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# **SUSTAINABLE DEVELOPMENT OF THE SERVICE SECTOR: THEORETICAL-METHODOLOGICAL APPROACH**

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## **ABSTRACT**

The services sector is one of the leading sectors of the economy. Today the share of this sector in the gross domestic product and employment is more than 70% in world economy. The service sector began to be studied in the 20th century as a separate discipline and field. Therefore, the theoretical and methodological foundations of this area are not yet perfect. In particular, most of the research in the field of services to date has focused on the socio-economic aspects of it. The purpose of this study is to improve the theoretical and methodological foundations of not only socio-economic but also ecological development of the services sector, in other words, sustainable development. Particular attention is paid to the creation of functions for sustainable development of the services sector and the development of an improved methodology for determining the level of sustainable development of the service sector.

## **KEY WORDS**

Services sector, sustainable development, shadow economy, digital technologies, aggregate demand, fixed capital, labor, market services, social services, ecological services

## **1. INTRODUCTION**

One of the main disadvantages of research in the field of services is that little attention is paid to improving the theoretical and methodological foundations for the sustainable development of the sector. However, the globalization processes in today's world require the sustainable development of the economy and its sectors.

In particular, in many scientific researches, the functions of the service sector are based on its socio-economic nature. In addition, almost all of these tasks duplicate each other, representing the similarity without being re-created. In our opinion, the objectives of the service sector should be developed not only from the socio-economic point of view, but also with an ecological factor. Another issue in the field of services research that is still underdeveloped is the lack of a methodology for determining the level of sustainable development of the industry.

The need to take into account the environmental factor in the development of the economy is also reflected in the economic policy of our country. The Republic of Uzbekistan is carrying out large-scale reforms to transition to a "green economy". In particular, the Resolution of the President of the Republic of Uzbekistan dated October 4, 2019 No PR 4477 "On approval of the Strategy of the Republic of Uzbekistan for the transition to a" green "economy for 2019-2030" [16] provides for the following tasks:

increase energy efficiency of the economy and rational use of natural resources through technological modernization and development of financial mechanisms;

introduction of "green" criteria based on advanced international standards in the priorities of public investment and spending;

assistance in the implementation of pilot projects in the transition to a "green" economy through the development of government incentives, public-private partnerships and intensification of cooperation with international financial institutions;

development of a system of training and retraining of personnel related to the labor market in the "green" economy by encouraging investment in education, developing cooperation with leading foreign educational institutions and research centers;

take measures to mitigate the negative effects of the environmental crisis in the Aral Sea region;

strengthening international cooperation in the field of "green" economy, including through the conclusion of bilateral and multilateral agreements.

In order to achieve the above objectives, it is necessary to conduct in-depth scientific research on sustainable development and to ensure the integration of scientific and practical areas.

## **2. LITERATURE REVIEW**

Over the last decade there has been a growing interest in services within the field of sustainable development. Services are viewed as a dematerialized alternative to existing products, with reduced environmental impact (i.e. less material and less energy use to fulfil a certain need) ([van der Zwan, F. and Bhamra, T. 2003](#)). But, the more successful service applications are not driven by environmental considerations ([Bartolomeo 2003](#)). Moreover, environmental sustainability is a growing concern that has not been examined in depth in the service literature ([Mark M. 2018](#)).

## **3. RESEARCH METHODOLOGY**

Many research papers on the theoretical and methodological foundations of the services industry have been reviewed in this study using a unit of logic and historical analysis as well as content analysis. Subsequently, the functions of sustainable development of the services sector were developed using the synthesis method. Also,

a method for determining the level of sustainable development of the services sector using mathematical methods has been developed.

## 4. ANALYSIS AND RESULTS

### 4.1 FUNCTIONS OF SUSTAINABLE DEVELOPMENT OF SERVICE SECTOR

In recent years, economists have conducted numerous scientific studies to analyze the socio-economic significance of the services industry. For example, G. Derujinsky cites in his research as the socio-economic functions of the services sector ([Deruzhinsky 2012](#)):

- service of material goods production process;
- reproduction of labor force;
- creation of additional material goods;
- meeting the needs of the population in various types of services;
- reducing costs and improving working conditions in households;
- realization of free time;
- ensuring normal functioning and security of the state, protection of public order.

