IMPACT OF CARBON TAXES ON COMPANY FINANCE

Euriver Zega[1], Merwati Waruwu[2], Ningsih[3], Muammar Khaddafi[4]
Faculty of Economics and Business Universitas Batam[1,2,3]
Faculty of Economics and Business Universitas Malikussaleh[4]
*Correspondence: rivermei01@gmail.com

Abstract

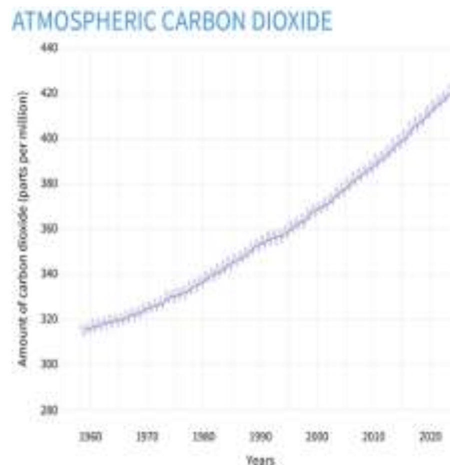
Carbon tax is new matter for company in Indonesia nowadays. The tax that charges for carbon is embodiment of constitution commitment. Indonesia government make a promise that written in Indonesia Constitution, which is the promise is to provide all of Indonesian People and give everyone healthy living environment. This promise has evolved into a carbon tax which is expected to curb corporate carbon spreading. This study will be based on Indonesia law Number 7 of 2021 on the Harmonization of Tax Regulation and Presidential Regulation Number 98 of 2021 on the Implementation of Carbon Value.

Keywords: tax, carbon, regulation, finance, living environment.

INTRODUCTION

Carbon is the largest contributor of global warming. Based on the annual report from NOAA's Global Monitoring Lab, global average atmospheric carbon dioxide was 417.06 parts per million ("ppm" for short) in 2022, setting a new record high. The increase between 2021 and 2022 was 2.13 ppm – year in a row where the amount of carbon dioxide in the atmosphere increased by more than 2 ppm. At Mauna Loa Observatory in Hawaii, where the modern carbon dioxide record began 1958, The annual average carbon dioxide in 2022 was 418.56. Carbon dioxide concentrations are rising mostly because of the fossil fuels that people are burning for energy. Fossil fuels like coal and oil contain carbon that plants pulled out of the atmosphere through photosynthesis over many millions of years; we are returning that carbon to the atmosphere in just a few hundred. Since the middle of the 20th century, annual emissions from burning fossil fuels have increased every decade, from close to 11 billion tons of carbon dioxide per year in the 1960s to an estimated 36.6 billion tons in 2022 according to the Global Carbon Budget 2022. Carbon cycle experts estimate that natural "sinks"—processes that remove carbon from the atmosphere—on land and in the ocean absorbed the equivalent of about half of the carbon dioxide we emitted each year in the 2011-2020 decade. Because we put more carbon dioxide into the atmosphere than natural sinks can remove, the total amount of carbon dioxide in the atmosphere increases every year. Therefore, we need the government to handle the increases of carbon dioxide as precision and quickly as possible.

Government is smartly enacting regulation such as taxing the carbon dioxide to reduce the amount of carbon dioxide produced by companies. This step or this move are alternative to eradication of so many carbon-providing companies. The eradication of carbon-intensive companies cannot be punished immediately, but requires smart ways to reduce it. All of these make an impact to companies' finance. So that to see the impact, further research is needed by reviewing related sources which will be presented in the following section research method and section result and discussion.



Objectives.

1. To find out whether a carbon tax improves corporate finances.
2. Determine the effect of carbon tax on company operational costs.
3. To find out the effect of carbon tax on the price of a company's products/services

LITERATURE REVIEWS

Taxes

Taxes are mandatory financial contributions imposed by government on individuals, businesses or other entities to fund public expenditures and services. Taxes play a crucial role in supporting government activities, such as infrastructure development, public education, healthcare, defense and various social programs. Here are some key aspects of taxes:

1. Types of Taxes
   a) Income Tax: a tax levied on individuals and businesses based on their earnings.
   b) Corporate Tax: taxes imposed on the profits of corporations.
   c) Sales Tax: a consumption tax levied on the sale
   d) Property Tax: Taxes on the value of real estate or personal property.
   e) Excise Tax: Applied to specific goods like alcohol, tobacco, and gasoline.
   f) Payroll Tax: Collected from employees and employers to fund social security and Medicare.
   g) Custom Duties: Taxes on imports and exports.

