



Article

Development of Circular Economy in Service Enterprises

Nuritdinov Ramziddin Sadridinovich^{*1}

1. Independent Researcher, Bukhara State University.

Abstract: This article is devoted to the study of theoretical and practical aspects of implementing the principles of a circular economy in service enterprises. The main objective of the study is to identify the opportunities for developing a circular economy in the service sector and its economic and environmental efficiency using the example of the Bukhara region. The article studies the place of service sector in the modern economy, its significance for sustainable development. It discusses the contribution of the circular economy to the resource efficiency, waste reduction and ultimately environmental protection. The methodological framework of the analysis is statistical analysis, dynamic series analysis, determination of relative indicators and methods of structural analysis. A database was the data of Statistics Committee of the Republic of Uzbekistan, reports and reports of the Bukhara Regional Department of Statistics, international organizations and scientific literature. The results of the study show that the service sector in the Bukhara region demonstrated stable growth rates during 2020-2024. The volume of services increased from 9843.1 billion soums in 2020 to 34071.7 billion soums in 2024. In particular, rapid growth was observed in the accommodation and catering services sector. The article identifies the main economic and environmental benefits of introducing a circular economy in service enterprises: reducing waste by 30%; reducing costs by 20-25%; increasing resource efficiency; creating new sources of income; increasing competitiveness. The practical significance of the investigation is to enhance development strategy of service enterprises at the regional level, provide recommendations for waste reduction and effective resources use, offer insights on how to implement principles of circular economy in public-private partnership.

Citation: Sadridinovich N. R. Development of Circular Economy in Service Enterprises. Central Asian Journal of Innovations on Tourism Management and Finance 2026, 7(1), 174-185.

Received: 04th Sep 2025
Revised: 12th Oct 2025
Accepted: 20th Nov 2025
Published: 05th Dec 2025



Copyright: © 2026 by the authors. Submitted for open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>)

Keywords: Service Delivery, Circular Economy, Horeca, Energy Saving\Extend 1 Em, Waste, GHG Emissions, Environmental Responsibility.

1. Introduction

The service sector plays an important role in the modern economy, contributing to increasing employment, improving the quality of life and efficient use of resources. With globalization and the rapid development of technology, services serve as the basis for innovation, increasing efficiency and economic stability. The service sector helps to strengthen social infrastructure, improve relations between the state, business and the population, and also stimulates the growth of other sectors of the economy.

The reforms being implemented in our country should be aimed at increasing the efficiency of the national economy. The development of service enterprises, which are its component, is one of the important directions for improving the quality of services to the population and meeting their various requirements. Today, the main criterion for including a particular country in the list of developed countries is that the share of the service sector in its gross domestic product is more than 65-70 percent [1].

The service sector is the most important source and factor in the sustainable development of the country's economy. World experience shows that today this sector is

the leader in the formation of GDP, ensuring employment, improving the well-being and standard of living of people. The circular economy reduces resource input and waste, emissions and energy leakage by improving, expanding, strengthening and dematerializing the circulation of materials and energy cycles through digitalization, service provision, sharing solutions, long-term product design, maintenance, and repair, reuse, remanufacturing and recycling. After initially focusing on technological aspects, such as recycling methods, circular economy research has shifted to business models to provide an effective unit of analysis for studying the drivers and barriers to the adoption of existing circular technologies [2].

The implementation of a circular economy in the service sector can not only increase environmental but also economic benefits. At the same time, sector-specific analysis and available statistical data demonstrate the effectiveness of the circular economy model and the opportunities it creates for service businesses. Resource use in the service sector. According to sector-specific statistics, service businesses are one of the most resource-intensive sectors in the global economy. For example, according to a United Nations (UN) report, more than 60% of global energy consumption falls on the service sector [3]. This is due to energy consumption in the hotel business, restaurants, transport and trade. At the same time, most of the waste generated by the industry (paper, plastic, and food waste) is still not fully recycled and harms the environment. Service enterprises that have implemented a circular economy model are not only reaping environmental benefits, but also significantly benefiting economically. For example, a report published by Euromonitor International in 2023 showed that enterprises that have implemented a circular economy have reduced their waste by 30%. Through this, service enterprises have not only saved resources, but also reduced their costs for materials and energy by 20-25% [4].

Literature Review

The development of the circular economy (CE) within service enterprises has increasingly become a focal point of academic research, enriched by the contributions of both local and international scholars. Their collective studies highlight that CE implementation in services is fundamentally different from that in manufacturing, as it relies not on material production but on resource-efficient service delivery, digitalization, and customer-centered business models.