A.Eremenko in his research outlines the functions of the services sector as follows ([Yeremenko 2014](#)):

- the function of producing services;
- employment and income generation;
- the function of mitigating regional disproportions;
- a distinctive function, that is, to meet the needs of the population in various services.

I.S.Ochilov outlines the socio-economic aspects of the services sector ([Ochilov 2010](#)):

- service sector improves human as an economic and biological subject;
- as a result of various services, appropriate conditions for the development of manufacturing and other real sectors of the economy will be created;
- the service sector, along with the increase in employment, also provides an opportunity to improve their livelihoods;
- the service sector contributes significantly to the country's GDP and saturation of its consumer market;
- the sphere of services is involved in taxation of the state budget.

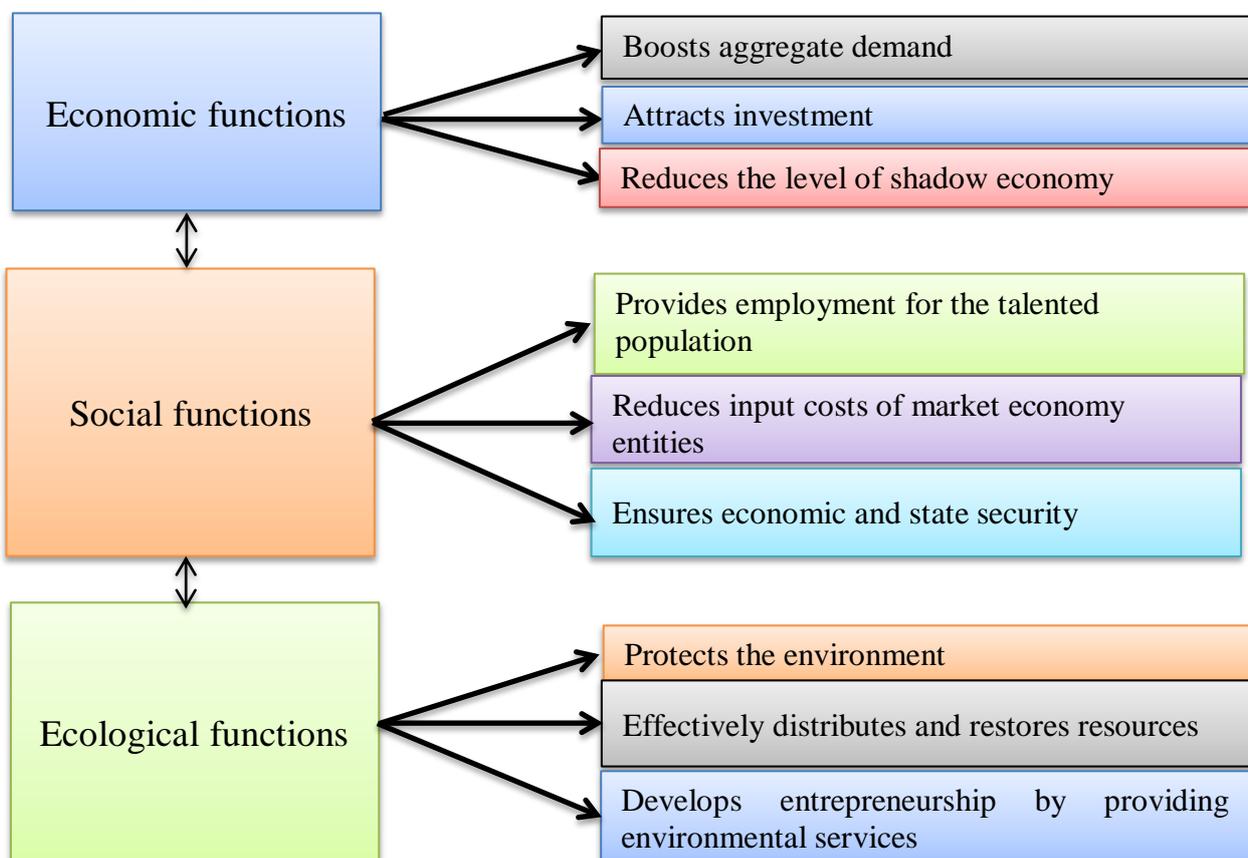
B.B.Mardonov also highlighted the socio-economic significance of the services sector ([Mardonov 2018](#)):

