heating oil; Jet fuel; Upstream approach and Crude oil.

3.11 Fossil Fuel emissions

Fossil fuel emissions could be taxed using either a so-called “upstream” or “midstream” approach. The approaches differ on the point in the supply chain at which the fuel’s emissions would be taxed: An upstream approach taxes raw fuels while a midstream approach taxes fuels at a designated point further down the supply chain but before they reach final consumers. A hybrid of the two approaches is also possible.

Under an upstream system, an excise tax would be levied on (i) crude oil as it reaches the refinery, (ii) natural gas as it leaves the processor to enter a pipeline system or, for gas that bypasses the processor or pipeline system, arrives at the end user, and (iii) coal as it leaves the mine. To be consistent with a carbon tax focused solely on domestic use, fuel imports would be taxed and exports would be eligible for a refundable tax credit. Aviation fuels used in foreign trade, a designation that includes international flights, would be exempt from the tax. Carbon dioxide captured from a fossil fuel plant or through industrial processes and permanently stored would be eligible for a refundable tax credit.

The carbon content of coal is more variable than the carbon content of refined fuels or natural gas. Under an upstream system, crude oil would be taxed based on its total carbon content regardless of the fuels and products it is used to produce. This approach is necessary to ensure the tax falls fully on those fuel products that are later used for energy purposes. Fuels and fuel products whose emissions were substantially lower than certain coefficients would be eligible to claim a credit based on their lower emissions. This treatment may be somewhat challenging for taxation of non-fuel petroleum products that emit greenhouse gases as they breakdown over time.

Comparison of upstream and midstream approaches. Our assessment is that the upstream, midstream, or upstream-midstream hybrid approaches would tax essentially the same quantity of fossil-fuel-based emissions, with minor differences. One exception is that a midstream system would not readily cover emissions from petroleum fuels burned at the refinery. Under a midstream system, those emissions would presumably be covered instead as industrial (non-fuel) emissions.

3.12 Non-fuel emissions

A number of greenhouse gas emissions would be covered by a fuel-based emissions tax. They

include: (i) emissions that arise during the production of industrial products such as cement, lime, glass, ammonia, petrochemicals, and others, (ii) emissions from the mining of coal and the extraction and refining or processing of oil and natural gas; these are mostly non-combustion emissions but some combustion emissions might be included here if they occur above the point at which the fossil fuel tax is imposed and (iii) direct emissions of fluorinated gases.

3.13 Biomass fuels

Biomass fuels such as ethanol, wood, animal waste, and corn stover, among others, are used for transportation, power generation, and heating. OTA did not assess the rationale for taxing these fuels, if at all, nor, if they were taxed, what CO₂ content parameters would apply. Because of the wide range of fuel sources, only a midstream-type of approach could be used. Biomass fuels used for transportation could be taxed effectively as they leave the processor or at the terminal rack, as is done for other transportation fuels. Biomass fuels used for power generation and heating may be subject to minimal processing and there may be no clear point in the supply chain until those fuels reach the electric generator or other stationary emitter.

4.0 Implementation of Green Taxation in Nigeria

Over the last decade, nations and international organizations have fought to come up with a system of universal governance that will help them tackle climate change. The common policy has been the implementation of green taxation, which despite its familiarity, has not been fully accepted in many countries. Moreover, while only a few countries chose green taxes, most nations want to implement soft policies such as subsidies for renewable energy which in most instances are not only regressive but also very expensive. Carattini *et al.* (2017) argued that the implementation of green taxation has proved difficult in many nations. However, learning from past failures, it is important for nations to increase popularity and broaden the implementation of green tax reforms. Green taxation policies, like other taxation reforms, has faced opposition in many countries. However, governments that have been strict on these reforms have seen an increase in green tax revenue and compliance. Cerniauskas *et al.* (2019) argued that corporate sustainability reporting is one of the methods organizations are using to disclose their sustainable activities.

Adoption of green taxation may increase the price of energy and it is considered to be a critical intervention for achieving the carbon emission reduction targets. This shall lead to reduced demand of energy and better environmental conservation practices. It is often articulated that carbon tax may be detrimental for economy because with increasing price of energy, the price of commodities would also escalate. Thus, it may reduce demand in the economy. It would raise the cost of entrepreneurship and as result; there might be exodus of a large number to businesses to other countries which provide a favorable tax regime. It sucks money out from the existing economy system. Despite all, carbon tax system would be favored since it is less-complex, predictable, transparent, accountable and much easy to monitor. It avoids speculation, inconspicuousness and extreme volatility which is usual with the other tax regimes. The Carbon tax is easy to monitor because it can be easily embedded into an existing system of taxation. Moreover, a carbon tax could contribute to social redistribution because the collected tax could be invested back into renewable energy and clean energy endeavors. Developing nations are in dire need of greening their economy in wake of much anticipated legally binding global emission reduction treaty, which is likely to be agreed upon and implemented by 2020. Through carbon tax, government taxation mechanism can target carbon emissions.