International academics like Stahel (2016), Kirchherr et al. (2017), Bocken et al. (2018), and Geissdoerfer et al. (2020) have defined the circular economy as systematic transition from a linear mode of consuming and discarding toward regenerative and restorative cycles. They focus on service oriented circular models, such as Product-as-a-Service (PaaS), performance contracting, sharing platforms and repair and maintenance services etc., access based consumption. Such models prolong the life of products—and thereby reduce the extraction of resources and use resources more efficiently—principles that have been embraced in hospitality, logistics, retailing, banking and digital services.

Regional researchers from Central Asia and Eastern Europe have also suggested that service enterprises are transformative in the transition to circular models. They stress the necessity to include CE principles in tourism services, retail chains, transport systems and digital solutions. As per local scholars, service providers are critical for facilitating (pro-active) behavioural change, sustainable consumption and the reversal of product flows through returns, repairs or re-use. Their research goes on to stress that CE in service firms is greatly related to national policy reformation, technological readiness, and green innovations capability.

Digital transformation has been mentioned in both international and local studies as the most solid propellant towards achieving circularity among service firms. Global studies of Antikainen & Valkokari (2019) and Lüdeke-Freund et al. (2020) explain that IoT, big data analytics, AI, and blockchain can support predictive maintenance, service

optimization, traceability and transparent waste management. Local academics also enhance this by scrutinizing e-banking, smart tourism, digital markets and shared mobility on their Uzbekistani terms and other economies in transition such as Kazakhstan. These works suggest that digitalisation is not only improving the efficiency of resources, but also fostering new circular service ecologies.

One of the issues which has received most attention in literature is circular business model innovation. Foreign scholars recommend that service businesses need to refocus on their value propositions and are recommended several of them they namely: 1. sustainability, which indicates the importance throughout time in business interactions; 2. long-term relationships with customers; and 3. eco-efficient provision of services is how success will be achieved today. Local researchers further this and consider how local businesses act greening marketing, servitization, leasing provision, subscription-based business models as well as collaborative consumption. According to their results circular business models increase companies' competitiveness and foster customer engagement as long as they involve a clear communication about environmental benefit and transparency.

Some obstacles which prevents CE in service sector has also been highlighted in the literature. Regulatory vacuum, financial limitation, lack of recycling infrastructure and poor consumer involvement are indicated in international studies. Domestic scholars note barriers that are unique to emerging markets, such as the lack of awareness of CE concepts, poor access capacity for green technologies, irregular service support system and insufficient government involvement. However, researchers from both camps concur on the importance of capacity building, government enablers, stakeholder collaboration and digital infrastructure investment to speed up the circular transformation.

In general terms, the review of the literature shows that a circular economy implementation in service organizations involves an integrated process in which technological innovation, redesigning services, policy coherence and changes in behavior are simultaneous. The papers written by domestic and international researchers provide clear evidence that service providers have a unique role to play as drivers of systemic circularity impacts, steers of sustainable consumer practices and player in the nations green transitions. Theoretical and empirical findings in their study will be significantly beneficial for CE implementation in service-oriented industries, involving developing countries as well aspiring toward sustainable development.

2. Materials and Methods

This study employs a combination of qualitative and quantitative research methods to examine the development of the circular economy in service enterprises. A systematic literature review is used to analyze the theoretical foundations of circular business models and to compare the scientific contributions of local and international scholars. Qualitative data are collected through semi-structured interviews with managers and experts in hospitality, retail, logistics, and digital services to identify existing circular practices, challenges, and drivers.

Survey approach is used to collect quantitative data on customer attitudes, readiness of the organization, and level of adoption of circular practices. Descriptive statistics, correlation analysis, and regression models are used to explore the effects of digitalization, innovation capability, and customer engagement on CE adoption. Service company examples Who has done it and how? This mixed methods combination leads to a thorough and sound evaluation of the development in service sectors towards CEs.

3. Results and Discussion

Service enterprises are defined as those whose main activity is "the provision of service products to individuals for which ownership rights cannot be created. They are not

sold separately from production" and "are produced to order and usually consist of changes in the conditions of consumption units due to the activities of producers in response to consumer demand"[5].

The market for services is completely different from other markets for two reasons. First, services do not exist until they are provided. This means that they cannot be compared and evaluated until they are provided. Only the expected benefits and the results actually obtained can be compared.

Secondly, services are characterized by a high degree of objectivity, which puts the customer at a disadvantage, and service providers have difficulty in targeting their services to the market.

