Macroeconomic prospects and challenges: international business and green economy

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Abstract. The global economy's shift into the post-industrial phase exacerbates worldwide challenges which demand adherence to green economy principles for resolution. This economic paradigm aims for sustainable development and the harmonization of interactions with natural systems. The article examines macroeconomic strategies and their interplay with international business in championing the green economy. It scrutinizes the current state of the global economic terrain and highlights the impact of green technologies on corporate structure and strategy. The study focuses on the pivotal role of international entrepreneurship in achieving sustainability goals, resource efficiency, and the reduction of carbon emissions. It details the progressive tendencies and innovations that entrepreneurs must consider when formulating corporate strategies in line with the green economy's demands. The significance of deep eco-innovations as obstacles on the path to ecological sustainability is recognized, and the need for their integration into corporate culture and operational practice is emphasized. The concluding insights lead to recommendations aimed at assisting international business entities in optimizing the use of ecological innovations to enhance competitiveness and resilience in the face of modern environmental challenges.

Keywords: renewable energy sources, green economy, green finance, macroeconomic theory of development, international business, environmental management, transnational company, sustainable development, energy efficiency.

1 Introduction

Against the backdrop of the prolonged financial and economic crisis caused by the COVID-19 pandemic and the gradual recovery of business activity, which leads to a more difficult situation even in previously prosperous countries and the threat of bankruptcy, as well as concerns about the possibility of a second wave of economic instability, the search for a new model of economic development has intensified at the national and international levels [1]. Such a model should ensure that the world economy moves forward with greater confidence, while at the same time helping to resolve the most acute accumulated contradictions and problems of recent years. During the research, particular emphasis is placed on formulating...
a sophisticated blueprint for economic progression, emphasizing eco-

security and equitable societal growth. The approach is framed around the phased enactment of structural modifications and the establishment of an innovate economic paradigm, often referred to as "sustainable" or "green". This paradigm has garnered considerable attention from the global network of specialists.

In our paper we analyse the importance of finding new approaches to economic development in a difficult period caused by the global crisis. The focus of the article is on green economy as a new model of development, which is designed to ensure sustainable growth and solve current problems taking into account environmental and social responsibility. It proposes structural reforms and principles that will build an environmentally sound and socially just economy. This article is of interest to professionals around the world as it discusses the prospects and challenges of the green economy and its role in ensuring sustainable development in a post-pandemic reality.

The concept was developed as a basis for practical measures that were presented at the June 2012 G20 Forum held in Los Cabos. This foundational concept became instrumental in its subsequent adoption within the G20 Leaders' Declaration and is intricately connected to the coalition's policy architecture, designed to enable governments to cultivate a robust and enduring model of growth.

Despite the Rio+20 UN Conference on Sustainable Development, which followed the June G20 Forum in Los Cabos, not culminating in the agreement of immediate consensus documents, the expert-developed content, encompassing notions like inclusive green growth, served as a valuable foundation for ensuing in-depth dialogues and coordinated actions.

Consequently, the evolved paradigm of green growth maintains its significance in strategic development and sustainability initiatives. Its ongoing application and discourse remain high-priority areas for policymakers and specialists engaged in crafting solutions at an international scope.

International organisations that monitor the transition to sustainable development at the national level use a variety of indicator systems to measure progress. Among them are the UN Millennium Development Goals (MDGs) set for the period from 2000 to 2015, as well as the UN Sustainable Development Goals (SDGs) adopted by all UN member states in 2015 for the period from 2016 to 2030.

At the same time, monitoring of sustainable development includes the use of integrated indicators, such as the Human Development Index proposed by the UN and the Adjusted Net Savings (ANS, Adjusted Net Savings) index developed by the World Bank.

It should be highlighted that, in 2006, the World Bank underscored the significance of assessing national wealth by factoring in human and environmental capital, alongside gross domestic product (GDP), as an auxiliary measure for more accurately tracking progress towards sustainable development.

The scholarly inquiries by J. Stiglitz and A. Sen have brought to light the deficiencies in contemporary techniques of appraising societal well-being, thereby instigating the introduction of novel metrics for the evaluation of socio-economic dynamics. In particular, the assessment of sustainability of development is now carried out taking into account indicators of well-being, not only production.


