



Enterprises and Carbon Neutrality

Dr. Bhoomika Saroha¹, Dr. Meenakshi²

Abstract

Businesses hold immense potential to combat climate change. This study explores how entrepreneurship can drive the shift to a carbon-neutral future. We analyse how businesses can leverage innovation to create clean solutions, implement sustainable practices, and minimize environmental footprints. By examining global trends, we unlock their potential as a driving force for a greener future. It highlights the challenges faced by green ventures and explores initiatives that empower them to become key players in helping achieve carbon neutrality. The study concludes by emphasizing the need for enterprises to embrace their responsibility towards achieving sustainability in practices while also urging policymakers to create supportive measure for these green ventures to achieve a more sustainable and positive future.

Keywords: Entrepreneurship, Carbon neutrality, Sustainable innovation, Green ventures

Objectives of the Study

To analyse the entrepreneurial role of enterprises in the arena of carbon neutrality.

To assess current global landscapes of governmental policies and regulations aimed at promoting carbon neutrality.

To investigate the potential barriers faced by entrepreneurs in adopting carbon-neutral practices and identifying strategies to overcome them.

Introduction

Businesses are key players in the race to carbon neutrality, but their influence is a double-edged sword. They can be champions of sustainability, developing clean technologies and fostering resource efficiency. Imagine a world powered by renewable energy breakthroughs or businesses prioritizing waste reduction.

However, the pursuit of profit can lead businesses down an unsustainable path. This can include resource-intensive production, planned obsolescence, and excessive packaging. Businesses may also create unnecessary consumer demands and lack transparency in their operations.

This study explores the power of entrepreneurship in the fight against climate change. We explore how businesses can leverage their influence and innovative spirit to become driving forces for a carbon-neutral future. By analysing global trends and emerging technologies, we aim to unlock the full potential of businesses as agents of positive change and a sustainable world.

Research Method

This study uses a mixed-methods approach, combining qualitative thematic analysis and quantitative statistical analysis of secondary data from diverse sources. Qualitative analysis identifies recurring themes, while quantitative methods quantify trends and relationships within the data. The research also includes comparative analysis to compare different aspects of entrepreneurial ecosystems and investment opportunities. This methodology aims to provide insights and recommendations for stakeholders to foster innovation and economic development in the target region or industry sector.

Research

Entrepreneurs as Climate Champions: Driving Innovation for a Carbon-Neutral Future

Businesses hold immense potential to lead the charge towards a carbon-neutral future. Their entrepreneurial spirit can be harnessed to develop innovative solutions across all aspects of their operations. This could involve implementing energy-efficient technologies, optimizing supply chains for reduced emissions, or even creating entirely new low-carbon products and services. This resonates particularly in Europe and Asia pacific, where stricter environmental regulations are driving businesses to innovate. A report by S&P Global Commodity Insights highlights this trend, showcasing the evolving global compliance landscape and its impact on emission targets. For example European countries have set ambitious targets for increasing their reliance on renewable energy sources driving investments in clean energy infrastructure.

¹ Assistant Professor, Department of Business Administration, Maharaja Surajmal Institute

² Assistant Professor, Chandigarh University

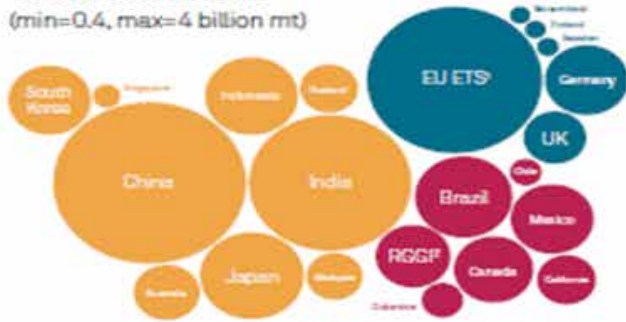
Global compliance carbon landscape

As nations across the globe sharpen their focus on the net-zero transition, the role of carbon prices can be crucial. The unfolding of new mechanisms to account for carbon costs shifts away from the traditional carbon tax or a cap and trade system, giving emerging economies a more egalitarian platform to design systems, in line with their developmental goals.



■ Asia Pacific
 ■ Europe, Middle East and Africa
 ■ Americas

Total emissions*
(min=0.4, max=4 billion mt)



Price
(\$/mtCO₂e – Sep 29, min=0, max=133)