During our research, we studied the economic characteristics of the service sector and identified its characteristics as shown in Figure 1.

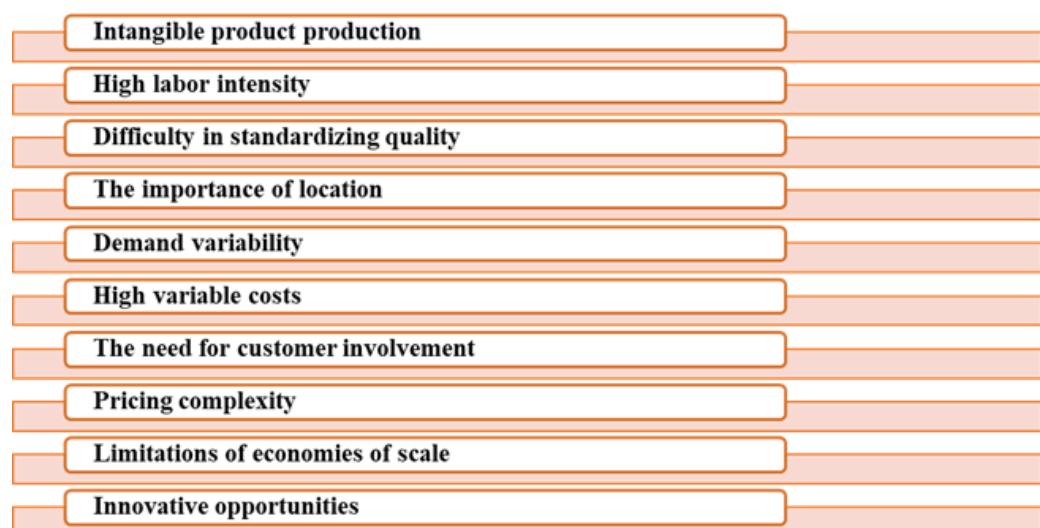


Figure 1. Economic characteristics of the service sector [6].

Intangible production. Services are products that are invisible, intangible, and unstorables. They are consumed at the time of production and are not stockpiled, which makes the market dynamic.

High labor intensity. The service sector is often based on manual processes, with limited automation capabilities. The sector creates many jobs and is labor-intensive.

Difficulty in standardizing quality. Service quality is often subjective and can be individual for each customer. Setting and monitoring standard quality indicators is a complex process.

Importance of location. Most services are geographically dependent and are focused on a local market. Remote services are an exception.

Demand volatility. Demand in the service market often fluctuates seasonally, daily, or hourly. This causes problem in resource planning and management.

High variable costs. The fixed costs of providing service are low, and the variable costs (in particular labor) constitute a significant proportion.

The need for customer participation. The involvement of the customer in service creation is included. The key to effectiveness is the Core Growth Interaction.

Complexity of pricing. One problem with a service is that it's hard to know what the price should be, because of the time, experience and results involved but the low cost of materials.

Limited economies of scale. Many services require a personal approach, so the ability to use the advantages of mass production is limited.

Innovation opportunities. Digital technologies are creating new business models and opportunities for efficiency gains in the service sector.

In recent years, the circular economy has gained momentum as a strategy for reducing resource extraction, waste and emissions. The concept is increasingly supported by academic circles, politicians and prominent business representatives as a central element of the transition to a sustainable economic system [7]. To make the transition, it is essential to implement business models (BMs) that are compatible with the principles of the circular economy [8].

When it comes to sustainable business practices, small bar and restaurant owners are leading the way in environmentally responsible practices. According to the "Diagnostics of the Circular Economy 2023" study conducted by Abrasel (Brazilian Bar and Restaurant Association) in collaboration with Sebrae, small bars and restaurants (MEI, ME and EPP) are ranked highest in sustainable management practices, ranging from waste reduction, conscientious use of resources to waste recycling. This is due to cost savings.

In a survey of thousands of business owners across Brazil, less than half (48%) said that the adoption of circular practices is due to internal factors, far outweighing the influence of customers (20%), partner demands (12%), suppliers (11%) or investors (11%)[9].

The implementation of a circular economy in the service sector requires the widespread use of digital technologies. According to a study by McKinsey & Company, service companies that use digital technologies, for example, through cloud platforms, have increased their profitability by 10-15% by more efficiently managing resources and improving customer relationships. These technologies also allow for waste monitoring and automation of recycling processes[10].

