



ORIGINAL RESEARCH PAPER

Commerce

CARBON TRADING – AN OVERVIEW

KEY WORDS:

Lalajee P. Thakor

Prof M.Com., G-SET Adhoc Lecturer in Commerce and Accountancy Smt. T. S. R. Commerce College, College Campus, Raj Mahel Road, Patan – 384265 (Gujarat)

1. Concept of carbon trading:

Carbon Trading is a scheme where firms (or countries) buy and sell carbon permits as part of a programme to reduce carbon emissions. Usually firms are given a certain quota to pollute a certain amount. If they wish to pollute more than their allowance then they have to buy more permits. If they pollute less than their quota they can sell their spare permits on the market. Thus there is an incentive to reduce pollution and find the most efficient way of dealing with pollution. Carbon trading is an approach used to control carbon dioxide (CO₂) pollution by providing economic incentives for achieving emissions reductions. It is sometimes called cap and trade or carbon emissions trading.

The carbon trade also refers to the ability of individual companies to trade polluting rights through a regulatory system known as cap and trade. Companies that pollute less can sell their unused pollution rights to companies that pollute more. The goal is to ensure that companies in the aggregate do not exceed a baseline level of pollution and to provide a financial incentive for companies to pollute less.

Carbon trading is administered by a central authority such as a government or international organization which sets a limit or cap on the amount of CO₂ that can be emitted. Companies or other groups are issued permits that require them to hold allowances (or credits) in order to emit an equivalent amount of CO₂. The total amount of allowances and credits cannot exceed the cap, limiting total emissions to that level. Companies that need to increase their allowance must buy credits from those who pollute less. The transfer of allowances is referred to as a trade. The buyer therefore pays to pollute, while the seller is financially rewarded for reducing CO₂ emissions. In theory, those that can easily reduce emissions most cheaply will do so.

Under Carbon trading, a country or a polluter having more emissions of carbon is able to purchase the right to emit more and the country or entity having fewer emissions sells the right to emit carbon to other countries or entities. The countries or polluting entities emitting more carbon thereby satisfy their carbon emission requirements, and the trading market results in the most cost-effective carbon reduction methods being exploited first. For any given expenditure on carbon reduction, the market mechanism will result in the greatest reduction.

2. History of carbon trading:

Carbon trading began in response to the Kyoto Protocol, signed by 180 countries in 1997. The Kyoto Protocol, signed by 180 countries in 1997, called for 37 industrialized countries to reduce their greenhouse gas emissions between the years 2008 to 2012 to levels that are 5% lower than those of 1990. [1] Article 17 of the Kyoto Protocol established emissions trading by allowing countries that have emission units to spare (emissions permitted to them but unused) to sell this excess capacity to countries that are over their emissions limits. In effect, this created a new commodity in the form of emissions and created a carbon market. Since CO₂ is the principal greenhouse gas, emissions trading effectively became carbon trading. The units which may be transferred under Article 17 emissions trading, each equal to one tone of CO₂-equivalent, may be in the form of:

- An assigned amount unit (AAU) issued by an Annex I Party on the basis of its assigned amount pursuant to Articles 3.7 and 3.8 of the Protocol.
- A removal unit (RMU) issued by an Annex I Party on the basis of

land use, land-use change and forestry (LULUCF) activities under Articles 3.3 and 3.4 of the Kyoto Protocol.

- An emission reduction unit (ERU) generated by a joint implementation project under Article 6 of the Kyoto Protocol.
- A certified emission reduction (CER) generated from a clean development mechanism project activity under Article 12 of the Kyoto Protocol.

Transfers and acquisitions of these units are to be tracked and recorded through the registry systems under the Kyoto Protocol.

3. Why we have the carbon trade:

When countries use fossil fuels, and produce carbon dioxide, they do not pay for the implications of burning those fossil fuels directly. There are some costs that they incur, like the price of the fuel itself, but there are other costs, not included in the price of the fuel. These are known as externalities. In the case of fossil fuel usage, often these externalities are negative externalities, meaning that the consumption of the good has negative effects on third parties. These externalities include health costs, (like the contribution that burning fossil fuels makes to heart disease, cancer, stroke, and lung diseases) and environmental costs, (like environmental degradation, pollution, climate change and global warming). Interestingly, research has found that, often, the burdens of climate change most directly affect countries with the lowest greenhouse emissions. So, if countries is going to burn fossil fuels, and produce these negative externalities, the thinking is that they should pay for them.

The carbon trade originated with the 1997 Kyoto Protocol, with the objective of reducing carbon emissions and mitigating climate change and future global warming. At the time, the measure devised was intended to reduce overall carbon dioxide emissions to roughly 5% below 1990 levels by between 2008 and 2012.

4. How does it work?

There have been attempts to allow richer countries to cut their emissions by paying for the development of carbon lowering schemes in poorer nations. However, the effectiveness of these schemes has been questioned, with research indicating that some have created more emissions than they have actually curtailed. Of greater significance have been the so called cap and trade schemes, at regional, national and international levels. They work by setting an overall limit or cap on the amount of emissions that are allowed from significant sources of carbon, including the power industry, automotive and air travel. Governments then issue permits up to the agreed limit, and these are either given free or auctioned to companies in the sector. If a company curbs its own carbon significantly it can trade the excess permits on the carbon market for cash. If it's not able to limit its emissions it may have to buy extra permits. Schemes are up and running in the European Union and in several regions of the United States, but attempts at a national scheme in the US foundered in the Senate in 2010.

