


Chapter 10


The Shift towards a Green Economy: Addressing the Sustainability Challenges of Technological Transformation

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ABSTRACT

The Green Economy is a progressive framework for development and growth that promotes economic progress along with environmental stability, as well as prioritizing people's needs in their social life. It is also crucial operational tool to apply the de-growth notion, to promote development and clean technologies. The Chapter stresses the interest of sustainable technology development and calls for formal

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decision-makers and society actors to be aware about bottlenecks in this field. Five interconnected challenges structure discussions: uncertainty about green capitalism and subjects responsible state interventions to shape optimal mixes (the mix problem); and distributional issues. The chapter suggests that the 'inter-connected' dimension of sustainable technological development brings into question traditional approaches to a relationship between private enterprise and successful innovation. It also highlights the importance of understanding and utilizing effective policy tools in varying institutional context, while raising a research agenda for further investigation

INTRODUCTION

For a decade, one has heard the refrain that traditional economics must be revised to account for climate change, species extinctions, water shortages and other imperatives. The global financial crisis of 2008-'09 accelerated this discourse, as the idea of a 'green economy,' emerged. In 2015, nations endorsed the 2030 Agenda for Sustainable Development and its 17 SDGs. This recognition reflects the closeness of achieving global poverty reduction and enactment of policies that would support economic activities, as well as other social demands to address issues such education, healthcare system, social protection plan or job opportunity. They highlight serious concerns about environmental decline and climate change (Reilly 2012). Since the sustainable development goals make a tangible link between ecological and economic systems, so it explicitly calls for addressing far-reaching changes from production to consumption that are needed toward achieving green economy of many forms of sustainable development

This chapter focuses on a vital element of the transition process: the promotion of sustainable technical innovation. This pertains to the creation of production and consumption patterns that have markedly reduced adverse impacts on the natural environment, particularly the global climate. The chapter addresses many critical concerns related to facilitating and overcoming barriers to attain sustainable technological transformation. The objective is to efficiently communicate significant findings from academic research to policymakers, professionals, and the public, with the goal of promoting informed decision-making and comprehension. Addressing climate and environmental challenges necessitates a scientific comprehension and engineering proficiency concerning the various technical solutions for alleviating adverse effects, including carbon-free energy technologies (Yumei, Iqbal, Irfan & Fatima, 2021; Söderholm, 2020). The quest for sustainable technological transformation transcends these areas, including sociological, managerial, political, and monetary factors, and entails several non-technical challenges. The transitions

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