

for start-ups and companies engaged in such developments; encouraging partnerships between the state and private companies for joint developments; raising awareness and educating the population to increase the level of trust in new technologies.

These measures will help the government to expand application of neural networks, integrate them into various areas of the economy in order to accelerate its development.

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IMPLEMENTING CIRCULAR ECONOMY PRINCIPLES INTO BUSINESS MODELS OF TRANSNATIONAL CORPORATIONS

Внедрение принципов циркулярной экономики в бизнес-модели транснациональных корпораций

Goal of the study: to examine how transnational corporations integrate circular economy principles into their business models, identify best practices, analyze challenges, and provide recommendations for enhancing environmental and economic sustainability.

Advancements in eco-friendly and waste management strategies are critical to reducing the environmental impact of our consumer society. The circular economy is an economic system based on the reuse and regeneration of materials and products. Linear business principles must be reconsidered to address this issue. The traditional linear economy, based on ever-increasing resource consumption, not only damages natural potential, but also carries significant economic risks. In addition, the introduction of innovative solutions such as circular business models can play a key role in accelerating environmental progress through the activities of multinational corporations. These corporations have the ability to operate across supply chains, allowing them to deliver goods and services in collaboration with their suppliers and customers.

The traditional commercial system has not yet achieved the goals of the circular economy, which operates on non-linear principles. Although there has been extensive research on how the circular economy can be implemented by companies and governments, the focus has mainly been on identifying the necessary steps to achieve its evolving objectives, rather than on the practicalities of adopting circular business models. Businesses lack the knowledge and guidance on how to transition to and operate within adaptable circular economy standards. There is also a lack of literature on how multinational corporations can expand and move across national categories, so a mixed approach including case studies and interviews is needed to obtain more comprehensive results.

Until recently, most multinational corporations focused on making quick profits, often without considering the long-term consequences of their actions on society and the environment. This economic model often led to resource depletion, environmental pollution and negative social consequences. We are now seeing a significant shift in the approach of multinational companies to environmental issues. This is mainly due to increased public awareness of environmental issues and social inequality, as well as pressure from regulators and investors. More and more companies are realizing that sustainable development is not only a moral obligation to society, but also a strategic tool for increasing competitiveness and attracting new customers.

Based on expert studies and empirical evidence, the leadership positions of four major multinational corporations are recognized when measured against specific circular economy criteria. These criteria include a commitment to resource stewardship and a closed-loop materials model, as well as the retention of value through product- service systems and life extension. Furthermore, the companies are evaluated on their inherent energy circularity through renewables, deployment of restorative business models, willingness to rethink the baseline of business, and their use of circular design and DfX approaches. The companies acknowledged for their circular economy impact are Illycaffè, Rolls-Royce, Michelin, and Interface.

The concept of the circular economy is evolving from a topic primarily discussed in academic circles to a fundamental business practice on a larger scale. The potential business advantages of a more sustainable circular business model are becoming more apparent. The circular economy is seen as the next significant shift in the sustainability narrative, extending from the UN's Sustainable Development Goals to the role of business in society. This increased demand for embracing circular economy principles applies to all types of businesses, including small- and medium-sized enterprises, but there is a particular emphasis on leading large multinational corporations to accelerate the transition. This is because the concept of the circular economy play a crucial role in the global economy, setting market standards and driving technological development, and they have significant power and influence over extensive supply chains.

The study identified four leading multinationals – Illycaffè, Rolls-Royce, Michelin, and Interface – for successfully integrating circular economy principles. It established evaluation criteria focusing on resource stewardship, closed-loop material systems, renewable energy usage, and business model innovation. Additionally, it observed the evolution of the circular economy concept from theory to widespread corporate practice, driven by societal and regulatory pressures. Finally, the study offered practical recommendations for companies to adopt sustainable business models, emphasizing process changes and rethinking core business fundamentals.