4.1 Findings on implementation of green, carbon and environmental taxation in Nigeria

Before a Green Tax system is incorporated, it is important that the public opinion on the same be taken into consideration. In order to raise awareness about the amount of regulation that is essential to combat environmental problems, it's important to know and invite suggestions of the public about the kind of reforms they would like. Incorporating public opinion into the new tax system would make sure that the public has confidence in the government and also instil a notion that the reforms are not enacted simply to generate revenue but to achieve environmentally friendly outcomes. However, one of the major questions that may arise is why a Green tax needs to be imposed when there are already laws and regulations enacted by the government to keep the pollution in check. Let's delve deeper into the subject matter in order to answer this question.

After considering the aforementioned provisions, it's time we looked at how well the people of the country accept the new system of Green Taxation and how accommodating they are to the new reformation. However, certain things must also be kept in mind while assessing the same.

First of all, an environmental tax/green tax may require the adaption of entirely new business operations and consumer habits in order to accommodate a more environment friendly behaviour. This change often requires high adjustment costs, for example, many products like a particular kind of automobile or vehicle or fuel might be rendered unec onomic after the new levy. Hence, the public in some instances may be mistrustful of the new tax reform. Secondly, a higher tax burden leads to an automatic increase in higher cost of production which may subsequently result in the shutting down of operations of many firms and businesses. However, this depends on how well the environmental tax is designed, the way in which it is recycled and the broad effects it has on the output of the provincial economy. It may also be that firms which fear of being negatively affected by such change naturally are not motivated to accept such a tax reform. Hence, this raises another concern regarding the functioning of the new tax reform.

Despite several environmental challenges in the country, we are constantly degrading the environment through carbon emissions. Nigeria did imposed an environmental tax to prevent these problems resulting in spending a large portion of the budget on this sector and creating a deficit budget due to the non-arrival of revenue. Although most of the policymakers are trying to impose a green tax it is not possible due to a lack of awareness in the corporate sector and a lack of public goodwill. Green taxation increase a sustainable economy and sustainable development as well as revenue growth of a country. It not only brings long-term economic prosperity but also contributes to social security and environmental security and strengthens the country's finances. Nigeria currently has a large-scale environmental disaster for emerging industries and to this end, it can increase the country's revenue by imposing an environmental tax on all environmentally impacting materials or environmental-related materials. To sustain the economy of Nigeria and to keep the internal development, it will help to increase the revenue through green tax as well as increase the growth of GDP and protect the environmental balance. If we want to live with high growth and per capita income then green tax is not an option. Through green tax, every citizen will improve their overall quality of life by raising their awareness as well as contributing to environmental conservation.

In Nigeria, the concept of an green tax has been incorporated to finance act but suspended till end of 2023. Although the concept may have been well received, the impact needs to be more powerful and popularised among the masses. People need to be made aware of their ability to protect the environment even at the grassroot levels for e.g. reducing the open burning of non-biodegradable wastes. Hence, educating the masses about Environmental (Green) Taxes will help them better understand the consequences of their actions and help them contribute towards sustainable development via the payment of green taxes.

There is an uncertainty about the public acceptance of these taxes and subsequent difficulty in predicting the rate at which the pollution will fall if environmental taxes are implemented, it becomes expensive for governments to pursue environmental targets and thereby makes it difficult for firms and households to plan investment, production, and consumption activities. Regardless of this, it can be seen that environmental taxes are slowly gaining momentum in Nigeria.

5.0 Conclusion and recommendation

This paper conceptually analyzed the development and current situation of Nigeria's "green tax system", finding the problems of Nigeria's "green tax system". It is pointed out that Nigeria should introduce and develop the scope of taxation and adopt the method of "green tax" to cultivate taxpayers' green awareness. It is hoped that all of the measures will contribute to tax collection and management.

In order to ensure a cost-efficient system, Green Taxes should apply uniformly to all taxpayers as differentiated tax rates will mangle the competition in the market and reduce the incentives and make them inefficient to lessen the environmental harm (Sun, 2013). Industrial exemptions can be allowed in this taxation only for a limited time period, but they should be well targeted and regularly reviewed so that enough time is given to the industries to structurally adjust in the long run and subsequent environmental effectiveness can be guaranteed. Further, it is important to assess the actual impact of a tax and hence, regular policy monitoring needs to be done to ensure that it is environmentally efficient, provided the market has adjusted to the existing rates and the firms and businesses are contemplating the change of business behavior towards being more environmentally suitable.

Green taxation policies are yet to be implemented in all countries across the world, although their familiarity is increasing. The few countries that are using these policies to conserve the environment have not achieved their intended goals (Islam *et al.*, 2022). One of the major problems is that green taxation also leads to economic problems such as the increase in the rate of unemployment that occurs when firms' profits decrease due to high taxes and they are unable to investment more hence leading to no job creation. Governments must find a balance between green tax reforms that will protect the environment and the economy as well. Fiscal and taxation policies are essential to promoting green development and helping to reduce pollution and carbon emissions.

The main challenge is to design policy objectives and their instruments in such a way that the social costs of any inefficiency are minimized and a fair distribution of the burden are ensured. Thus, the policy framework needs to be systematically analysed for the successful design and implementation of environmental taxes. It seems impossible to have production and manufacturing without degrading the environment (Al-Alawi & Nobanee, 2020).

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