- the services sector increases the leisure time of the population;
- provides the business entities with the necessary information;
- slows down inflation;
- Increases revenue to the state budget;
- improves market infrastructure;
- generates income of the population;

- increase consumer spending and stimulate producers engaged in the sector with additional income.

The above mentioned scholars have tried to reveal the socio-economic nature of the service sector. However, no studies focused on the ecological functions of the service sector. And modern economies require not only social and economic development, but also ecological development. In the conditions of resource depletion and ecology, there is a need for socio-economic and ecological development of the country so that the next generation can live a decent life. The urgency of the environmental development of the services sector is of double benefit to the environment. Firstly, it changes the ways in which products are made, used and disposed (Zaring 2011). Secondly, this area directly protects the environment by providing environmental services. Therefore, it is necessary to outline the objectives of the services sector from the standpoint of sustainable development of the country.

As sustainable development functions for the services sector, we propose the following (Figure 1).



**Figure 1. Functions for sustainable development of the service sector (developed by the author)**

- the service sector contributes to increase aggregate demand. For example, there are services that are included in the autonomous consumption basket of the population. Examples include medical, transport and utilities. Their mass consumption, especially during times of crisis, raises aggregate demand and reduces the level of recession;

- the service sector plays an important role in attracting investments. The investment attractiveness in this area is higher than in other sectors (industry and

agriculture). This is because there is no significant capital investment required to start the business in services sector, i.e. economic risk is low;

- the service sector also serves to reduce the share of the shadow economy in the economy. This nature of the services industry is represented by the use of digital technologies. The introduction of cash registers, plastic card payment terminals in trade and service entities will reduce and eliminate the share of the shadow economy in GDP, while ensuring the legitimacy of money circulation. That is why digital technologies play an important role in reducing or even losing this share in the economy;

- the service sector provides employment for the talented population. Some studies have focused on employment of the population through the establishment of business entities in the services sector. However, the dual impact of the services sector on employment has been ignored. The second feature of the service sector in providing employment is that it trains qualified personnel through medical, educational and recreational services and ensures employment as required;

- the service sector reduces input costs of market economy entities and improves working conditions. Enterprises prefer to purchase certain services from outsourcing firms rather than their own products to increase their productivity. This allows companies to focus on the core activities, while reducing the additional costs on the one hand;

- the services sector also plays an important role in ensuring economic and state security. Defense, public order, judicial and legal services are provided to ensure national security. It prevents various cyber-attacks by providing digital security services for economic security. It is worth noting that economic security is just as important as government security. After all, difficult money earned as a result of a cyberattack can be put at risk. One of the functions of the service sector is to prevent it;

- the services sector is also actively involved in environmental protection.

This is achieved through: (1) environmental services; 2) carrying out various activities aimed at protecting the environment in the society; 3) by introducing high technologies into production by reducing environmental damage;

- the service sector prevents wastage of natural resources and ensures their restoration and transfer to the next generation. This is also achieved through the introduction of scientific and technological progress in agriculture and industry;

- development of other ecologically relevant industries and sectors. In particular, one of the environmental tasks is the development of entrepreneurship through the provision of environmental services. As a result, along with environmental protection, there is an opportunity to earn income in this area.

In general, the comprehensive expression of the socio-economic and ecological functions of the services sector is a complex process that is considered to be functional.

## 4.2 METHOD FOR DETERMINING SUSTAINABLE DEVELOPMENT RATE OF THE SERVICES SECTOR

Many scientific works have been developed to measure the stability of the economic system. However, there is little approach to the study of sustainable development indicators in the services sector and its methodology is still far from perfect. The United Nations system of indicators (UNO, [SDG Agenda 2030](#)), used in the assessment of sustainable development, can be used to measure the sustainability of an entire economic system. However, no comprehensive approach has been developed to determine the level of sustainable development of the services sector, and the existing methods are often suitable for service companies ([Frank Wolf 2011](#)). Whereas, this area is unique and the method of determining the level of sustainable development should correspond to the scale of the sector.