The purpose of the study is to conduct a comprehensive analysis of the current situation and the possibilities of introducing circular economy principles in service enterprises of the Bukhara region. Based on the goal, tasks were defined. A) to assess the dynamics of the development of the service sector in the region; to determine the contribution of the accommodation and catering services sector to waste generation; to analyze indicators of greenhouse gas emissions and pollutant emissions; to substantiate the need to introduce circular economy principles. The study analyzed service enterprises (hotels, restaurants, tourism infrastructure) of the Bukhara region.

The article includes a systematic analysis of international and local scientific sources; study of theoretical foundations of the circular economy concept; study of world experience in waste management in the service sector. The article uses statistical analysis methods such as collection and processing of official statistical data (stat.uz), dynamic series analysis (2020-2024), calculation of growth rates and relative indicators, structural analysis (distribution by sectors), etc.

The database and sources of the study are data from the Statistics Committee of the Republic of Uzbekistan (stat.uz), reports of the Bukhara Regional Department of Statistics, regulatory and legal documents (resolution No. PQ-78), methodologies of international organizations (Eurostat), scientific articles and monographs, analytical materials on Internet resources, and statistical data on Global emissions and emissions.

We will try to analyze the volume of services provided using the example of the Bukhara region.

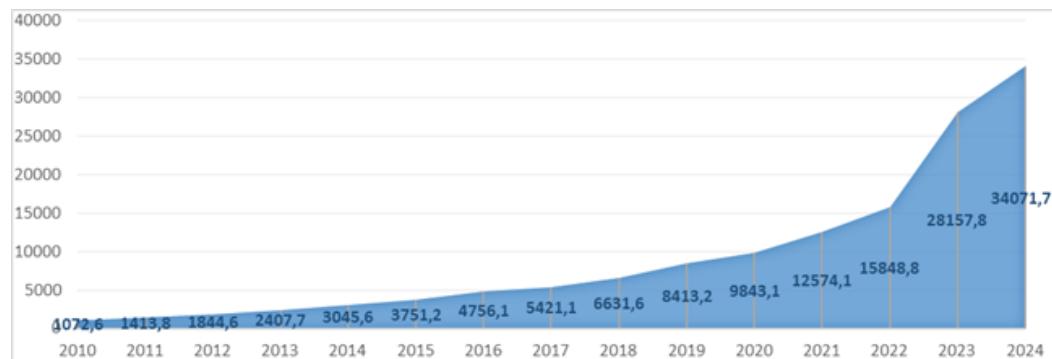


Figure 2. Volume of services provided in Bukhara region, in billion soums [11].

In the analysis of the development of the services sector in Bukhara region, the main emphasis is on the last five years, that is, during 2020-2024, the services sector in Bukhara region demonstrated stable growth rates. The volume of services increased from 9843.1 billion soums in 2020 to 34071.7 billion soums in 2024. The main reasons for this are:

In 2020, the COVID-19 pandemic also had a serious impact on the services sector in Bukhara region. Tourism, hotel and catering services declined sharply. The activities of retail outlets in cities were limited. The service network in rural areas slowed down. The volume of services provided this year decreased significantly. Economic recovery began in 2021.

The tourism sector slowly reactivated, especially domestic tourism, which was based on the historical and cultural heritage of Bukhara. State has implemented measures to support entrepreneurship and resource benefits and services. Markets, transport and logistics were among the growing sectors. A marked increase in service volume was observed in 2022. Information and communication services grew, E-services (online payment systems etc.) were promoted. Tourism infrastructure drew investments. Trade and service industries developed in the cities and rayons of Bukhara. In 2023, the service sector continued to expand in the region. Service points close to the population were opened in rural districts. Active development was noted in the accommodation and catering sectors. Hotel and guide services have become more active due to the increase in the flow of tourists. Trade, transportation and educational services also showed steady growth. According to the latest data, in 2024, the volume of services in the Bukhara region is being formed in accordance with world standards. In particular, tourism and hotel services have reached a new level. Internet services and digital programs have become popular in the information and communication sector [12]. Trade and consumer services have become widespread in all districts. New types of services have been introduced through public-private partnerships (banking, insurance, notary services, government-related services).

