

Article

Identification of Internal Factors in the Dynamic Development of the Regional Economy and Priority Directions of Social Sector Organizations' Activities

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Abstract: This article examines the internal factors influencing the dynamic development of regional economies and identifies the priority areas for the activities of social sector organizations. The study analyzes the role of social institutions in enhancing regional economic stability, improving human capital, and providing effective social services. Key internal factors, such as resource management, institutional frameworks, and organizational efficiency, are assessed to determine their impact on regional economic growth. The research proposes strategic directions for optimizing the activities of social sector organizations, aiming to strengthen their contribution to sustainable regional development.

Keywords: Regional Economy, Internal Factors, Dynamic Development, Social Sector Organizations, Priority Activities, Organizational Efficiency, Institutional Frameworks, Sustainable Development.

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1. Introduction

In contemporary conditions, the dynamic development of regional economies depends not only on industrial and investment activities but also on the effective functioning of social sector organizations. These organizations, including education, healthcare, culture, and social services, play a crucial role in forming human capital, improving the quality of life, and ensuring social stability. Therefore, enhancing the efficiency of their management is a key factor in promoting sustainable regional economic growth. Modern regional development is influenced by various internal factors, such as resource allocation, institutional frameworks, governance efficiency, and the level of integration between social and economic policies. Despite significant progress in developing social infrastructure, existing management practices often do not fully correspond to the evolving needs of regional development, which can reduce the effectiveness of social services and limit their contribution to economic performance. Recent studies highlight the importance of identifying these internal factors and prioritizing the strategic directions of social sector organizations to optimize their activities and enhance regional competitiveness. However, comprehensive research that integrates internal economic and organizational factors with the operational effectiveness of social sector organizations remains limited. The purpose of this study is to identify the key internal factors influencing the dynamic development of regional economies and to determine priority directions for the activities of social sector organizations, aiming to

improve their effectiveness and maximize their contribution to sustainable regional growth.

Literature Review.

The dynamic development of regional economies and the effectiveness of social sector organizations have been widely discussed in both international and local research. Recent studies emphasize that the efficiency of social institutions is a critical determinant of regional economic stability and growth [1]. Human capital investment has long been recognized as a key driver of regional development. Schultz (1971) and Becker (1975) highlighted the importance of investing in education, health, and social services to enhance economic performance and productivity [2]. These principles have been widely adopted in contemporary regional development studies, linking social sector effectiveness with economic outcomes. Porter (1990) emphasizes that regional competitiveness and economic growth depend not only on infrastructure and industrial activity but also on the development of social services and institutional frameworks [3]. Effective social institutions contribute to regional clustering, economic activity, and overall development. Management effectiveness in social sector organizations has been extensively studied by Drucker (1985), who stressed the importance of strategic management, resource optimization, and performance measurement in both nonprofit and public sectors [4]. This approach underlines the need for modernizing governance mechanisms in social services. From an institutional economics perspective, North (1990) argued that institutional quality directly impacts economic outcomes. Strengthening governance mechanisms within social sector organizations can enhance their contribution to regional economic growth [5]. Recent research by Stiglitz (2022) and Fankhauser (2020) demonstrates that improving the efficiency of social service delivery can reduce regional inequalities and support sustainable economic development [6], [7]. In the context of the Commonwealth of Independent States (CIS), Abalkin (2002) examined the role of state and social institutions in forming socially-oriented economic policies, emphasizing institutional cooperation as a key factor for effectiveness [8]. Local researchers in Uzbekistan, including Vahobov & Xajibakiyev (2019) and Qodirov (2021), have explored the interconnection between regional economic development and social service systems, highlighting that organizational and management factors significantly influence regional outcomes [9], [10]. Despite these findings, a comprehensive analysis integrating internal economic factors and social sector organizational effectiveness remains limited, indicating a need for further research in this area.

2. Research Methodology

This study employs a comprehensive research approach to examine the internal factors influencing regional economic development and to identify priority directions for social sector organizations. The methodology integrates systematic analysis, comparative assessment, and logical generalization, alongside economic and statistical tools. Primary data sources include official statistics, recent scientific publications, regional development indicators, and operational information from social sector organizations. These sources enabled the evaluation of organizational efficiency, assessment of management mechanisms, and identification of key internal factors affecting regional growth. Based on the analysis, the study develops strategic recommendations and organizational mechanisms aimed at optimizing social sector operations and enhancing their contribution to sustainable regional development.

