

Study the Impact of Carbon Credit on Accounting and Taxation of Companies' Profitability - An Indian perspective

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Abstract

This Paper attempts to study accountants' undertaking of carbon tariff in relation to climate change. Specifically, it focuses on how energy sector industries have adapted the working since the introduction of carbon tax. The concept of carbon credit trading is based on the Kyoto Protocol and is primarily used to control greenhouse gas emissions. This concept is used to generate revenue from carbon credits and trade between various companies and the government. The concept is primarily known for reducing carbon emissions to mitigate future climate change; the main targets are greenhouse gases, especially carbon dioxide. It is important to assess the global scenario of the carbon credit business. India signed and ratified the Kyoto Protocol in 2002. Since then, India has been exempted from the treaty; it is expected to benefit from the protocol in terms of foreign investment. In this market, India is one of the first participants. Initially, this concept was only used and cashed in by a few big business players. But now, some newer and smaller companies are also taking advantage of the opportunities. This market is currently the fastest-growing financial market in India.

Keywords: Carbon Discharge, Carbon tariff, Climate Change, Energy sector industries, Environmental Tax Carbon Credit Trading, Clean Development Mechanism (CDM),

Introduction

Global warming - the issue

"Environmental taxes send signals that permeate the entire economy, which leads to increased reaction, operating system changes, and transition to uncontaminated materials. The need is to reduce the use of materials that negatively affect all phrase of manufacturing. Tariff also ensures that different people are liable to

different price slabs, which leads to methods to achieve environmental goals" (ESRC.2000). The issue (Adhikariparajuletal 2019; Elmaghietal. 2019 (Alshbilitetal. 2019); Evangelinoset;2015; Eweje;2011; Gergedet;2018; Hansfordet;2004) with carbon emissions in CO₂ is to find a way to reduce the amount of emissions. The agreement was signed in 2015 by 192 representatives of several countries (Chen;M). -SanchoH.2017.). L. Lynn. 2016). Thus, the carbon tax is a way to

pay for carbon emissions (Guo.2014). However, the tax laws that implement them require proper education to monitor the impact of carbon tariff on climate change (Hwang.K;2017; Martin.R;2014).

There is a lot of room on Earth for controlling the emission of chemicals. About 30% of solar energy shines in the atmosphere, the rest reaches the earth, warms the air, sea, land and has an average outdoor temperature of about 15 ° C. Most of them are NO₂ (78%). Approximately 21% is O₂, which is necessary for all animals to survive, and plants need (0.036%) carbon dioxide for photosynthesis. Every day solar energy passes through the earth, sea, mountains and more. When all this energy passes, the earth becomes hotter and hotter. All this increase in temperature is not lost in space and is part of the most common gas (or footprint) in the airspace, called GHG (greenhouse gases). GHG (carbon dioxide (CO₂), methane (CH₄), nitroxide (N₂O), water vapor, etc.) convert some of this heat into the Earth's atmosphere. If they do not execute this necessary purpose, most of the heat energy is removed and carried out outside into the cold (about -18°C), which is not suitable for support. However, since the beginning of the industrial revolution about 150 years ago, human desires have released a large amount of natural gas into space. Emissions of carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) increased by almost 31%, 151% and 17%, respectively, between 1750 and 2000 (Governmental Group on Climate Change). Obviously, natural gas has high emissions, but because it is polluted by long-term emissions, increasing gas can lead to global warming and climate change. In fact, in the 20th century, scientists noticed that the average global temperatures rose by 0.6 ° C (IPCC2001). They also note that the 1990s were the hottest decadal years since the 1860s, when the temperatures began to be recorded with thermometer). The major GHG (greenhouse gas) are Carbon Dioxide (CO₂), Methane (CH₄), Nitroxide (N₂O), Hydro fluorocarbons (HFCs), Per fluorocarbons (PFCs) and Sulfur Hexafluoride (SF₆). Steam is also an important gas, but unlike humans, it usually does not directly affect the amount of pollutants in the atmosphere. Since each hot gas carries a

different type of heat and stays in the atmosphere for different periods of time, this study focuses on the probability of global warming due to gases. As the CO₂ is used as a reference, all other gases are computed with standard CO₂.

Carbon credits and their trading

Carbon Credit

Each Carbon Credit performs one ton of CO₂ either discharged from airspace or stop from being emitted.

Carbon Trading

The process of purchasing and selling carbon credits is called as carbon trading. Developed countries with discharge, reduce their emission and are the purchasers of carbon credits. Developing countries and least developed countries without discharge targets (currently) are the vendor or providers of carbon credits. Clean companies in developing countries sell carbon credits to buyers and make extra money in the process. Environmental carbon buying and selling is done on the basis of carbon credits earned. These credits are kept in the form of e-certificates. In the carbon market, two kinds of transactions occur:

- (a) Cap and trade (emission trading)
- (b) Offset trading (project-based carbon credits)

Two types of carbon market occur –

- (a) The voluntary market in which the trade of carbon credit is on a voluntary basis.
- (b) Market Compliance Markets: Used by industry and governments that needs to account for their greenhouse gas emissions. They are governed by mandatory national and international carbon reduction schemes.