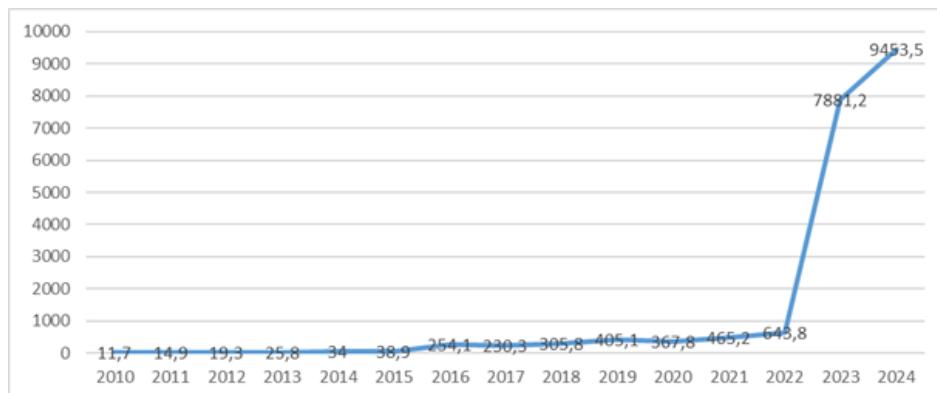


Figure 3. Volume of accommodation and catering services [11], (bn.sum).

The volume and growth rate of accommodation and catering services in Bukhara region are important indicators of the economic and social development of the region. They are necessary for monitoring changes in this area and developing effective economic strategies. As can be seen from Figure 2.1.4, the volume of accommodation and catering services in Bukhara region has increased sharply since 2022. We believe that this was due to the following factors:

1. Rapid development of the tourism sector. Bukhara is a city with a rich historical and cultural heritage, and after 2022, as a result of the revival of tourism after the COVID-19 pandemic, the flow of international and domestic guests increased. The increase in demand for hotel, restaurant, cafe and excursion services increased the volume of services.
2. Improvement of infrastructure and service efficiency. The construction of new hotels, restaurants and convenient transport networks in the region has increased the quality of services and increased consumer spending. As a result of increased investments within the framework of state programs "Development of Tourism", jobs in the sector and the types of services have expanded.
3. Economic reforms and applications. The economic liberalization measures (including support for small and medium-sized businesses) that began to be implemented in Uzbekistan in 2022 have further revitalized activity in the service sector. Exchange rates have stabilized, foreign investment is increasing and the cost of travel abroad in general has become higher affecting volume.
4. Socio-demographic factors. With the increase of the income level and accelerated speed of urbanization, consumer demand for food and accommodation services has grown. The rise in the spending patterns of young and middle class has increased the demand for restaurants, fast-casual dining options.
5. Effectiveness of press and advertising. Bukhara's historical heritage and cultural attractiveness have contributed to the international spread of the city, increasing the number of visitors to the region.

Since 2022, the growth of accommodation and catering services in Bukhara region is mainly due to the restoration of tourism, improved infrastructure, economic reforms and changes in consumption patterns. The continuation of these trends indicates the economic growth and tourism potential of the region.

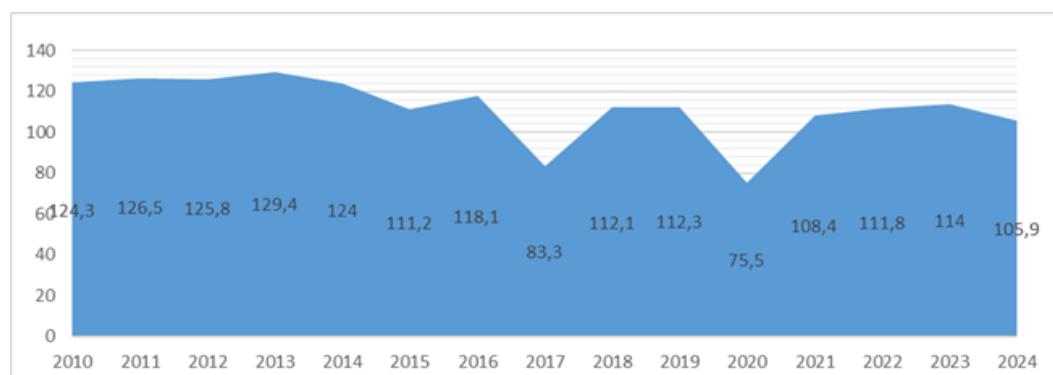


Figure 4. Growth rates of accommodation and food services in the Bukhara region, %.

As Figure 3 shows, in 2020, the growth of accommodation and food services decreased by 25 percent due to the pandemic. Starting from 2021, the growth rates of the sector have taken a positive turn. In particular, growth accelerated sharply in 2023, which indicates increased competitiveness in the market.

The participation of the private sector in these processes, an increase in the quality of services, and an increase in the types of services can be considered as the main factors.