3. Results and Discussion

The identification and evaluation of internal factors and their interrelations play a crucial methodological role in the dynamic development of regional economies. These factors include investment activity, employment levels, demographic potential, development of the production and services sectors, infrastructure conditions, and technological advancement. A systematic analysis of these factors enables the determination of the main drivers of regional economic growth and provides opportunities for their effective management. In particular, the interrelation between investment flows and employment, as well as the link between demographic factors and economic activity, is of key importance in shaping a dynamic model of regional development. Simultaneously, defining the priority directions of social sector organizations is essential for sustainable regional economic development [11]. Education, healthcare, social services, and employment support systems ensure a qualitatively new level of economic growth through human capital development. Effective functioning of social sector organizations contributes to improving the standard of living, strengthening social equity, and enhancing the quality of labor resources, thereby serving as a critical factor for regional economic stability. The process of identifying internal factors in dynamic regional development implies a systematic analysis of internal resources, capabilities, and mechanisms that directly affect economic growth. This approach reduces the region's dependence on external factors while allowing for an assessment of its unique economic potential. Internal factors encompass production resources, labor potential, financial capacity, infrastructure, innovation environment, and management efficiency. A deep analysis of these factors identifies the main drivers of sustainable regional economic development. The essence of internal factor identification lies in the comprehensive evaluation of the region's economic forces, including production, consumption, labor resources, and innovation potential. This allows for relatively independent assessment of regional development and strengthens economic security. In particular, evaluating the share and efficiency of local production sectors enhances regional economic stability and competitiveness. Likewise, the level of resource utilization and diversification is a key factor ensuring sustainable economic growth. The importance of identifying internal factors becomes even greater under dynamic development conditions. This approach enables the detection of rapidly developing sectors, those that lag behind, and provides opportunities for resource redistribution. Key components shaping the internal mechanisms of regional economies include labor resources, production volume, services sector, infrastructure, and innovation activity. These factors allow for assessing the effectiveness of regional policies and the impact of tax and credit policies on real economic growth. A clustering model is applied to classify regions according to their development levels, serving as the analytical core of a real-time monitoring system. The model aims to group districts and cities based on socio-economic status, infrastructure provision, digital development, and social sector efficiency, facilitating targeted governance decisions. Its advantage lies in the ability to monitor regional disparities dynamically, using continuously updated data rather than relying solely on static snapshots. In the first stage of the model, a monitoring indicator system is established [12]. The economic block includes per capita GDP, investment volumes, and the share of industry and services. The social block incorporates employment levels, unemployment, coverage of education and healthcare services, and living standards. The infrastructure block includes transport networks, electricity provision, internet coverage, and logistics capacity. The digital governance block considers the usage of electronic services, the number of digital platforms, and the degree of automation in management processes. In the second stage, the indicators are normalized, as different metrics are measured in different units and must be evaluated on a common scale. The min-max normalization formula is applied for this purpose:

$$X_{ij}^* = \frac{X_{ij} - X_j^{\min}}{X_j^{\max} - X_j^{\min}}$$

If the indicator is negative, such as unemployment or poverty rates, then the inverse form is used:

$$X_{ij}^* = 1 - \frac{X_{ij} - X_j^{\min}}{X_j^{\max} - X_j^{\min}}$$

In the third stage, the integral development index of the regions is calculated. For this, the weights of the indicators can be determined using AHP, expert assessment or entropy methods. The integral index is expressed as follows:

$$RI_i = \sum_{j=1}^n w_j X_{ij}^*$$

In the fourth stage, the regions are divided into clusters. One of the most convenient methods for this is the K-means clustering algorithm. Its goal is to combine regions into groups with similar development characteristics:

$$\min \sum_{k=1}^K \sum_{i \in C_k} \|x_i - \mu_k\|^2$$

In practice, it is advisable to divide the regions into 4 clusters:

1. Highly developed regions
2. Sustainable development regions
3. Regions requiring transformation
4. Underdeveloped regions

At the fifth stage, a real-time monitoring panel will be formed. This panel will constantly update the main indicators, integral index and cluster status for each region. The monitoring system may use a color signal method: green - high development, blue - sustainable development, yellow - risk zone, red - low development.