2 Research methods

The present analysis draws upon a theoretical scaffold constructed from various regulatory and legal texts, as well as prior local and international scholarly works focusing on environmental economics and project management, all targeted towards the sustainable development of regions. A myriad of informational sources have been tapped over the course of this investigation, encompassing datasets from the Statistical Agency under the President of Uzbekistan, the Ministry of Ecology, Environmental Protection, and Climate Change of the Republic of Uzbekistan, alongside numerous discourses and publications from scientific bodies and project entities engaged in examining the intricacies of green economies, investment stewardship in environmental utilization, and conservation initiatives. Various methods and analytical approaches were applied to solve the set tasks. These include system analysis, which allows us to consider and study the research object in all its complexity and interrelationships; statistical methods, which allow us to analyse and summarise numerical data; economic and mathematical modelling methods, which are used...
3 Analysis and results
The proposed study considers the concept of green economy with the actor approach, which implies the interconnection and interdependence of different levels of its realisation. Addressing this subject is critical, as fostering economic growth often correlates with increased ecological contamination and the depletion of natural reserves. The paradigm of the green economy commits to judicious resource management, conservation of ecological assets, curtailment of greenhouse gases, and other initiatives directed towards sustainability.

The implementation model for green economic principles employs an actor-oriented approach, discerning individual, national, and systemic levels. It assesses individual and corporate behavior at a micro-level, state-level adaptation of sustainable practices, and at a macro-level, it examines international engagements among states to facilitate a collective transition to greener economies.

The United Nations Environment Programme (UNEP) underscores the necessity of an actor-oriented strategy in actualizing green economic models. It advocates for the creation of a collaborative network to advance sustainable economic practices. The UN proclaims this effort should be a conjunctive action entreating participation from governments, NGOs, civil society, international entities, and the private sector.

Although nation-states still play a key role in the world system, given globalisation and global challenges, the importance and influence of individuals and corporations are increasing significantly. The theory of "tragedy of the commons" by G. Harding, which refers to the exhaustion of common goods, is also relevant to the concept of "green economy", where it is important to ensure common welfare for both today's and future generations.

In this context, there is a risk of using the principles of the green economy to maximise profits. However, successful implementation of this model is only possible with the participation of all stakeholders. The private sector is pivotal, functioning as the dynamo for amplified economic advancement and job generation.

Furthermore, the blueprint for corporate evolution, within the sustainable development domain, is encapsulated by the ESG (Environmental, Social, and Governance) framework. ESG’s triumvirate of components serves as a compass and barometer for appraising the enterprise's prowess in ecological stewardship, social responsibility, and ethical governance.

Hence, adopting an actor-oriented method to instill green economy principles necessitates the collaboration and collective action across all echelons, from individuals to the global stage. Such inclusive engagement is fundamental to reaching sustainable development, ensuring an equilibrium between the march of economic progress and the imperative of environmental stewardship. (refer to Table 1).

Table 1. The concept surrounding Environmental, Social, and Governance (ESG) criteria.
Multinational corporations serve not only as entities within the green economy but as pivotal shapers of its framework, influencing norms for the production, distribution, and consumption of goods and services. Hence, their proactive engagement in sustainable practices holds critical importance. As these enterprises tread the path toward green economic practices, they draw heightened scrutiny, notably amid debates over integrating such practices into their operational models. While traditionally aimed at profit maximization, businesses face resource usage constraints under a green economic regime, which can potentially impact their financial outcomes.

The drive towards the green economy's principles in transnational corporations is becoming increasingly recognized. The United Nations Environment Programme (UNEP), a leading entity in sustainable progression, persistently issues publications that dissect sustainability issues and chart pathways for corporations, offering strategic actions to pivot towards enlightened economic models. The UNEP report "Adapting to the Green Economy: Companies, Communities, and Climate Change" underscores the interconnection of climatic and social challenges with corporate operations, illuminating how societal tribulations resonate as business risks.

The crucial aspect of adopting innovative management methodologies within business structures lies in recognizing that organizations which acclimatize to novel operating conditions and comprehend the symbiosis between their risks and societal risks seize a strategical edge. Key drivers propelling sustainable growth and ecological business evolution include global movements and agendas, consumer and buyer demands, national policy directives, brand reputation, and the prospect of accruing fresh investments.