The tertiary sector in Bukhara oblast is showing impressive growth at 2020-2024. Pandemic-paused services have been brought back, along with some even more inviting opportunities. In a highly touristic area such as Bukhara, the services are no less important for the economic development, but also with regard to people and employment.

Service sectors, including hospitality, tourism, restaurants and logistics have several impacts of greenhouse gas emissions as well as pollutants in Uzbekistan. To understand the sector's energy demand and role in source pollution, it is important to analyze the overall indicators. Energy consumption and emissions. The service sector, especially the hotel and restaurant sectors, uses highly profitable sources of energy – mainly natural gas and municipal electricity. This, in turn, increases energy sector emissions, which account for 80% of total greenhouse gas emissions in Uzbekistan. The heating, cooling, cooking and lighting requirements of service enterprises increase overall electricity consumption, resulting in increased CO₂ emissions through the use of coal and gas. Food waste and methane risk. High levels of food waste in restaurants and hotels cause methane emissions. Methane is a greenhouse gas 25 times more potent than CO₂. The insufficient development of food waste collection and processing systems, especially in large cities, leads to an increase in methane emissions. Transport and logistics. Traffic, especially tourism and service vehicles - taxis, buses, planes - releases poisonous gases (NO_x, SO_x) and CO₂ when using oil as fuel. Inadequacy of the vehicle fleet in Uzbekistan, and non-compliance of vehicles with ecological standards to date also boosts pollutants emissions. Water consumption and wastewater. Hotels and restaurants have high water consumption for each customer causing the pressure to be higher in water networks (the energy required for water preparation and distribution are also higher). Also, along with wastewater, food products, detergents and other chemicals are dispersed, polluting water sources.



Figure 5. Direct greenhouse gas emissions per capita (tons of CO₂eq/person).

Source: stat.uz

Emissions peaked in 2013–2014 (~8.4 t/capita) and then declined slightly, with a significant decline in 2020 (due to the pandemic). The latest recovery is that emissions have risen again after 2020, but remain below their peak levels. The waste problem in the HoReCa sector.

The hospitality industry has been growing in recent years, but so has its waste problem. According to data, restaurants, hotels and cafes generate a huge amount of waste. In 2021 alone, the global HoReCa sector contributed to 28% of the 1.03 billion tons of food wasted worldwide.

Hotels add another 290,000 tons of waste each year, a third of which is excellent quality food. In addition to food waste, single-use plastics, lack of recycling and inefficient supply chains mean that a large part of this waste ends up in landfills or, worse yet, incinerated, polluting our air and ecosystems. If this continues, the damage to the environment will reach an irreversible and irreversible level.

When it comes to sustainability in the HoReCa sector, the circular economy is emerging as a powerful tool. Traditionally, we have followed a linear economy, where resources are used to produce products; the products are used, become waste and are ultimately discarded.

The circular economy is an economic system that focuses on the efficient use of resources by minimizing waste and pollution. It is the opposite of the traditional linear economic model of "take-use-dispose". Moving towards a circular economy allows companies to play an active role in creating a more sustainable future, ensuring that resources are used responsibly and that no products end up in landfills.

The circular economy is not just a fad, it is a necessity. But it is also full of benefits that companies cannot afford to miss, and we believe the following are the main reasons for moving towards circularity. The main reasons are listed in Table 1.

Table 1. Reasons for developing a circular economy in service enterprises.

Reasons	Description
High economic efficiency	Resource efficiency allows service businesses to significantly reduce costs. Reuse and reuse models reduce the need to purchase new materials. New revenue streams are created - services for repairing, refurbishing and reselling obsolete products bring additional benefits.
Environmental responsibility	The need to protect the environment is of great importance in the modern business environment. Reducing waste and conserving natural resources is an important part of social responsibility. Reducing the carbon footprint is a result of compliance with international environmental standards and the commitment to combat climate change.
Changing market demands	Consumers are increasingly demanding sustainable and environmentally friendly services. Younger generations in particular prefer companies that are environmentally conscious. Corporate clients are also demanding circularity across their supply chains.
Increasing competitiveness	The circular model allows companies to stand out in the market and differentiate themselves from their competitors. This improves brand image and increases customer loyalty. By offering innovative services, new market segments can be captured.
Legislative requirements	Public policies increasingly support a circular economy. Legislation encourages waste reduction and reuse. International standards and certification requirements require the adoption of a circular approach.
Risk management	It is desirable to rely less on new materials to hedge against resource price volatility. Reduce the risk of supply chain disruption and increase independence.
Technological capabilities	Digital technologies facilitate the implementation of circular models - systems for monitoring, analysis and optimization. With the help of IoT and artificial intelligence, resource use can be managed more efficiently.