Clean Development Mechanism (CDM).

The Kyoto Protocol has developed three mechanisms to save energy and reduce emissions;

- Clean Development Mechanism (CDM)
- Joint Implementation (JI)
- Emissions Trade (ET)

- (I) **Clean Development Mechanism (CDM)** The Protocol has agreed on a "limit" or allocation for maximum greenhouse gas emissions in developed and developing countries. These countries set emission limit for plants operated by local businesses and other organizations (often referred to as "operators"). Each country manages it through its registry. This register must be verified and monitored by the United Nations Framework Convention on Climate Change. Each operator has a credit allowance that allows each unit to emit a ton of carbon dioxide or other equivalent greenhouse gas to the owner. Businesses that have not used up their quotas can resell unused quotas personally or in the open market in the form of carbon credits. Energy demand has increased over time and total emissions have not yet reached their limits, but the carbon credit mechanism ensures that the sector is profitable and predictable in its system. By permitting the purchase and sale of emission space, operators can reduce emissions most by funding cleaner technologies and practices, or by buying releases from another operator who has already overdosed. You can find a cheap way. Energy saving and emission reduction mechanism
- (II) **Joint Implementation (JI)** The mechanism known as the 'collective result', defined in Article 6 of the Kyoto Protocol, is that countries that reduce or limit their emissions under the Kyoto Protocol (Annex B) receive an emission reduction unit (ERU) or another Annex B, for companies with projects to reduce emissions per ton of CO₂ that could be considered as a Kyoto target. Joint implementation provides a reasonable and inexpensive way for the parties to implement some of the

Kyoto Protocols, and the host country will take advantage from foreign funding and technology transfer.

- (III) **Emission Trading (ET)** These objectives for the year 2008-2012 are defined as the air level of the regulatory framework, or "specific funding" for the duration of the project dividing the products into "Assigned Sections" according to Article 17 of the Kyoto Protocol.

Carbon tax – Outcome on Industries

Carbon taxes are an important issue for greenhouse gas emitters. This would affect overall profits and could lead to unemployment. This can be due to aging fossil fuel demand, negligible domestic use, thereby reducing manpower requirements and product costs. The example of the state of Uttarakhand can be cited, where coal was the fossil fuel that dominated electricity demand in Uttarakhand in 2013, accounting for more than 40% of total electricity (Webster;2014). In 2015, those numbers fell down to 22%. Between April and June 2016, coal fell by 6%. Few coal power plants have been shut down under European Union regulations, but some are hampered by one of Uttarakhand's most isolated energy directives, a carbon tariff (Gosden.2016).

Are Carbon Tariffs Conservative or Liberal?

An advanced tariff system is a system that pays more taxes on your income. The debate about the possibility of increasing the carbon tax is challenging because the study by (Dissou. Siddiqui 2013) shows an outcome that actively indicates that "the consequences of the carbon tax on imbalance is not defined, as it depends on the situation." These effects can be bad, good or none. It means impact of the carbon tax on the country can be flexible (Haines;2015). Past research has shown that in Denmark, CO₂ and other environmental tariff are an efficient way to reduce discharge (Wier.2005) and the potential of a carbon tax to inspire the renovation and energy efficiency sector with positive signs on economic

parameters of a country (Ekins;2003) . Both express the plan that a carbon tariff is a gain in advanced tariff. On the one hand, a retroactive tax is a tax that hits the lowest and is the opposite of an advance tax. Income tax deductions mean that low-income families pay a larger share than those with higher incomes (Wieret;2005). A work by Hamilton.C;1994 investigating the impact of the 14-section carbon tariff result that the effects of the carbon tariff were negligible.

Research Objectives

- a. To understand the basic fundamental of carbon credit trading.
- b. To show the effect of carbon credit accounting on the taxation of companies.
- c. To study the taxation issues of carbon credit accounting in India

Screening method:

This research is conducted using the secondary data sourced from books (with case histories of large companies like related to CO₂ discharge in India from 2016-2020), newspaper articles, Government reports, and certified accounting organizations.

REVIEW OF LITERATURE:

(Kamat & Kamat, 2015) – A survey was conducted to find out the perception of accounting for carbon credits. Because it is the last subject to ponder; Many basic concepts have not been covered or explored.