In their groundbreaking work "Towards a new concept of the relationship between environment and competitiveness," authored in 1995, M. Porter and C. Van der Linde dissected the nexus between environmental stewardship and market competitiveness. Porter's model proposed that adhering to environmental regulations does not hinder a business's competitive edge; rather, there exists a direct positive relationship: the greater the conformity to ecological norms, the more competitive the enterprise becomes. The authors of the study emphasize that there can be no trade-off between environmental protection and competitiveness. Instead, the policy focus should shift from pollution control to improving resource efficiency. Success, they argue, requires innovative solutions that improve the environment while at the same time ensuring industrial competitiveness. With these aspects in mind, the authors suggest replacing command-and-control methods of environmental regulation and emphasizing the use of market-based instruments. The transition to a market approach in environmental policy will help to stimulate enterprises and organizations to use resources more efficiently and reduce negative environmental impacts.
environmentally friendly materials and products, and adopting market mechanisms to incentivise environmental responsibility. Thus, the relationship between the environment and the competitiveness of companies should be seen as complementary, where the implementation of innovative environmental solutions contributes to strengthening the companies' position in the market and ensures their sustainable development.

However, companies that do not follow the path of transformation and adaptation face certain risks, which can be distinguished as follows:

1. Community risks: Companies depend on the support of the community (customers, suppliers, employees, etc.) to carry out their business processes, both locally and globally. Failure to comply with environmental standards and lack of attention to social and environmental issues can cause public dissatisfaction and negative perception of the company, which can affect its reputation and status in the market.

2. Risk of maladaptation: Maladaptation is the adoption by a company of certain decisions and strategies that, while they may bring short-term economic benefits, in the long term result in increased vulnerability of the region to climate change and other environmental issues. Such short-term benefits can be deceptive and subsequently damage the business as well as the environment (Table 2).

Table 2. List of potential risks that businesses may face if they do not comply with Green Economy principles.

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<thead>
<tr>
<th>№</th>
<th>Name of risk</th>
<th>Brief risk characterisation</th>
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<tbody>
<tr>
<td>1</td>
<td>Risks associated with physical operations.</td>
<td>Potential impacts and losses due to climate fluctuations and natural calamities.</td>
</tr>
<tr>
<td>2</td>
<td>Legal and compliance-related risks.</td>
<td>Non-adherence to governmental regulatory mandates.</td>
</tr>
<tr>
<td>3</td>
<td>Risks pertaining to finance.</td>
<td>Challenges in obtaining debt finance and investments for firms perceived as high-risk in sustainability compliance.</td>
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<tr>
<td>4</td>
<td>Risks linked to market dynamics.</td>
<td>Shifts in market regulations, the pertinence of goods and services, and consumer demographics.</td>
</tr>
<tr>
<td>5</td>
<td>Risks emanating from political changes.</td>
<td>Political and societal tumult in nations affected by climatic alterations.</td>
</tr>
<tr>
<td>6</td>
<td>Reputational risks.</td>
<td>Adverse public perception of goods and services from entities disregarding ecological and sustainability norms.</td>
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The risks identified above could result in significant economic losses to businesses. To reduce the likelihood of such risks, companies need to change their business strategy to adapt to the new requirements.

Another important aspect emphasised by UNEP in its research is the economic attractiveness of green business. Thus, the principles of "greening" the activities of companies are becoming more attractive in terms of economic benefits. It should be highlighted that, in the immediate timeframe, breaching sustainable development tenets could precipitate financial repercussions, including levies for pollution, reputational damages, and customer attrition owing to boycotts. Conversely, over a more protracted period, there lies a tangible threat of dwindling biodiversity and natural asset depletion, leading to substantial direct fiscal setbacks for businesses.

Some companies are adopting a strategy of "greening" their operations also on the basis of moral standards. Their decision comes from a moral imperative to care for nature and the environment.
Interesting research in the field of sustainability was conducted by the Morgan Stanley Sustainability Institute. Research indicates that more than 70% of investors are inclined to favor businesses that prioritize sustainable practices. As a case in point, companies adopting "green office" initiatives experience efficient resource usage, curtailing the consumption of materials such as paper, cups, and printer ink. Moreover, the design, construction, and operation of buildings that adhere to green architecture standards result in long-term savings on water and energy.

Currently, the corporate sector exhibits growing enthusiasm for embracing green economy methods and tenets. This trend is primarily triggered by enterprises striving to align with governmental regulations and to avert damage to their reputation. Nevertheless, an emerging movement towards a moral obligation is also discernible. Businesses are increasingly motivated to pursue sustainable practices, not merely to circumvent ecological damage or to ensure their longevity, but to proactively contribute to lasting economic wellbeing.

