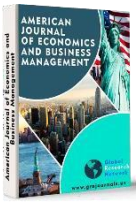

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Article

Ways to Improve The Efficiency of Rental Services in The Digital Economy

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Abstract: The rapid expansion of the digital economy has transformed the landscape of service industries, with rental services emerging as a promising sector for digital innovation. In Uzbekistan, the rental services sector has shown notable growth, yet its full potential remains untapped due to limited technological integration and uneven regional development. Despite global advances in digital solutions such as AI, IoT, dynamic pricing, and blockchain in rental service optimization, their application in Uzbekistan's rental sector—particularly for operational efficiency and equitable market expansion—has not been comprehensively analyzed. This study aims to explore strategies for improving the efficiency of rental services in the digital economy by examining digital transaction management systems, technological innovations, and relevant national policy frameworks. Using qualitative analysis of literature, statistics, and expert assessments, the study reveals that digital tools enhance booking, payment automation, predictive analytics, and service personalization. Findings indicate a twofold growth in national rental services from 2019 to 2023, with 1.9 times growth in the Samarkand region. However, regional disparities and weak legal guarantees remain key obstacles. The research uniquely combines economic data with technology-driven models to assess efficiency improvements in a transitional economy. The study recommends region-specific digital strategies and legal reforms to foster inclusive development. Broader implementation of smart technologies and supportive infrastructure can significantly elevate customer value, operational transparency, and employment generation within Uzbekistan's rental service sector.

Keywords: Digital Economy, Rental Services, Operational Efficiency, Artificial Intelligence, Internet of Things, Dynamic Pricing, Data Analytics, Block Chain Technology

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1. Introduction

The digital economy has significantly transformed various sectors, including rental services, by introducing innovative technologies that streamline operations and enhance customer experiences. Traditional rental models are increasingly being replaced by digital platforms that offer greater convenience, efficiency, and scalability. This paper aims to identify and analyze key strategies that rental services can adopt to improve efficiency in the digital economy [1].

Today, a number of works are being carried out in our country to develop the services sector. A number of regulatory documents are being adopted. These include the Decree of the President of the Republic of Uzbekistan dated May 11, 2021 No. PQ-5113 "On measures for the accelerated development of the services sector" , Resolutions No. PQ-104

of January 27, 2022 "On additional measures for the development of the services sector" We can cite. As can be seen from these regulatory documents, great attention is paid to the development of the service sector in our country. In turn, the share of this sector in the gross domestic product of our country is also growing from year to year [2].

Analysis of literature on the topic.

The fundamental foundations of the problems of further development of rental services, economic growth, efficient use of resources, the impact of information technologies on socio-economic processes were studied by foreign scientists A. Smith and D. Ricardo, K. Marx, A. Marshall and others [3].

The theory explaining the origin and nature of economic rent was put forward by the English classical economist David Ricardo. He defined rent as “a part of the land product paid to the landowner for the use of the original and indestructible power of the land” [4].

Among the economists who made a worthy contribution to the development of rental services in the countries of the Commonwealth of Independent States and conducted in-depth research on the subject of research, we can include: N.G. Chernyshevsky, N.I. Ziber and others [5].

Among the economists in Uzbekistan: M.Q. Pardayev, M.E. Pulatov, M.M. Muhammedov, D.R. Despite the fact that scientific research has been conducted by Zaynalov, Q.J. Mirzayev, D. Sultonova, D.Kh. Aslanova and others on the topic of scientific and methodological aspects of service provision and service sector development, issues related to rental services have not been sufficiently studied. Therefore, the topic of this research work is relevant [6].

2. Materials and Methods

This study employs a qualitative research approach, analyzing existing literature, case studies, and industry reports to identify best practices and emerging trends in the rental services sector. The research focuses on technological innovations such as AI, IoT, blockchain, and data analytics, examining their impact on operational efficiency, customer satisfaction, and business profitability. Additionally, the study explores the implementation of dynamic pricing models and digital transaction management systems as tools for enhancing rental service efficiency [7].

The research used methods of induction and deduction, scientific abstraction, systematic and comparative analysis, monographic, statistical and economic analysis, expert assessment, and sociological questionnaire. These methods serve to explain the ways of effective development of service provision in rural areas [8].