We use an integrated approach to determine the level of sustainable development of the services sector. The modern system of assessment of changes in the economy should be based on integrated indicators. In other words, the indicators that should be integrated as a whole should be integrated into one ([Klyushnikova, Shitova 2016](#)).

The following formula is recommended for determining the level of sustainable development of the services sector:

$$SSS = \sqrt[3]{Econ.SSS * Soc.SSS * Ecol.SSS} * 100\% \quad (1)$$

SSS[0-100%]

$70 \leq SSS \leq 100$  – high sustainable development;

$50 \leq SSS \leq 70$  – average sustainable development

$30 \leq SSS \leq 50$  – satisfactory sustainable development;

$15 \leq SSS \leq 30$  – unsatisfactory sustainable development;

$0 \leq SSS \leq 15$  – the worst sustainable development.

Here, SSS- Sustainability of service sector;

*Econ.SSS* – Economic sustainability of service sector;

*Soc.SSS*- Social sustainability of service sector;

*Ecol.SSS* – Ecological sustainability of service sector.

*Economic stability.*

In her research, N.A.Voronina categorizes indicators that reflect the importance of the services sector in the economy into three categories ([Voronina N.A.](#)): coefficients that reflect the potential of the service sector ( $e_1, e_2, e_3$ ), the coefficient of market relations in the service sector ( $e_4$ ), a coefficient that reflects macroeconomic changes in the services sector.

To summarize them, we recommend the following formula for calculating the economic sustainability of the services sector:

$$Econ.SSS = \frac{1}{n} \sum_{i=1}^{n=5} e_i \quad (1)$$

Unlike NA Voronina, we propose that element  $e_5$  should be taken into account when calculating the economic sustainability of the services industry.

$e_1$ - share of services sector in GDP:

$$e_1 = \frac{\text{total amount of services produces}}{GDP} \quad (1.1)$$

The reason for this factor being included in the factor of economic sustainability is that, first of all, in any sphere or sector, profitability is one of the main laws of the market economy.

$e_2$  - the share of employment in the service sector in the total economy:

$$e_2 = \frac{\text{labor in service sector}}{\text{labor in the whole economy}} \quad (1.2)$$

As one of the key factors of economic growth is the number of employed in the sector, this coefficient should be considered as an economic factor.

$e_3$ - share of fixed capital in the services sector in total fixed capital in the economy:

$$e_3 = \frac{\text{value of fixed capital in service sector}}{\text{total value of fixed capital in the whole economy}} \quad (1.3)$$

Fixed capital, like the workforce, is a key factor in value creation. In addition, the fixed capital helps to improve the quality of service and ultimately competitiveness.

$e_4$  - the share of market services in the production of services:

$$e_4 = \frac{\text{amount of market services}}{\text{total amount of services}} \quad (1.4)$$

This coefficient directly reflects market services and excludes social and environmental impacts.

$e_5$ - share of service sector enterprises in the total number of enterprises:

$$e_5 = \frac{\text{number of service companies}}{\text{total number of companies in the whole economy}} \quad (1.5)$$

True, the number of businesses may not be so important in real life. However, by analyzing the dynamics of the number of enterprises it is possible to objectively determine the tendency for economic activity in the sector.

*Social stability.*

Per capita retail turnover ([T.V.Uskova](#)) and service provision of population ([B.B.Mardonov](#)) are shown in research works related to service economy as the indicators of social sustainability in the services sector. Indicators in the aforementioned scientific works are developed from a more subjective point of view and do not allow a complete assessment of the field. Therefore, we recommend the following formula for assessing the level of social sustainability of the services sector:

$$Soc. SSS = \frac{1}{n} \sum_{i=1}^{n=4} s_i \quad (2)$$

$s_1$ - is the share of services per capita in GDP per capita:

$$s_1 = \frac{\text{total services per capita}}{GDP \text{ per capita}} \quad (2.1)$$

That is, it means the level of service provision of the population. The greater this figure, the greater the impact of the social services sector on social development, or vice versa.