2. Taxation Process
   a) Filling: Individuals and businesses are required to report their income and relevant financial information to tax authorities.
   b) Calculating: The tax owed is calculated based on the applicable tax rates and deductions.
   c) Payment: Taxes are paid to the government according to the established schedule.

3. Tax Authorities
   a) State: country have its own tax system and revenue agency
   b) Local: Some taxes are collected at the local level, such as property taxes, retribution taxes and another taxes.

4. Tax Deduction and Credits
   a) Deduction: Allowable expenses that can be subtracted from taxable income.
   b) Credits: Direct reductions in the amount of tax owed.

5. Tax Planning
   a) Legal Strategies: Individuals and businesses may employ legal methods to minimize their tax liabilities.
   b) Financial Planning: Structuring finances to optimize tax outcomes.

6. Tax Compliance
   a) Penalties: Failure to comply with tax laws can result in fines, penalties or legal consequences.
   b) Audits: Tax authorities may conduct audits to ensure compliance.

7. Tax Reform
   Governments may periodically review and reform tax systems to address economic changes, promote fairness, or stimulate growth.

Corporate Financial

Corporate finance is a field of finance that deals with the financial decisions made by corporations and the tools and analysis used to make these decisions. The primary goal of corporate finance is to maximize shareholder value while managing the firm's financial risks.

Here are key aspects of corporate finance:

1. Capital Budgeting

   Involves decisions about which investment projects a company should undertake. Evaluates the potential returns and risks associated with various projects.

2. Capital Structure

   Refers to the mix of debt and equity used to finance a company's operations and investments. Balancing the cost of debt against the benefits of financial leverage.

3. Working Capital Management

   Involves managing a company's short-term assets and liabilities. Aims to ensure the company has enough liquidity to meet its short-term obligations.

4. Dividend Policy

   Involves decisions on whether to distribute profits to shareholders in the form of dividends or retain earnings for reinvestment. Balancing the interests of shareholders with the need for retained earnings.

5. Risk Management

   Involves identifying and managing financial risks, such as interest rate risk, currency risk, and commodity price risk. Utilizes various financial instruments and strategies to hedge against risks.

6. Financial Planning and Analysis (FP&A)

   Involves forecasting and planning for a company's financial future. Budgeting, financial modeling, and scenario analysis are common tools in FP&A.

7. Corporate Governance

   Encompasses the structures and processes used to direct and manage a company Involves the relationship between a company's management, its board of directors, and its shareholders.

8. Mergers and Acquisitions (M&A)

   Involves the buying, selling, and combining of companies. Evaluating potential targets, negotiating deals, and integrating acquired businesses.

9. Financial Reporting and Analysis

   Involves the preparation and analysis of financial statements. Communicates a company's financial performance to stakeholders.

10. Financial Markets

    Involves interactions with capital markets to raise funds through debt or equity issuance. Understanding market conditions and investor sentiments.

Carbon Tax

A carbon tax is a form of environmental tax imposed on the carbon content of fuels. Its primary purpose is to reduce greenhouse gas emissions, particularly carbon dioxide (CO_2), as part of efforts to mitigate climate change. The concept behind a carbon tax is to internalize the social cost of carbon emissions into the price of fossil fuels, encouraging businesses and individuals to reduce their carbon footprint. Here are some key features and considerations related to carbon taxes:

1. Tax on Carbon Emissions

A carbon tax is typically levied on the amount of carbon dioxide (or its equivalent in other greenhouse gases) emitted when using fossil fuels. It is measured in terms of a certain amount of tax per unit of carbon content or per unit of energy produced.

2. Pricing Mechanism

The tax is designed to create a financial incentive for businesses and individuals to reduce their carbon emissions. By increasing the cost of fossil fuels, it encourages the use of cleaner energy sources and promotes energy efficiency.

2. Revenue Generation
   Governments can use the revenue generated from carbon taxes for various purposes, such as funding renewable energy projects, supporting energy efficiency initiatives, or offsetting other taxes.

Emission Reduction Goals

Carbon taxes are often implemented as part of a broader strategy to meet national or international emission reduction targets. They provide a market-based approach to achieving environmental goals.

Impact on Businesses and Consumers

Businesses that rely heavily on fossil fuels may face increased production costs due to the carbon tax. Consumers may experience higher prices for goods and services that are energy-intensive.

Progressivity and Social Equity

Concerns about the regressive nature of carbon taxes, where lower-income individuals may be disproportionately affected, have led some policymakers to explore ways to address social equity issues. This can include mechanisms to redistribute revenues or provide targeted assistance.

International Cooperation

Carbon taxes can be more effective if implemented globally or regionally to prevent businesses from relocating to areas with lower or no carbon pricing.