5. Scope of carbon trading in India:

Indian Market of Carbon Trading: The carbon market is divided into two parts-that which is compliance driven and the other being the voluntary market. The more dominant and lucrative compliance market only accepts carbon credits under the CDM programme, while there are various regional non UN administered voluntary programs worldwide. For carbon credit trading, India follows a scheme called Clean Development Mechanism (CDM) or more commonly, carbon trading. CDM is an arrangement under the Kyoto Protocol allowing industrialized countries with a

greenhouse gas reduction commitment to invest in emission reducing projects in developing countries as an alternative to what is generally considered more costly emission reductions in their own countries. Under CDM, a developed country can take up a greenhouse gas (GHG) reduction project activity in a developing country where the cost of GHG reduction project activities is usually much lower. The developed country would be given carbon credits for meeting its emission reduction targets, while the developing country would receive the capital and clean technology to implement the project. Carbon credits are certificates issued to countries that reduce their emission of GHG, which causes global warming. Developed countries that have exceeded the levels can either cut down emissions, or borrow or buy carbon credits from developing countries.

The Indian market is extremely receptive to CDM. Having cornered more than half of the global total in tradable certified emission reduction (CERs), India's dominance in carbon trading under the CDM of the UN Convention on climate change is beginning to influence business dynamics in the country. Carbon credits are measured in units of CERs, which is equivalent to one tone of carbon dioxide reduction.

6.Future scope:

India's huge potential for generation and sale of CERs needs to be harnessed especially to tap the huge opportunity in the European Union Emission Trading System (EU-ETS). Hence, in order to bring vibrancy to the emission market in the country, there is a need for a transparent platform that will help buyers and sellers get a fair deal and reduce the margins of the intermediaries to reflect the economic value-addition. With technology at India's side, it is time the country leveraged it for a sustained growth of the carbon credit market. "Indian industries, which looked at CDM implementation in their process have failed to realize fair prices in most cases due to the currently thriving OTC (over-the-counter) markets that have fleeced most sellers by buying at prices much lower than that provided by buyers. The MCX-CCX (Chicago Climate Exchange) tie-up is expected to ensure better price discovery of carbon credits besides helping the participants cover the risks associated with selling and buying of carbon credits. Further, the exchange, with its various ways of educating the eco-system participants, would enhance the benefits accruing to them in its endeavor to make India a major global commodity-trading hub.

7.Advantages of carbon trading:

Cap and trade schemes have been very effective in tackling environmental problems in the past, with trading in sulphur dioxide permits helping to limit acid rain in the US. The big attraction for governments concerned with stemming CO₂ is that carbon trading is much easier to implement than expensive direct regulations, and unpopular carbon taxes. If regional cap and trade schemes can be joined up globally, with a strong carbon price, it could be a relatively pain-free and speedy method to help the world decarbonize. The argument is that firms are free to choose the most cost-effective way of meeting permit requirement. For example, they have an incentive to develop better technology which limits carbon emissions. However, if the price of permits is low, they may decide to buy more. The idea of carbon trading is for governments to gradually reduce the number of available permits from year to year. Therefore, firms need to increasingly find more ways to reduce carbon emissions.

8.Criticisms of carbon trading:

Opposition to carbon trading has grown due to the belief that such approaches do little to help climate change and instead provide substantial profits for corporate greenhouse gas polluters. Critics point out failures in accounting, dubious science, and the negative impact of the carbon market on local communities. In addition, critics contend that carbon trading does not solve the overall pollution problem since net reduction would require fewer allowances rather than permitting groups that pollute less to sell their allowances to the highest bidder.

Creating a market in something with no intrinsic value such as carbon dioxide is very difficult. You need to promote scarcity - and

you have to strictly limit the right to emit so that it can be traded. In the world's biggest carbon trading scheme, the EU ETS, political interference has created gluts of permits.

These have often been given away for free, which has led to a collapse in the price and no effective reductions in emissions. Another problem is that offset permits, gained from paying for pollution reductions in poorer countries, are allowed to be traded as well. The importance of these permits in reducing carbon emissions is questionable and the effectiveness of the overall cap and trade scheme is also reduced.

The difficulty of measuring how much a firm is actually polluting. The problem of excess carbon emissions is a global problem. Therefore, there needs to be a global solution. If carbon trading is introduced in one country but not others, it may cause production to shift to countries without the scheme. Often countries don't start carbon trading precisely for the fear other countries will be free-riding on their efforts. Carbon Tax may be more simple, transparent and easy to administer. Carbon Trading may have a greater impact on those with low incomes and poor areas who have less flexibility to change their lifestyles.

9.Conclusion:

The carbon credits trading business will likely emerge as the most profitable business in the coming times. It occupies the fastest growing financial market in the world economy presently. As a developing country, India has a large potential for greenhouse gases reduction and carbon trading business. With recent changes and signs of support and recognition from the Indian government, it is a promising time for carbon trading.

REFERENCES

1. Dr. Shi-Ling Hsu, The Case for a Carbon Tax: Getting Past Our Hang-ups to Effective Climate Policy 2nd Edition, eBook
2. <https://www.economicshelp.org/blog/glossary/carbon-trading-definition/>
3. <https://www.economicshelp.org/blog/2204/economics/carbon-trading-schemes/>
4. <https://www.youthkiawaaz.com/2011/02/carbon-trading-in-india/>
5. <https://enkingint.org/index.php/blogs/Significance-of-Tax-Reduction-on-Income-from-Carbon-Credits>
6. <https://www.quora.com/How-can-a-company-start-earning-through-selling-Carbon-Credit-in-India>
7. <https://ideas.repec.org/p/zbw/vfsc/14/100472.html>