

Redefining economics for a sustainable Earth

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Abstract

The interdisciplinary economics book *“Better Economics for the Earth: A Lesson from Quantum and Information Theories”* by Prof. Quan-Hoang Vuong and Dr. Minh-Hoang Nguyen introduces a new concept of “growth” and “eco-surplus culture,” aiming toward an economic system that “heals” the Earth.

[Book Review]

Although the climate crisis has been recognized as a serious issue since the late 20th century, humanity seems to have made little progress in mitigating it. At the 2023 United Nations Climate Change Conference (COP28, held in Dubai, UAE), conference president Sultan Ahmed Al Jaber even declared that there was “no scientific basis” to show that reducing fossil fuel use would lower global temperatures [1]. Meanwhile, environmental activism has become increasingly extreme, evidenced by acts of vandalism targeting artworks to draw attention to the increasingly severe climate crisis [2]. This polarization has spread across cyberspace, particularly on Twitter, where climate change debates have grown more heated since 2019. Notably, ideological polarization between climate change skeptics and proponents has quadrupled since COP21 (2015, held in Paris, France), exacerbating public division [3].

In this context, economics—often dubbed the “queen of social sciences,” with its prestigious Nobel Prize—has created an illusion of being able to guide the world out of the climate crisis.

However, in reality, many economists remain influenced by outdated economic theories and environmentally harmful thinking, rooted in 400 years of classical capitalism driven by greed and profit [4].

Recognizing the urgent need for a new approach, Prof. Quan-Hoang Vuong and Dr. Minh-Hoang Nguyen (Center for Interdisciplinary Social Research, Phenikaa University) released *“Better Economics for the Earth: A Lesson from Quantum and Information Theories”* in early July 2024. This is a noteworthy effort to address global economic and environmental challenges. The book has been published in English and is available on Amazon in both e-book and print formats.

Tái định nghĩa kinh tế ĐỂ HƯỚNG TỚI MỘT TRÁI ĐẤT BỀN VỮNG

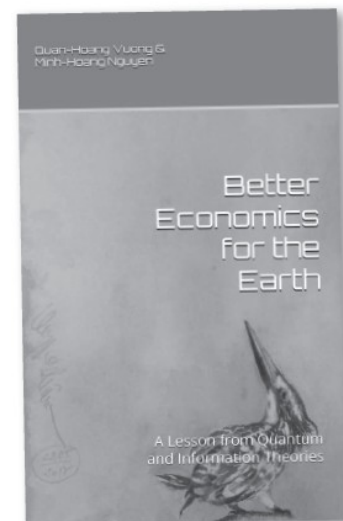
Cuốn sách kinh tế học liên ngành *“Better economics for the Earth: A lesson from Quantum and information theories”* của hai tác giả Việt giới thiệu khái niệm mới về “tăng trưởng” và “văn hóa thịnh dư sinh thái”, hướng tới một hệ thống kinh tế giúp “chữa lành” Trái đất.

Mặc dù khủng hoảng khí hậu đã được công nhận là vấn đề nghiêm trọng từ cuối thế kỷ 20, nhân loại dường như chưa đạt được tiến bộ đáng kể trong việc giảm thiểu nó. Tại hội nghị về biến đổi khí hậu của Liên Hợp Quốc năm 2023 (COP28, diễn ra ở Dubai, Các Tiểu vương quốc Ả Rập Thống nhất), Chủ tịch Hội nghị Sultan Ahmed Al

luc đang chú ý nhằm giải quyết các thách thức kinh tế và môi trường toàn cầu. Cuốn sách đã được xuất bản bằng tiếng Anh và có sẵn trên Amazon dưới cả hình thức sách điện tử và sách in.

Cuốn sách thuộc thể loại kinh tế học liên ngành, dày 159 trang, và được chia thành năm chương, mỗi chương phân tích các khía cạnh khác nhau của mối quan hệ giữa kinh tế học và môi trường.

xuất một mô hình kinh tế mới. Các tác giả lập luận rằng “nền kinh tế ổn định” (tức chỉ hoạt động ở mức đủ cho sự tồn tại mà không gây tác động tiêu cực đến hệ sinh thái lớn hơn) là hệ quả tất yếu để ngăn chặn sự sụp đổ sinh thái do hoạt động của con người gây ra. Tuy nhiên, gấp rút thực hiện quá trình chuyển đổi tới trạng thái này có thể dẫn đến sự sụp đổ của các cấu trúc kinh tế-xã hội hiện tại. Nguyên nhân



Cuốn sách của TS. Vương Quân Hoàng và TS. Nguyễn Minh Hoàng có sẵn trên Amazon dưới cả hình thức sách điện tử và sách in.

Illustration. My official book review in Vietnamese in the magazine Science & Development, published by the Vietnam Ministry of Science and Technology, on July 29, 2024. <https://khoahocphattrien.vn/khoa-hoc/tai-dinh-nghia-kinh-te-de-huong-toi-mot-trai-dat-ben-vung/2024072509426673p1c160.htm>

This interdisciplinary economics book, spanning 159 pages and divided into five chapters, analyzes various aspects of the relationship between economics and the environment.

For example, the authors highlight the limitations of innovation in addressing environmental issues. While technology and innovation are often seen as key solutions to the climate crisis, the authors argue that they have significant limits. On a finite planet like

Earth, where humans are extracting and using resources faster than they can be replenished, the critical question arises: can our planet survive long enough for necessary innovations to be created and widely applied?

The book also offers a deep critique of the limitations of market mechanisms and policies in pricing and commodifying nature, as seen with carbon credits and ecosystem services. For instance, more than 90% of carbon credits from tropical forests failed to deliver real climate benefits but are still sold to many companies and organizations worldwide [4]. Additionally, carbon credit projects sometimes lead to Indigenous communities being displaced from their lands or prevented from maintaining their traditional livelihoods. The authors warn that such methods could have serious long-term consequences for both the environment and society, such as harming biodiversity and risking human rights, if not carefully considered.

A standout feature of the book is its unique interdisciplinary approach, combining knowledge from economics, physics, and information theory to propose a new economic model. The authors argue that a “steady-state economy” (operating at a sustainable level without negatively impacting larger ecosystems) is an inevitable outcome to prevent ecological collapse caused by human activities. However, rushing to transition to this state could lead to the collapse of current socio-economic structures. This is because the values generated by the existing economic system, rooted in continuous growth, have been deeply embedded in social and cultural value systems for the past 400 years. Even if we reduce or stop production, this approach may be ineffective because consumer culture remains unchanged. Instead of completely abandoning the concept of growth, the authors suggest restructuring our understanding of “growth” and propose the need for at least one transitional phase before achieving a steady-state economy.

This transitional phase is called “eco-surplus culture,” a concept developed by Vuong [5]. It is a culture aimed at reshaping human belief systems and values to minimize negative environmental impacts while promoting conservation and restoration of nature. This process requires effective communication and education about climate change risks, active participation from the scientific community, and efforts to restore the connection between humans and nature.

In conclusion, “*Better Economics for the Earth*” is a thought-provoking work that makes an important contribution to the discussion on addressing global environmental issues. The book has the potential to significantly influence how we perceive the relationship between economics and the environment, encouraging policymakers, economists, and business

leaders to rethink fundamental assumptions about growth and development.

For the academic community, the book opens up new avenues for research on the relationship between economics, physics, and the environment, while also inspiring the development of economic models that better integrate ecological factors.

For the general public, the book can raise awareness about the limitations of the current economic system and stimulate dialogue on building a more sustainable economy. It is a must-read for anyone interested in the future of the global economy and the environment.

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