Long-term stability.

The circular model ensures the long-term sustainability of the enterprise and prepares for future resource scarcity challenges. Investors and financial institutions are increasingly supporting and financing sustainable business models.

Reasons for economic efficiency. Resource efficiency allows service companies to significantly reduce costs. Reuse and reuse models reduce the need to purchase new materials. New revenue streams are created - services for repairing, refurbishing and reselling worn-out products bring additional benefits. Environmental responsibility. The need to protect the environment is becoming increasingly important in the modern business environment. Reducing waste and conserving natural resources is an important part of social responsibility. Reducing the carbon footprint is a consequence of the obligation to comply with international environmental standards and combat climate change. Changing market demands. Consumers are increasingly demanding sustainable and environmentally friendly services. The younger generation especially prefers companies that take environmental issues into account. Corporate customers are also demanding that circular principles be implemented throughout their supply chains. Increased competitiveness. The circular model allows companies to stand out in the market and differentiate themselves from competitors. This improves brand image and increases customer loyalty. New market segments can be captured by offering innovative services.

Legislative requirements. Public policies increasingly support a circular economy. Legislation encourages waste reduction and reuse. International standards and certification requirements require the adoption of a circular approach. Risk management. It is desirable to depend less on new materials to protect against resource price volatility. Reduce the risk of supply chain disruptions and increase independence.

Technological opportunities. Digital technologies facilitate the implementation of circular models - monitoring, analysis and optimization systems. With the help of IoT and artificial intelligence, resource use can be managed more effectively. Long-term sustainability [13]. A circular model ensures the long-term sustainability of the enterprise and prepares for future resource shortages. Investors and financial institutions increasingly support and finance sustainable business models. Service companies that implement the circular economy model are not only reaping environmental benefits, but also significantly benefiting economically. For example, a report published by Euromonitor International in 2023 showed that companies that implemented the circular economy reduced their waste by 30%. Through this, service companies not only saved resources, but also reduced their costs for materials and energy by 20-25% [14].

However, the circular economy is designed to recover, reuse and recycle resources and products, thereby minimizing waste generation. And in some cases, waste becomes a resource for new products. Businesses that adapt to the circular economy can save costs minimize waste generation and reduce environmental impact. On the contrary, companies that fail to adapt to the circular economy struggle with resource scarcity, increased waste and sustainability issues. The growth of the circular economy in the global economy is gaining momentum. According to the Circularity Gap Report 2024, only 8.6% of the global economy is based on a circular economy model. The service sector accounts for the largest share of this share, and by adapting the sector to a circular economy, there is an opportunity to reduce global waste by 50%. It is also estimated that the widespread application of the circular economy model can create new business opportunities in the global economy worth \$ 4 trillion [15].

The restaurant sector is also managing to save resources and reduce waste by using circular economy principles. According to a study conducted by the organization WRAP (Waste and Resources Action Programme), restaurants have managed to reduce annual

costs by 15% by reducing their waste by 30-40%[16]. At the same time, they have increased profits by increasing the recycling and use of food waste as raw materials.

4. Conclusion

The service sector plays an important role in the modern economy, contributing to increasing employment, improving the quality of life and efficient use of resources. The implementation of a circular economy in the service sector can increase not only environmental, but also economic benefits. The analysis and statistical data carried out in the sector demonstrate the effectiveness of the circular economy model and its impact on the service sector shows what opportunities it creates for service enterprises.

The study is aimed at a comprehensive analysis of the current situation and the possibilities of introducing circular economy principles in service enterprises of the Bukhara region. The study analyzed service enterprises (hotels, restaurants, tourism infrastructure) of the Bukhara region. The service sector in the Bukhara region showed stable growth rates during 2020-2024.

The volume of services increased from 9843.1 billion soums in 2020 to 34071.7 billion soums in 2024. In particular, the volume of accommodation and catering services has increased sharply since 2022. The service sector - sectors such as the hotel business, tourism, restaurants and logistics - affects the volume of greenhouse gas emissions and pollutants in Uzbekistan in several ways.

Energy consumption, food waste and methane emissions, transport and logistics, water consumption and wastewater of service enterprises have a negative impact on the environment. The waste problem in the HoReCa sector is becoming increasingly acute. Restaurants, hotels and cafes generate a huge amount of waste. The global HoReCa sector contributes to 28% of food wasted worldwide.