Carbon market status and voluntary credits allowed for compliance

Country	Carbon market status	Voluntary offsets allowed for compliance
Australia	Functional carbon market since 2012	No international/VCM offsets
New Zealand	Functional ETS since 2008	No offsets
South Korea	Functional ETS since 2015	KOC up to 5% allowed
Japan	Functional carbon tax since 2012, ETS to start 2025-29	J-Credits
Malaysia	ETS estimated to start by 2028	International VCM credit trading only
Indonesia	Functional ETS since 2023 (Coal sector only)	No offsets
India E	TS to start 2026	No offsets
China	ETS since 2021 (Power sector only)	CCER up to 5% allowed
Thailand	Voluntary ETS since 2013	TVER credits to be allowed
Singapore	Carbon tax	Verra, GS & GCC offsets up to 5% allowed
EU ETS*	Functional ETS since 2005	No offsets
Switzerland	Functional ETS since 2008, linked with EU ETS	No offsets
UK	Functional ETS since 2021	No offsets
Sweden	Carbon tax since 1991	No offsets
Finland	Carbon tax: 77 €/mt transport fuels, 63 €/mt heating fuels in 2022	No offsets
Germany	Functional ETS since 2021	No offsets
US- RGGI*	Functional ETS since 2009	Offsets 3.30% allowed
US- California	Functional ETS since 2013	Offsets below 5% allowed
Canada	Mix of ETS, carbon tax	Offsets allowed
Mexico	Functional ETS from 2023 (Industry, Power)	Offset up to 10% to be allowed
Brazil	Voluntary ETS since 2013	Offsets to be allowed
Colombia	Carbon tax, offset scheme, ETS under planning	Offsets allowed
Chile	Carbon tax, ETS under planning	Offsets to be allowed

*27 EU states and Iceland, Liechtenstein, and Norway. *Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont and Virginia. *Total emissions are as per latest data available from IEA, ICAP or individual countries ranging from 2019-2022. Australia, New Zealand, South Korea, EU ETS, California, RGGI are Platts prices; the rest are market sources. China ETS price is sourced from SZZE.

S&P Global
Commodity Insights

Source: S&P Global Commodity Insights, ICAP, IEA, Climate Tracker, Clean Energy Regulator, MoE Korea & New Zealand, TCO, SEEC. Credit: Agamoni Ghosh, Kshitiz Goiya, Kanchan Yadav, CI Information Design. Copyright © 2023 by S&P Global Inc. All rights reserved.

Empowering Green Ventures: Bridging the Gap for Sustainable Solutions

However, innovative green ventures often face financial hurdles. The World Economic Forum acknowledges this challenge through its UpLink initiative, which connects green entrepreneurs with investors and mentors. Green enterprises typically have longer development cycles and higher upfront costs compared to traditional businesses. By providing financial and mentorship opportunities, UpLink and similar initiatives empower green entrepreneurs to overcome these hurdles and accelerate the transition towards a carbon-neutral future. By fostering a supportive environment for these innovative businesses, we unlock their full potential in combating climate change.

Analysis

The study analysed the entrepreneurial role of enterprises in achieving carbon neutrality. Businesses played a pivotal role in driving sustainability by developing clean technologies and promoting resource efficiency. However, profit-driven practices led to unsustainable outcomes such as resource-intensive production and excessive packaging.

Entrepreneurs emerged as climate champions, leveraging their innovative spirit to implement energy-efficient technologies, optimize supply chains, and create low-carbon products. Europe and Asia Pacific stood out as regions where stricter environmental regulations drove business innovation in this direction.

Despite their potential, green ventures faced financial challenges due to longer development cycles and higher upfront costs. Initiatives like the World Economic Forum's UpLink bridged this gap by connecting green entrepreneurs with investors and mentors, empowering them to overcome hurdles and accelerate the transition to carbon neutrality.

Conclusion

In conclusion, businesses play a critical role in the pursuit of carbon neutrality. Their entrepreneurial spirit can drive innovation, leading to the development of clean technologies, optimized supply chains, and low-carbon products. However, profit-driven practices must be balanced with sustainability considerations to avoid unintended negative consequences.

Entrepreneurs have emerged as climate champions, leveraging their creativity and expertise to combat climate change. By implementing energy-efficient measures,

optimizing operations, and creating sustainable products, businesses can contribute significantly to a carbon-neutral future.

Financial support and mentorship are crucial for green ventures to overcome challenges and accelerate their impact. Initiatives like the World Economic Forum's UpLink play a vital role in bridging the gap between green entrepreneurs and investors, fostering a supportive ecosystem for sustainable innovation.

As we move forward, it is imperative that businesses embrace their responsibility and leverage their entrepreneurial spirit to drive positive change. By aligning their pursuit of profit with sustainability goals, enterprises can become powerful agents in the fight against climate change and create a more sustainable and prosperous world.

Implications for Businesses and Policymakers

- Businesses must prioritise sustainability and align their operations with carbon neutrality goals.
- Governments and policymakers should create supportive initiatives to foster the growth of green ventures.
- Financial institutions should play a role in providing funding and investment opportunities for sustainable businesses.

References

1. S&P Global (2022) "Global Compliance Carbon Landscape"
2. https://commodityinsights.spglobal.com/q4-asia-ET-compliancecarbonlandscape-asset-download.html?utm_campaign=2023-q4-asia-ET-compliancecarbonlandscape&utm_source=google&utm_medium=cpc&gclid=CjwKCAjwzN-vBhAkEiwAYiO7oMPQZdu-YC4gFQNmysWRoXk42nQ9h1KKuDh4Qhho6GaQ_XOYyQGvxoCH2gQAvD_BwE
3. World Economic Forum (2024) <https://www.weforum.org/agenda/2024/01/unlocking-impact-innovation-and-an-entrepreneur-revolution/>.
4. UNEP (2018) Business Unusual: The Shift to "Carbon Neutral"
5. <https://www.unep.org/news-and-stories/story/business-unusual-shift-carbon-neutral>