3. Results and Discussion

Today, there are industries in our country that can achieve higher results without spending a lot of money. One of these industries is the services sector. Today, a number of works are being carried out in our country to develop the services sector. A number of regulatory documents are being adopted. These include the Resolutions of the President of the Republic of Uzbekistan dated May 11, 2021 No. PQ-5113 , “On Measures for the Accelerated Development of the Services Sector” and dated January 27, 2022 No. PQ-104 “On Additional Measures for the Development of the Services Sector” . As can be seen from these regulatory documents, great attention is paid to the development of the services sector in our country. In turn, the share of this sector in the gross domestic product of our country is also growing from year to year [9].

Digital Transaction Management: The adoption of digital transaction management systems has streamlined rental processes by automating booking, payment, and contract management. This reduces administrative overhead and minimizes errors, leading to improved operational efficiency and customer satisfaction [10].

AI and IoT technologies enable rental services to offer personalized experiences and optimize asset utilization. AI-driven analytics can predict customer preferences and demand patterns, while IoT devices provide real-time monitoring of rental assets, facilitating proactive maintenance and reducing downtime.

Implementing dynamic pricing strategies allows rental services to adjust rates based on real-time demand and market conditions. This approach maximizes revenue potential and ensures competitive pricing, benefiting both service providers and customers [11].

Leveraging data analytics tools enables rental services to gain insights into customer behavior, inventory usage, and market trends. These insights inform decision-making processes, leading to more efficient operations and targeted marketing strategies [12].

Blockchain enhances transparency and security in rental transactions by providing a decentralized ledger for recording agreements and payments. This technology reduces the risk of fraud and builds trust between service providers and customers.

Table 1. Key indicators by type of service sector in the Republic of Uzbekistan.

No	Name of service types	2019	2020	2021	2022	2023	In 2023 compared to 2019 +/-	In 2023 compared to 2019 %
	Services - total	190 356,0	218 853,50	283 301,6	357554,5	470 286,50	279 930,5	2,5 m
	including:							
1.	Communication and information services	10 869,2	12 886,00	17 117,2	22 917,60	32 226,60	21 357,4	3,0 m
2.	Financial services	34 635,00	45 817,30	59 851,7	80 431,00	106 363,80	71 728,8	3,1 m
3.	Transport services	53 576,50	53 772,50	67 418,3	81 006,60	108 477,70	54 901,2	2,2 m
4.	including: motor transport services	25 279,10	29 196,60	37 114,4	41 318,30	51 272,70	25 993,6	2,2 m
5.	Accommodation and catering services	5 715,90	5 878,50	7 479,3	11 322,80	18 327,30	12 611,4	3,2 m
6.	Trade services	47 693,30	56 553,90	72 718,6	88 847,90	110 662,40	62 969,1	2,3 m
7.	Real estate services	5 862,20	6 089,70	8 150,9	9 674,30	12 064,30	6 202,1	2,1 m
8.	Educational services	6 990,40	9 073,00	11 772,6	15 395,70	20 418,40	13 428,0	3,0 m
9.	Health services	2 930,30	3 209,40	5 018,8	6 384,20	8 441,20	5 510,9	2,9 m
10.	Rental services	3 952,30	4 172,10	5 455,5	6 444,30	7 542,60	3 590,3	2,0 m
11.	Computer and household goods repair services	3 102,10	3 407,40	4 771,5	5 842,30	7 021,50	3 919,4	2,2 m
12.	Personal services	4 564,80	4 983,30	7 171,7	8 713,90	10 916,00	6 351,2	2,4 m
13.	Architectural, engineering research, technical testing and analysis services	4 039,00	4 925,70	6 514,3	7 338,20	7 959,70	3 920,7	2,0 m
14.	Other services	6 425,00	8 084,70	9 861,2	13 235,70	19 865,00	13 440,0	3,1 m

As can be seen from the data in Table 1, the total volume of services in the period under review increased by 190,356.0 billion soums compared to 2019-2023, reaching 470,286.50 billion soums. The growth rate increased by 279,930.5 billion soums compared to 2019-2023, or 2.5 times. The volume of rental services in the period under review increased by 3,952.30 billion soums compared to 2019-2023, reaching 7,542.60 billion soums. The growth rate increased by 3,590.3 billion soums compared to 2019-2023, or 2.0 times [13].

Table 2. Main indicators of the service sector of Samarkand region by type.