Service enterprises that have implemented a circular economy not only benefit from environmental benefits, but also significantly benefit economically. According to studies, enterprises that have implemented a circular economy have reduced their waste by 30%, reduced their costs for materials and energy by 20-25%. The main reasons for developing a circular economy in service enterprises are:

1. High economic efficiency - resource efficiency reduces costs, creates new revenue streams.
2. Environmental responsibility - the need to protect the environment.
3. Changing market demands - consumers are demanding sustainable and environmentally friendly services.
4. Increasing competitiveness - the ability to stand out in the market.
5. Legislative requirements - public policy supports the circular economy.
6. Risk management - protection from resource price volatility.
7. Technological capabilities - digital technologies facilitate the implementation of circular models.
8. Long-term sustainability - preparation for future resource shortages. The growth of the circular economy in the global economy is gaining momentum. These claims are supported by data in the Circularity Gap Report 2024, which states that just 8.6% of the global economy is circular.

We can cut global waste in half by converting the service sector to the circular economy. Practical importance of the research: the results obtained can be used to optimize the development strategy of service enterprises at the regional level and inform recommendations on waste reduction and efficient use of natural resources, develop regulations for implementation of circular economy principles in state and private sectors; improve mechanisms for ensuring environmental safety (for tourism and services sector).

REFERENCES

- [1] K. Mukhamadiyev and M. Ahmatova, "Ways to Effectively Use Resources in the Service Sector," *Modern Approaches and New Research in Modern Science*, vol. 4, no. 5, pp. 33–37, 2025. [Online]. Available: <https://inlibrary.uz/index.php/canrms/article/view/83464>
- [2] A. Rashid, F. M. A. Asif, P. Krajnik, and C. M. Nicolescu, "Resource conservative manufacturing: An essential change in business and technology paradigm for sustainable manufacturing," *Journal of Cleaner Production*, vol. 57, pp. 166–177, 2013. doi: 10.1016/j.jclepro.2013
- [3] United Nations, "Renewable energy – powering a safer and prosperous future." [Online]. Available: <https://www.un.org/en/climatechange/raising-ambition/renewable-energy>
- [4] A. Bradford, *The Brussels Effect: How the European Union Rules the World*. Oxford, UK: Oxford University Press, 2020. doi: 10.1093/oso/9780190088583.001.0001
- [5] N. Bocken, L. Strupeit, K. Whalen, and J. Nußholz, "A review and evaluation of circular business model innovation tools," *Sustainability*, vol. 11, no. 8, p. 2210, 2019. doi: 10.3390/su11082210
- [6] Movimento Circular, "Small Brazilian bars and restaurants adopt circular economy practices." [Online]. Available: <https://movimentocircular.io/en/blog/small-brazilian-bars-and-restaurants-adopt-circular-economy-practices>
- [7] M. Kadyrova *et al.*, "A Regression Analysis for Sustainable Waste Management in Uzbekistan," in *The 18th Thai Society of Agricultural Engineering International Conference (TSAE 2025)*, 2025. doi: 10.1051/e3sconf/20256610400
- [8] E. Farmanov *et al.*, "Balancing Heritage and Innovation: A Multi-Dimensional Framework for Smart City Implementation in Historic Urban Centers – The Case of Bukhara, Uzbekistan," *E3S Web of Conferences*, vol. 648, p. 03024, 2025.
- [9] F. Kholmurotov Saribayevich and K. Kholmuratov Sariyevich *et al.*, "Analysis of factors affecting CO2 emissions: in the case of Uzbekistan," *International Journal of Energy Economics and Policy*, vol. 14, no. 4, pp. 207–215, 2024. doi: 10.32479/ijEEP.16193
- [10] McKinsey & Company, Official website. [Online]. Available: <https://www.mckinsey.com/>
- [11] State Committee of the Republic of Uzbekistan on Statistics, "Analytical Report 2024." [Online]. Available: https://stat.uz/img/analitika-12_2024-zb_p70331.pdf
- [12] Euromonitor International, Official website. [Online]. Available: <https://www.euromonitor.com/>
- [13] Circularity Gap Reporting Initiative, "Circularity Gap Report 2024." [Online]. Available: <https://www.circularity-gap.world/2024>
- [14] WRAP Global, Official website. [Online]. Available: <https://www.wrap.ngo/>
- [15] Euromonitor International, Official website. [Online]. Available: <https://www.euromonitor.com/>
- [16] European Commission, "CPA 2008 Introductory Guidelines." [Online]. Available: <https://circabc.europa.eu/sd/a/238a1027-5781-4d34-985e-fbc77127718/CPA%202008%20introductory%20guidelines%20-%20EN.pdf>