Challenges and Opposition

Carbon taxes may face opposition from industries that rely heavily on fossil fuels.Some argue that carbon taxes may not be sufficient on their own and that complementary policies, such as regulations and subsidies for renewable energy, are needed.

METHODS

The method used in this research is library data collection or secondary sources. This method aims to assess, identify and interpret all findings in a research topic. In conducting research, a systematic literature review method is carried out by following stages that enable the literature review process to avoid subjective understanding. The stages in this systematic review include data search. To support the research process, data searches were carried out via websites, Google Books, Google Scholar, and related journals based on topics and subtopics. Because this writing is a systematic literature review, the material or data used is dominated by secondary data in the form of books that can be accessed via internet networks, journals or previous research, as well as other supporting articles. Furthermore, the research results are not in numerical form, but descriptive sentences which are arranged systematically so that they are easy to understand, so this writing specification is called qualitative descriptive.

RESULTS AND DISCUSSION

Based on the search results for articles that are relevant to the research theme, they are then collected and filtered to see whether the research is the same or not. The research data was then analyzed and a summary of the documented articles was created. The results of the data analysis can be seen in the following table.

Researcher and Year	Journal Name	Research result
Intan Pandini & Hwiahanus (2023)	Jurnal Ekonomi, Akuntansi dan Manajemen	The existence of a carbon tax can affect business continuity and ticket prices on airlines. Sales of airline tickets or company products are increasing as the carbon tax is implemented.
Alikhan Salim & Mahfud Sidiq (2022)	Jurnal Akuntansi Keuangan dan Perbankan	The impact of the carbon tax on business includes the relocation of many aluminum, steel and nickel smelters to countries that have not implemented a carbon tax, as well as changing commodity prices due to the carbon tax, making business actors substitute minerals that produce high carbon with low ones.
Devita Kusumawati & Etty Murwaningsari (2023)	Jurnal Ekonomi Trisakti	The implementation of green accounting has a negative effect on company performance. Environmental costs incurred by companies are still considered current expenses which reduce the company's net profit. Carbon performance has a negative effect on company performance
Cholida & Warsito Kawedar (2020)	Diponegoro Journal of Accounting	Financial performance is responsive to carbon emissions disclosure but has a negative influence.

CLOSING

Conclusion

Based on the results of the analysis carried out by researchers, it can be concluded that the current implementation of the carbon tax is likely to have an unfavorable impact on companies from a financial perspective. The financial burden borne by the company is increasing so that the company's sales price is also increasing. This can cause a decrease in sales. As a result, the company's income decreased.

Suggestions and Acknowledgments

For Indonesia's current condition, there is still a need to review the implementation of the carbon tax. The government should consider carbon tax rates based on company sectors. And in its implementation, companies must be wise in complying with the carbon tax in order to avoid losses.

Government and companies must have one vision, namely generating income in a way that is friendly to the environment. If the government and companies have the same goals, then in implementing this carbon tax no party will be disadvantaged.

In future research, researchers are expected to be able to review more literature and focus on one type of business sector in a country. Researchers can explore the impact of carbon taxes on finances and also on the environment.

REFERENCES

Andersson, Julius J. 2019. "Carbon Taxes and CO2 Emissions: Sweden as a Case Study." American Economic Journal: Economic Policy 11(4):1–30. doi: 10.1257/pol.20170144.

Azkiya, Balqis Tsabita. 2022. "Paris Agreement_ Asal-Usul Dan Isi Perjanjiannya." Www.Kompas.Com. Retrieved March 20, 2022 (https://www.kompas.com/skola/read/2022/03/25/143000069/paris-agreement--asal-usul-dan-isi-perjanjiannya#:~:text=Isi Paris Agreement&text=Berupaya membatasi kenaikan suhu global,net zero atau nol bersih.).

Banjarnahor, Astri Rumondang, Ovi Hamidah Sari, Mariana Simanjuntak, Nur Khaerat, Sudirman, Ihsan Mukrim, Parea Rangan, Mahyuddin, Duwila, Tumpu, Erdawaty, and Fatmawaty Rachim. 2021. Manajemen Transportasi Udara. Medan: Yayasan Kita Menulis.

Citasco. 2020. "Maskapai Eropa Tolak Pajak Karbon." Citasco.

DDTCNews. 2020. "Transportasi Udara Bakal Dipungut Pajak Karbon, Asosiasi Resah." News DDTC.

DDTCNews. 2021. "Mulai Juli 2021, Penumpang Pesawat Dan Kapal Bakal Kena Pajak Karbon." News DDTC.