$s_2$  - the share of social services per capita in the total volume of services per capita:

$$s_2 = \frac{\text{social services per capita}}{\text{total services per capita}} \quad (2.2)$$

This indicator reflects the level of net social development of the services sector.

$s_3$  - share of social services in total services:

$$s_3 = \frac{\text{amount of social service}}{\text{total amount of services}} \quad (2.3)$$

This indicator is also important for reflection of social development.

$s_4$  - the share of household expenditures on services.

$$s_4 = \frac{\text{household expenditures on services}}{\text{total household expenditures}} \quad (2.4)$$

Ушбу кўрсаткич уй хўжаликларининг хизматлар харид қилишга кетадиган харажатларининг уй хўжаликларининг умумий харажатларидаги улушини ифодалаб, муҳим ижтимоий барқарорлик кўрсаткичларидан бири ҳисобланади.

*Ecological stability.*

Numerous research studies on ecological sustainability ([Sh.Yu.Nikolaevich](#)) have been conducted. However, there has been little research into the ecological sustainability of the services sector, and there are still many issues that need to be addressed in this scientific direction. We have adapted some indicators of ecological sustainability to the service sector and recommend the following formula, including the methodology for calculating new indicators:

$$Ecol.SSS = \frac{1}{n} \sum_{i=1}^{n=3} g_i \quad (3)$$

$g_1$  - share of fixed capital investments in services sector in the volume of investments into fixed capital in the economy:

$$g_1 = \frac{\text{investment in fixed capital of service sector}}{\text{investment in fixed capital of the whole economy}} \quad (3.1)$$

The reason this element is included in the ecological factor element is that all of today's technological changes are aimed at achieving quality and efficiency by reducing resource costs in the production of products and services. Reducing resource costs means indirect ecological protection.

$g_3$  – share of excess amount of gas and waste emitted between the whole economy and service sector in the gas and waste emitted by the whole economy:

$$g_2 = 1 - \frac{\text{pollutin from service sector}}{\text{total amount of pollution}} \quad (3.2)$$

The essence of this index is that the non-service part of the volume of gas and waste emissions is not related to the services sector damage on environment, ie the level of zero damage or harmlessness of the services sector can be considered as profitability index.

$g_4$  - the share of environmental (ecological) services in the overall environmental protection activities:

$$g_3 = \frac{\text{amount of ecological services}}{\text{total amount of environmental protection activities}} \quad (3.3)$$

In summary, the methodological aspects of this service sector are still in development phase as it is not too long since the emergence of the service economy. That is why research in services is one of the main tasks of economists today. It should be noted that research in the field of services should emphasize the ecological factor, which is one of the problems of modern society. That is, service and environmental economies need to be integrated. Only then it will be possible to determine the prospects for sustainable development of the services sector. On this occasion, we contributed to the methodology by proposing a method for determining the level of sustainable development of the service sector.

## 5. CONCLUSION

In summary, the theoretical and methodological aspects of this service sector are still in development phase as it is not too long since the emergence of the service economy. That is why research in services is one of the main tasks of economists today. It should be noted that research in the field of services should emphasize the ecological factor, which is one of the problems of modern society. That is, service and environmental economies need to be integrated. Only then it will be possible to determine the prospects for sustainable development of the services sector. This research also focuses on these issues. Firstly, the service sector's sustainable development functions were developed and enriched with the theory; secondly, we contributed to the methodology by proposing a method for determining the level of sustainable development of the service sector.

Using the suggested method, the level of sustainable development of services in Khorezm region was assessed. Studies show that in 2019, the level of sustainable development of services in Khorezm region was 36%, which is assessed as satisfactory sustainable development. It was also found that economic sustainability, which is one of the components of sustainable development, was 48% (satisfactory), social sustainability was 34% (satisfactory) and environmental sustainability was 29% (unsatisfactory).

It is obvious that it is necessary to strengthen the measures taken by the state to strengthen the environmental sustainability of services in Khorezm region.

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