Discussions

The drive to cultivate green economy and sustainable living practices originated predominantly from national initiatives, with the concept initially presenting as an exogenous variable influencing the evolution of global trade. Consequently, corporations were impelled to recalibrate their strategic outlook, reengineer operational workflows, and seek innovative ways to optimize their economic benefits.

Yet, there has been a palpable shift in corporate attitudes. The business sphere, particularly multinational giants, now acknowledges the intrinsic value of integrating sustainable practices within their operations. Concepts like sustainable development, ESG criteria, and green economy have transitioned from being mere external pressures to keystones of internal business doctrines.

While the green economy concept remains relatively nascent, its scope has already broadened substantially. In its nascent stages, the emphasis was predominantly on harnessing renewable energy as a staple environmental priority by states and global enterprises, with traditional pollutive energy sources being the central concern. The evolution towards a greener growth model often involved revitalizing the energy sector.

In the current landscape, however, the green economy encompasses a more holistic approach, extending the environmental ethos across all economic segments. Today's definition of a green economy stretches beyond clean energy adoption to include an array of practices and sectors focusing on environmental preservation.

The implementation of green economic principles across business operations can be encapsulated as follows:

1. "Green" office practices focus on operational eco-consciousness, with companies embarking on extensive office upgrades to slash utility consumption.
2. Adoption of "Clean" technology showcases commitment to sustainable advancement via cutting-edge technological solutions, ranging from AI to energy-conserving devices and resource-efficient sensors.
3. Support for "Eco" movements and environmental education emphasizes proactive sustainability promotion, with eco-activists cropping up as standalone entities or embedded within current corporate frameworks. Eco-movement helps to change the internal culture of the company, create an ecological corporate culture and conduct programmes to inform employees about global environmental trends and their integration into everyday life.
4. "Green" image and "transparency"—this approach implies transparency of environmental policy and business strategy.
5. The "Circular" economic model prioritizes the judicious exploitation and recycling of natural resources. It endeavors to establish a self-sufficient cycle that maximizes resource efficiency and curtails waste generation.
6. The deployment of "Green" financial instruments represents a shift toward funding practices that underpin eco-friendly projects. This involves leveraging mechanisms such as green bonds, eco-conscious loans, sustainable mortgages, and other fiscal instruments dedicated to bankrolling initiatives with environmental and sustainability objectives.

The last major trend in the green economy has been a change in consumer behaviour. This trend is driven by the increase in waste caused by the coronavirus pandemic. The burgeoning waste problem has sparked recognition of the necessity for a transition to a circular economic system—a regenerative loop in production, consumption, and waste management. Consequently, there's been substantial demand for enterprises that adhere to eco-friendly practices and comply with green standards.

A notable offshoot has been the rise of ecological entrepreneurship, which reconciles profit-making with environmental healing and preservation. The emergence of this concept affirms the fusion of environmental considerations into commercial ventures. The array of applications for green economic principles within businesses indicates a transformative paradigm that spans the entire spectrum of a company's operations. Organizations are harmonizing the ideals of green growth, sustainable development, and ESG frameworks into their core functional principles. Companies increasingly embrace a holistic stance, weaving varying approaches and methodologies to align with the Sustainable Development Goals. This integration often extends to crafting dedicated corporate sustainability strategies that dovetail with overarching business plans.

It's apparent that green growth has been assimilated as a fundamental component of business strategy, encompassing everything from leveraging renewable energy to fostering an eco-conscious corporate ethos. The green growth trend is positioned to remain a focal point in the future, with business applications expected to broaden.

A pressing issue facing businesses is the adaptation of the energy sector to support a green growth model, as traditional energy sources currently dominate production. The shift to renewable energies is a complex, sizable investment, complicated by the vested interests of states and entities entrenched in conventional energy, upon which their economies heavily rely.

Simultaneously, greening businesses involves embracing novel technologies and digital transformations. Yet, this presents challenges related to inequality, as access to new technological solutions isn't uniform across nations and companies. Such disparities could potentially widen the gap between developed and developing countries in achieving sustainability goals.

Furthermore, the trajectory for adopting a green transformation agenda is often nebulous and unpredictable. This stems from the indeterminate pace of environmental decline and the complex nature of human impact on global changes. The effectiveness and eventual outcomes of enacted policies are fraught with uncertainties, complicating the strategic blueprint and execution of eco-centric projects.