No	Name of service types	2019	2020	2021	2022	2023	In 2023 compared to 2019	
							+/-	%
	Services - total	12 271,1	14 318,7	18 656,7	22 734,9	28 992,0	16 463,8	2,3 m
	including:							
1.	Communication and information services	613,0	698,8	833,3	1 059,5	1 318,4	705,4	2,1 m
2.	Financial services	1 573,5	2 077,9	2 615,2	3 585,6	4 541,0	2 967,5	2,9 m
3.	Transport services	3 155,0	3 484,9	4 690,0	5 333,6	6 805,1	3 650,1	2,1 m
4.	including: motor transport services	2 874,3	3 366,5	4 462,3	5 059,2	6 180,5	3 306,2	2,1 m
5.	Accommodation and catering services	398,4	458,3	537,2	860,9	1 717,5	1 319,1	4,3 m
6.	Trade services	3 559,1	4 202,0	5 155,1	6 428,5	7 511,1	3 952	2,1 m
7.	Real estate services	375,3	324,5	453,6	567,7	681,7	306,4	1,8 m
8.	Educational services	584,2	736,7	1 002,5	1 208,7	1 578,7	994,5	2,7 m
9.	Health services	178,4	225,3	396,8	454,2	585,2	406,8	3,3 m
10.	Rental services	406,2	414,2	581,9	662,5	771,3	365,1	1,9 m
11.	Computer and household goods repair services	348,4	363,9	538,2	672,3	821,3	472,9	2,4 m
12.	Personal services	520,0	552,6	776,2	1 002,5	1 286,9	766,9	2,5 m
13.	Architectural, engineering research, technical testing and analysis services	142,5	296,9	609,2	341,9	477,5	335	3,4 m
14.	Other services	417,1	482,7	467,5	557,0	896,3	479,2	2 m

As can be seen from the data in Table 2, the total volume of services in the period under review increased by 12,271.1 billion soums compared to 2019-2023, reaching 28,992.0 billion soums. The growth rate increased by 16,463.8 billion soums compared to 2019-2023, or 2.3 times. The volume of rental services in the period under review increased by 406.2 billion soums compared to 2019-2023, reaching 771.3 billion soums. The growth rate increased by 16,463.8 billion soums compared to 2019-2023, or 1.9 times [14].

It is necessary to fundamentally revise regional programs for the development of the rental services market and take additional measures in rural areas, as an important factor in increasing the employment of the population, especially youth, and the standard of living of the rural population [15].

Everyday life shows that the level of legal guarantees for the activities of industry entities is somewhat low. For this reason, in recent years, a number of new legal and

regulatory documents have been adopted in our country that legally strengthen the activities of rental enterprises. They will serve as the legal basis for a number of issues related to the activities of rental service enterprises.

In many countries, special importance is attached to scientific research on the development of the rental services market. In this regard, issues such as managing the rental service industry, increasing its position in the economy, creating new jobs, ensuring the economic and social development of countries, introducing new types of services in the industry, and using innovative factors have been reflected in the scientific works of foreign scientists [16].

The issue of developing the rental services market in our country in accordance with world standards has not been fully studied. Therefore, conducting research on this topic in our country is relevant

4. Conclusion

The integration of advanced technologies into rental services has proven to be a catalyst for improving efficiency in the digital economy. By adopting digital transaction management systems, AI and IoT integration, dynamic pricing models, data analytics, and blockchain technology, rental services can streamline operations, enhance customer experiences, and achieve sustainable growth. Future research should focus on exploring the scalability of these technologies and their applicability across different rental sectors to further optimize service delivery.

Our research shows that in fact, the growth of rental services leads to an increase in the standard of living of the population. It is rental services that ensure the inter-sectoral distribution of funds in the hands of the population, their re-accumulation and distribution in the country's banks. The development of financial, credit and insurance relations, as well as the banking system, largely depends on the development of the service sector, including rental services. The installation of terminals for making payments with bank plastic cards at rental service enterprises, as well as the development of a system of cashless settlements with the population in our country, serves this purpose.

This area is characterized by a high rate of development of technological and service processes. Another important aspect of the development of the rental services market is the proportional filling of the domestic market with rental services by regions, along with employment of the population. Also, the creation of jobs in this area does not require large investments and sophisticated technology.

Because of this, many entrepreneurs, starting their activities in other areas, gradually become rich and create rental service enterprises with their own funds. As a result of the increase in the volume of investments in the rental services market, the number of enterprises providing rental services and the population they serve, especially students, is also increasing.

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