(Ravi K Jain, Anupam Jain & Vinita Jain, 2013) – Taxation eye-view, income from the transfer of carbon credit should be taxable under the head of Business and Profession. In the current scenario, companies mostly in India has a record earnings from “other sources” which includes carbon credit trading, so the opinionnaire reviews that the carbon credit is a certificate like shares which should be titled under capital gain as the taxation rate varies in the short term- long term holdings. The Institute of Chartered Accountants of India from 2009 has made a blueprint containing policies and guidelines for carbon credit accounting which deals with the

Certified Emission Reduction that are generated through CDM

(Christoph Bohringer & Heinz Welsch, 2010) – Emphasis was placed on sovereignty versus egalitarianism to provide practical answers to the equity debate. when combined with international discharge buying and selling; The constructive approach is notable for the fact that developed countries offer significant quotas to participate in reducing the greenhouse effect.

(B.C.M.Patnaik et al. (2016) The aim of the study were to study the effects and consequences of carbon credit accounting and to undertake empirical research on the basis of identification of variables through literature review.

Taxation for Carbon Credits:

Certified discharge reductions turnover should be considered in the Enterprise and Employment section. However, although the sale of intangible assets is taxed on a 'capital gain' basis, most Indian industries now record carbon loan business income as 'capital gain' from other sources. If the loan is held for more than 3 year before the transfer date, a reduced tariff rate is still applicable. It allows the company to make decisions about when to transfer these loans, to balance the need for cash, interest rate factors, and differences in long-term and long-term tariff rates. The self-created certified discharge reductions loan has no buying costs; therefore Article 55 (2) is subject to capital gains tariff (long-term / short-term) on full sale price in accordance with the Income Tax Act. Maintenance period certified discharge reductions are traded on the spot or in futures markets. Certified discharge reductions transactions on foreign exchange platforms may be subject to service charges. Value added tax may also apply to supply contracts. Indian carbon credits are usually sold to foreign buyers. Accordingly, these goods are not subject to Value added tax. When the property is sold, this amount is converted into ownership of the forest carbon offset. Therefore, forest carbon offsets are an asset for financial accounting purposes as they are managed by the business and provide future economic benefits. The use of forest

carbon offsets calculates its nature and how it should be classified in the financial statements. This has a direct impact on the economic value that the public and private sectors receive as a result of carbon offsets.

Business Scenario in India: Important Glimpses

1. Jindal Vijaynagar Steel

This company will be ready to trade roughly \$225 million in carbon savings. This is only possible with the oven and the basic oven technology that is used in this plant. This technology avoids the release of 15 million tons of carbon into the airspace.

2. Powerguda

The company named Powerguda in a village in Andhra Pradesh has made a claim of reducing about 147 million tons of carbon-dioxide. This has only been possible by extracting bio-diesel from 4500 Pongamia trees in their small village.

3. Handia Forest

In Madhya Pradesh, approximately 95 very poor villages would together gain at least US\$300,000 per year from carbon remittance by restoring 10,000 hectares of degraded greenwood forests.

4. Gujarat Fluorochemicals Limited (GFL)

The Gujarat refrigerated gas plant is the first in India to receive the project registration from the CDM Executive Committee established within the CDM. GFL has successfully launched its greenhouse gas reduction project, and the Clean Development Mechanism Board has recently issued the initial Certified Emission Reduction (CER) documents. The company expects a production of about 3 million.

5. Shri Ram Fiber Limited

With a business of Rs. 4,000 crores, SRF is a diversified company. Its business profile encompasses technical textiles, fluorochemicals, specialty chemicals, packaging films and engineering plastics. SRF gets carbon credits: Large stock now that SRF launched ca. 7.72 lacs carbon credit units by the supply agency, ie

United Nations Framework Convention on Climate Change. Approximately 86.5 certified emission reductions were issued. The fare, at which SRF exchanges CER, is 22 Euros per certified emission reduction.

6. Delhi Metro Rail Corporation

Metro Delhi UN Corps Loans about 6.3 Million Carbon Credits for Modal Shift Project. The DMRC has been verified by the United Nations as the world's first train and train system to receive carbon credits for reducing greenhouse gas emissions, contributing \$6.3 million helping to reduce global warming.

7. AAC India

An Aerial Concrete (AAC) project in India can generate 50,000 carbon. The average cost of a carbon loan is € 10. That means 50,000 carbon credits will generate € 500,000 a year in revenue (Rs 3.5 million).

Conclusion

This study found that India has a great opportunity to study the effect of carbon credits on energy sector taxation and accounting. The findings also indicate that India will remain second to China in carbon credit trading in 2030. Adequate and clear financial accounting standards need to be established for carbon offsetting. Lack of uniformity in financial and tax accounting standards are also an impediment in the process. The level of awareness should be raised through common platforms such as social media and electronic media to inform the concerned parties. This will help create a clean, pollution-free and hazardous environment, which is one of the main priorities of the current government in India. Accounting is a breakthrough in the field of reducing greenhouse gas emissions, which will be an example for industries for business purposes; here first the process must meet the principle. Governments in place must have strict procedures, rules and regulations for accounting for carbon credits to ensure that carbon credits are not an attractive product but a standard measure used by commercial enterprises.

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