All these factors create a complex picture for achieving sustainable green growth. Challenges need to be actively embraced and flexible and effective strategies need to be developed that take into account economic, technological, social and environmental aspects to ensure a more sustainable future for our planet.

Currently, one of the key obstacles to business transformation is the intrinsic nature and purpose of business. Academic literature identifies three main concepts that define the understanding of business:

1. The critical concept of business: here business is seen as a self-serving enterprise aimed solely at the interests of businesspeople.
2. Within the pragmatic business framework, the primary focus is on fulfilling the desires of business entities with marginal consideration for societal welfare.
Conversely, the positive business model envisions commerce as a propellant for societal well-being, committed to advancing the collective interests of the entire community. Currently, businesses predominantly align with the critical and pragmatic concepts, yet there’s an apparent momentum shifting towards the positive model. Nevertheless, at present, corporations don’t inherently function as benevolent entities dedicated to the public good; profitability remains their central aim. Despite the potential repercussions of flouting eco-standards, many firms view the transition to environmentally friendly practices with skepticism, perceiving it more as a source of financial burdens than as an avenue for growth and opportunity. This reluctance is particularly pronounced during economic downturns, such as global pandemics, financial upheavals, and political disturbances. In such times, companies hunker down with a critical approach to weather the storm, making the switch to a green economy appear financially injudicious due to immediate incremental costs and necessary investments.

The successful adoption of green economic principles is contingent upon a holistic method and the concerted efforts of all relevant parties. Aligning business objectives with sustainable development tenets and fostering a culture where ecological transformation is an integral component of a company’s strategy is imperative. This requires cooperation and involvement of all stakeholders, including companies, governments, public organisations and consumers. Only through such cooperation can we successfully realise a transition to sustainable and responsible business that not only benefits companies, but also contributes to the public good.

The state’s role is critically emphasized in steering societies toward a green growth paradigm, particularly during the formative phase of embracing novel standards. To effectively advance the green agenda, amplification of governmental influence is vital, entailing the establishment of eco-centric regulations for corporate operations, invigoration of state-led environmental strategies, and provision of fiscal backing for green ventures. Such state-driven mechanisms as incentives, subsidies, and monetary aid play a decisive role in the fruition of green ventures.

Regulatory edicts mandating comprehensive non-financial reporting, with a focus on corporate environmental responsibility, have significantly aided green transformational efforts. Such directives have been instrumental in fostering a conscientious, eco-aware business ethos. Recognizing the imperative of state-directed regulatory oversight in shifting businesses towards greener practices, the United Nations Environment Programme (UNEP) has formulated guidelines for national administrations:

1. Crafting efficacious legal and normative infrastructures for a smooth shift to greener development models.
2. Fostering the growth of green economic sectors and endorsing pro-environment initiatives.
3. Imposing constraints on industries that erode the earth’s natural capital.
4. Utilizing fiscal measures and market tools to adjust consumer demand in favor of green technology and products.
5. Advocating for eco-innovations and investments to spur environmentally favorable solutions.
6. Investing in green awareness and sustainability education.
7. Strengthening international cooperation in addressing green issues and sharing experiences.

Thus, the state plays a crucial role in the successful transformation of business to a green development model.
5 Conclusion

"Green economy" is a widely discussed and widespread phenomenon covering all aspects of human life. The basis of this concept is the close relationship between man and nature and its influence on the economic organisation of society.

"Green economy" is a state that protects the country from threats related to environmental risks, energy efficiency and resources in the national energy system, and the production of environmentally friendly agricultural products. It also includes the integration of environmental protection into the spheres of production and consumption, taking into account economic, environmental and social factors.

Amidst the recognition of finite growth and the deteriorating trajectory of current socio-economic models, the green agenda has surged in pertinence. Presently, instituting and molding green paradigm precepts has transcended beyond national boundaries to become a vital mission for global institutions and corporations alike, underscoring its augmented significance and timeliness.

For multinational corporates, integrating green transformations has become a cardinal objective, as adherence to sustainable development principles boosts investment appeal and strengthens their competitive foothold in the international and domestic markets of developed economies, which champion ecological considerations.

The "Green economy" represents a nascent, yet influential, paradigm shift in business philosophy, heralding a distinct future demarcation between organizations reliant on "brown" production methodologies and those embracing innovative practices to foster "green" growth.

Hence, the green economy is now a fundamental element of the global landscape, with its adoption becoming an imperative for the sustained progression of both the corporate sector and society at large.

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