



THE ROLE OF CIRCULAR ECONOMY IN ACHIEVING A GREEN ECONOMY

Hamdamov Behruz Nomozali ugli

Student of the faculty of Finance
Tashkent state university of economics

Allayarov Sukhrob Rustamovich

PhD, associate professor
department of "Finance and financial technologies",
Tashkent state university of economics
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ABSTRACT

The circular economy offers a radical way of sustainable development that encourages efficiency of the resources, minimizing waste, and environmental degradation. In this paper, the authors discuss the importance of a circular economy in promoting a green economy, paying attention to the theoretical basis, the policy tools applied by the country in Uzbekistan, and the current progress (2019-2024). It relies on the qualitative literature review and policy analysis, and offers specific suggestions to ensure that the Uzbekistan transition into circularity is speeded up.

РОЛЬ ЦИРКУЛЯРНОЙ ЭКОНОМИКИ В ДОСТИЖЕНИИ ЗЕЛеноЙ ЭКОНОМИКИ

Хамдамов Бехруз Намозали угли

Студент факультета финансов,
Ташкентский государственный экономический университет

Аллаяров Сухроб Рустамович

PhD, доцент кафедры «Финансы и финансовые технологии»,
Ташкентский государственный экономический университет

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ABSTRACT

Циркулярная экономика представляет собой инновационный подход к устойчивому развитию, направленный на эффективное использование ресурсов, сокращение отходов и предотвращение деградации окружающей среды. В данной статье рассматривается роль циркулярной экономики в формировании зеленой экономики в Узбекистане, анализируются ее теоретические основы, национальные политические инструменты и достигнутые



результаты в период 2019–2024 гг. Исследование основано на качественном анализе литературы и государственной политики. Также предложены рекомендации по ускорению перехода Узбекистана к циркулярной экономике.

YASHIL IQTISODIYOTGA ERISHISHDA AYLANA IQTISODIYOTNING O'RNI

Hamdamov Behruz Nomozali o'g'li

Moliya fakulteti talabasi,
Toshkent davlat iqtisodiyot universiteti
Allayarov Suxrob Rustamovich

PhD, dotsent, "Moliya va moliyaviy texnologiyalar" kafedrası,
Toshkent davlat iqtisodiyot universiteti
<https://doi.org/10.5281/zenodo.17340899>

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Resurslarni boshqarish;
Chiqindilarni kamaytirish.

ABSTRACT

Aylana iqtisodiyot — bu resurslardan samarali foydalanishni rag'batlantiruvchi, chiqindilarni kamaytiruvchi va ekologik buzilishning oldini oluvchi barqaror rivojlanishning innovatsion yondashuvidir. Ushbu maqolada O'zbekistonda yashil iqtisodiyot tamoyillarini shakllantirish va rivojlantirishda aylana iqtisodiyotning ahamiyati, uning nazariy asoslari, milliy siyosat vositalari hamda 2019–2024 yillarda erishilgan yutuqlar tahlil qilinadi. Tadqiqot sifat jihatdan adabiyotlarni tahlil qilish va siyosiy hujjatlar tahliliga asoslangan bo'lib, O'zbekistonning aylana iqtisodiyotga o'tish jarayonini jadallashtirishga doir takliflar ilgari suriladi.

Introduction

Green economy seeks to embrace economic growth and at the same time balance the ecological system, minimize risks to the environment, and engage in sustainable practices. In this context, the circular economy appears as the approach that is crucial and is based on waste reduction, resources optimization, and product life prolongation. Alternative to the classical linear economy (take-make-Dispose), the circular economy is concerned with keeping materials in constant utilization through repair, remanufacturing, reuse and recycling. In this paper, the author will examine how the principles of the circular economy can be used to contribute to the green development goals of the Uzbekistan country, and also the author will propose some recommendations on both policies and practices.

Methodology



This study can be described as a qualitative one with the help of a systematic literature review and the policy analysis. Among the primary materials, one can distinguish academic books and articles, government strategy papers, presidential decrees and international organisations reports (World Bank, OECD, IEA, UNDP). The selection of sources was based on the relevance, credibility, and recency (with the last 3-5 years as the priority). The research paper is not based on primary data collection; rather it is a synthesis of secondary evidence to make action plan conclusions.

Literature Review and Theoretical Background

Circular economy is based on industrial ecology and ecological economics. First of such works included Pearce et al. (1989) which suggested the economic valuation of natural resources and brought sustainability to the model of the environmental policy. Tim Jackson (2009) claimed that prosperity has to be decoupled with material throughput which backs the systemic change which leads to the core of circular models. The model that balances the planetary boundary with social foundations, proposed by Kate Raworth (2017) and called Doughnut Economics, is quite similar to the goals of the circular economy.