Fajar, Muhammad, and Hariyanto. 2021. "Pengujian Eksistensi Environmental Kuznets Curve Di Indonesia." Lebesgue : Jurnal Ilmiah Pendidikan Matematika, Matematika Dan Statistika 2(1):62–68.

Fecht, Sarah. 2021. "How Exactly Does Carbon Dioxide Cause Global Warming?" Columbia Climate School. Retrieved March 20, 2022 (https://news.climate.columbia.edu/2021/02/25/carbon-dioxide-cause-global-warming/).

Hove, Simbarashe, and Turgut Tursoy. 2019. "An Investigation of the Environmental Kuznets Curve in Emerging Economies." Journal of Cleaner Production 236:117628. doi: 10.1016/j.jclepro.2019.117628.

Kumar, Patanjal, Suresh Kumar Jakhar, and Aashes Dixit. 2022. "Effectiveness of Carbon Tax and Congestion Cost in Improving the Airline Industry Greening Level and Welfare: A Case of Two Competing Airlines." Journal of Air Transport Management 100.

Leal, Patricia Hipolito, and Antonio Cardoso Marques. 2022. "Heliyon The Evolution of the Environmental Kuznets Curve Hypothesis Assessment : A Literature Review under a Critical Analysis Perspective." Heliyon 8(March). doi: 10.1016/j.heliyon. 2022.e11521.

Liu, Jianghua, Nianjiao Gong, and Jiahong Qin. 2022. "How Would The Carbon Tax on Energy Commodities Affect Consumer Welfare? Evidence from China's Household Energy Consumption System." Journal of Environmental Management 317. doi: 10.1016/j.jenvman.2022.115466.

Martha, Faustina. 2022. "Pemerintah Akan Berlakukan Pajak Karbon Untuk Tiga Sektor Ini." Ekonomi Bisnis.

Munir, Qaiser, Hooi Hooi Lean, and Russell Smyth. 2019. "CO2 Emissions, Energy Consumption and Economic Growth in the ASEAN-5 Countries: A Cross-Sectional Dependence Approach." Energy Economics 104571. doi: 10.1016/j.eneco.2019.104571.

Pagoni, Ionna. 2016. "The Impact of Carbon Emission Fees on Passenger Demand and Air Fares: A Game Theoretic Approach." Journal of Transport Management 1(1).

Prakoso, S. G., W. Lie, and M. P. I. Cahyani. 2021. "The Importance of Politics on Precautionary Principles ' Implementation in the Environmental Sector : Cases and Examples of Indonesia and Australia The Importance of Politics on Precautionary Principles ' Implementation in the Environmental Sector : Cases." IOP Conf. Ser.: Earth Environ. Sci. 905 012005. doi: 10.1088/1755-1315/905/1/012005.

Pratama, Bintang Adi, Muhammad Agra Ramadhani, Putri Meiarta Lubis, and Amrie Firmansyah. 2022. "IMPLEMENTASI PAJAK KARBON DI INDONESIA : POTENSI PENERIMAAN NEGARA DAN PENURUNAN JUMLAH EMISI KARBON." Jurnal Pajak Indonesia 6(2):368–74.

Pratama, Yoga Putra. 2020. "Konsensus Kemitraan Global PBB (MDGs & SDGs), Hipotesis Environmental Kuznet Curve (EKC), Dan Degradasi Kualitas Udara Di Indonesia Periode 1980 - 2018." Diponegoro Journal of Economics 9(4):1–15.

Rinaldi. 2021. "Menakar Tarif Pajak Yang Optimal Bagi Pajak Karbon." Opini Kemenkeu.

Salim, Alikhan, and Mahfud Sidiq. 2022. "Dampak Pajak Karbon Terhadap Kelangsungan Bisnis." Jurnal Akuntansi Keuangan Dan Perbankan 3(1):74–81.

Saputra, Agustinus Imam. 2021. "Pajak Karbon Sebagai Sumber Penerimaan Negara Dan Sistem Pemungutannya." Jurnal Anggaran Dan Keuangan Negara Indonesia 3(1):56–71.

Simionescu, Mihaela, Wadim Strielkowski, and Beata Gavurova. 2022. "Could Quality of Governance Influence Pollution ? Evidence from the Revised Environmental Kuznets Curve in Central and Eastern European Countries." Energy Reports 8:809–19. doi: 10.1016/j.egyr.2021.12.031.

Yustisia, Dea, and Catur Sugiyanto. 2014. "Analisis Empiris Environmental Kuznets Curve (EKC) Terkait Orientasi Energi." Jurnal Ekonomi Dan Studi Pembangunan 15(2):161–70.