This discourse has also been made by the Uzbek scholars. Allayarov (2025) investigated the mechanisms of green financing and their potential in the scaling of the circular projects in Uzbekistan. The article by Isaakulova et al. (2024) addressed the topic of renewable energy development as one of the essential aspects of the circular transition in this country. Jiyanova (2023) highlighted the importance of digital transformation and capacity-building in monitoring and putting sustainable practices into practice. Past policies in Islam Karimov were based on afforestation, water conservation, and early environmental control, which were later reformed. Nevertheless, the greatest step was made by President Shavkat Mirziyoyev (2017-2024), whose policies proactively incorporated the principles of a circular economy into the national policies.

Results and Analysis (Uzbekistan: 2019–2024)

The Strategy of the Transition to a Green Economy (2019-2030) of Uzbekistan includes the national goals in resource efficiency, renewable energy, and waste management (Government of Uzbekistan, 2019). The Concept on Environmental Protection until 2030 was also implemented by Presidential Decree PF-5863 (2019) and sets the duties at the ministries (President of Uzbekistan, 2019). Major progress has been achieved in the renewable energy sector in Uzbekistan between 2020 and 2024: as of 2023, the International Energy Agency indicates that more than 4 GW of solar and 4 GW of wind energy projects are underway (International Energy Agency, 2023). Uzbekistan has become the first country to issue a green bond in 2023 with a nominal of UZS 4.25 trillion to fund environmentally friendly projects (UNDP, 2023). The World Bank (2023) estimated the rate of municipal solid waste recycling to be approximately 26% in 2024. On the other hand, in 2024, it was announced that large-scale waste-to-energy projects are being planned at a price of USD 1.3 billion (Reuters, 2024).

As illustrated in Figure 1, examples of circular economy practices vary globally, demonstrating practical approaches across regions.

Similarly, Figure 2 presents projected costs of municipal solid waste management in 2050, comparing different management approaches.

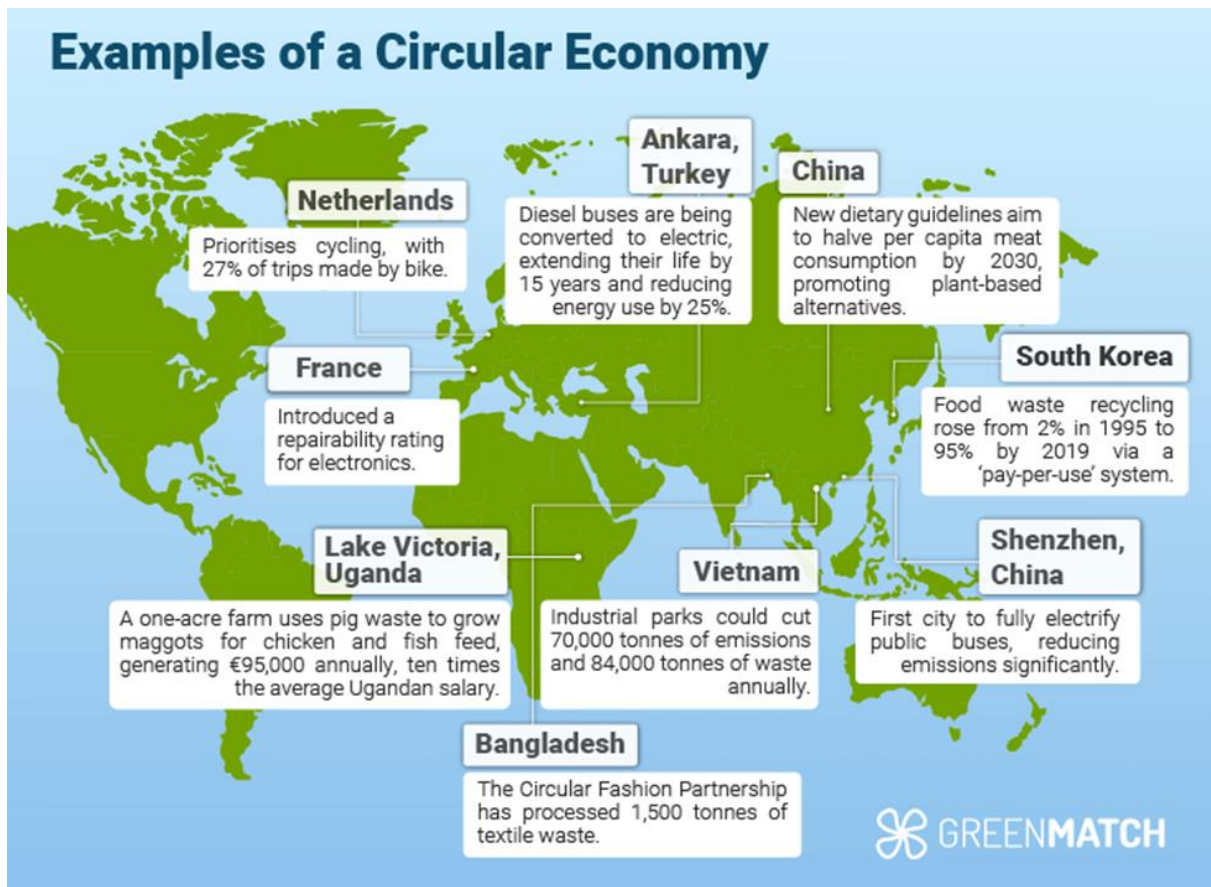
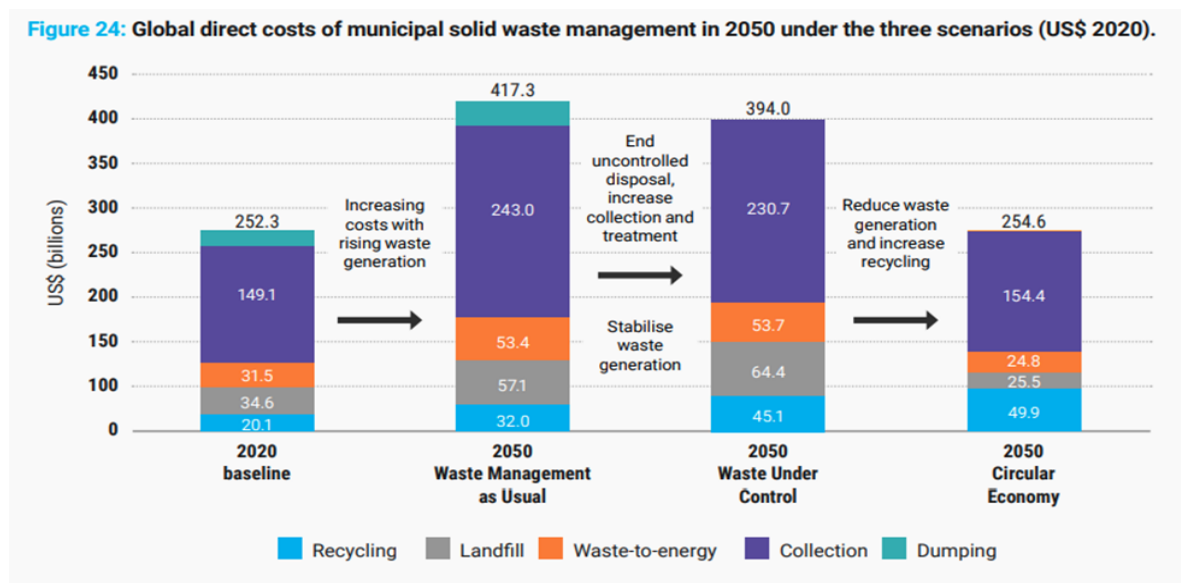


Figure 1. Examples of a Circular Economy (GreenMatch, 2023).



¹ <https://www.greenmatch.co.uk/environmental-impact-of-a-circular-economy>

² <https://www.weforum.org/stories/2024/04/circular-economy-waste-management-unep/>



Figure 2. Global Direct Costs of Municipal Solid Waste Management in 2050 under Three Scenarios (UNEP, 2020).

Discussion

The use of the idea of the circle in various fields in Uzbekistan can now be considered more evident. Biogas plants and composting projects are also encouraging the recovery of energy and the recycling of nutrients in agriculture. Modular design and recycled materials are becoming significant in the construction industry and the textile industry is pondering on closed-loop water systems and reusing fabrics. The ICT industry has embarked on the e-waste collection and materials recovery initiatives.

Although these have been met, there are still challenges. The infrastructure recycling is not evenly distributed, monetary incentives are scarce and the consumer awareness is low. There should be better mechanisms of enforcement of the policy structures and there should be increased collaboration between the government and the corporate world.

Policy Recommendations

1. Expand green financing mechanisms such as green bonds and concessional loans to support circular business models.
2. Strengthen regional recycling infrastructure and promote SME participation in circular value chains.
3. Introduce extended producer responsibility (EPR) schemes and environmental tax incentives.
4. Promote nationwide public education on circular consumption and waste separation.
5. Enhance digital monitoring and reporting systems for material tracking and environmental compliance.

Conclusion

The circular economy represents a viable pathway for Uzbekistan to achieve sustainable growth and environmental resilience. Recent policy initiatives, investments in renewables, and growing financial instruments indicate strong political commitment. However, realizing the full potential of circularity requires addressing systemic barriers such as limited infrastructure and low awareness. By adopting comprehensive policies and fostering innovation, Uzbekistan can emerge as a regional leader in circular economy implementation.

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