Based on this system, management decisions will be developed as follows: in highly developed regions, innovation and digital projects will be expanded, in regions of the middle cluster, investment and infrastructure support will be strengthened, and in underdeveloped regions, priority will be given to expanding the coverage of the social sphere, employment and basic services [13].

Analysis of internal factors also plays an important role in increasing the region's resilience to external economic impacts. For example, in the event of price fluctuations in global markets or import restrictions, economic stability can be maintained by relying on domestic resources. At the same time, the possibility of developing clustering and agglomeration processes in regions based on internal factors is also determined. This will increase the territorial concentration of production and achieve synergistic effects. Identification of internal factors in regional development is also of particular importance in the case of the Kashkadarya region. The internal resource potential of the region is characterized by human capital, natural resources, infrastructure and innovative capabilities. Human capital includes the population, age structure, level of urbanization, number of educational institutions and the state of the labor market. Agricultural land, minerals (gas, oil, building materials) and water resources play an important role as natural resources. Economic infrastructure is determined by the level of development of transport, energy, communication and logistics systems. Positive dynamic changes in socio-economic indicators were observed in the region during 2020–2024. In particular, the growth in industrial production amounted to approximately 18 percent, while the share of the service sector in the economy increased from 24 percent to 31 percent. At the same

time, growth trends are also observed in per capita income and investment volumes. However, these indicators are unevenly distributed across regions, and while high economic activity is observed in the city of Karshi, Kitab, Shahrisabz and Guzar districts, the development rates in some districts remain relatively low. These disparities are also inextricably linked to the activities of social sector organizations. The level of development of the education, healthcare and social services system determines the quality of human capital in the regions. Therefore, improving the quality of education, modernizing the healthcare system, supporting employment, and developing social infrastructure are of particular importance as priority areas for the activities of social sector organizations [14]. This, in turn, serves as a key factor stimulating regional economic growth. On this basis, the following priority areas for strengthening internal factors in the Kashkadarya region can be distinguished: improving the investment climate and modernizing infrastructure; increasing labor market efficiency through the development of human capital; introducing innovative and digital technologies; increasing the level of strategic planning of territorial management and organizing the activities of social sector organizations in an integrated manner with economic development.

Table 1. Analysis of internal factors in the case of the Kashkadarya region (2020–2024).

Indicator	2020	2021	2022	2023	2024
Population (million)	3.26	3.35	3.43	3.51	3.60
Secondary and higher education graduates (thousand)	28.4	30.1	32.6	35.0	36.5
Unemployment rate (%)	11.3	10.7	10.1	9.4	8.8
GDP per capita (million soums)	9.8	10.4	11.2	12.7	13.9
Transport infrastructure (km)	4 800	4 850	4 920	5 000	5 150
Internet coverage (%)	55	62	70	78	85

During 2020–2024, positive dynamic changes were observed in the Kashkadarya region in terms of internal factors. The stable growth of the population indicates an expansion of the labor resource base, while the increase in educational indicators indicates a qualitative improvement in human capital (Table 1). The decrease in the unemployment rate reflects the effectiveness of employment policy. At the same time, the growth of GDP per capita indicates a positive trend in economic development. The expansion of transport infrastructure and internet coverage confirms the acceleration of economic activity and digital transformation processes in the region.

In the Kashkadarya region, the dynamics of internal factors is not formed uniformly across regions, and there is significant differentiation between districts and cities. In regions such as Karshi city, Kitab, Shahrisabz, Guzar and Mirishkor, production, services, investment and infrastructure indicators are developing at relatively high rates, while in some remote districts this process is taking place more slowly (Figure 1). This situation indicates that the internal factors of regional economic growth are inextricably linked with resources, infrastructure, demographic potential and management capabilities [15]. As administrative and service centers of the region, Karshi city and Shahrisabz city demonstrate a relatively high level of socio-economic activity. In these regions, the coverage of education, healthcare, trade, transport and digital services is wider, and the quality of human capital is also being formed higher.

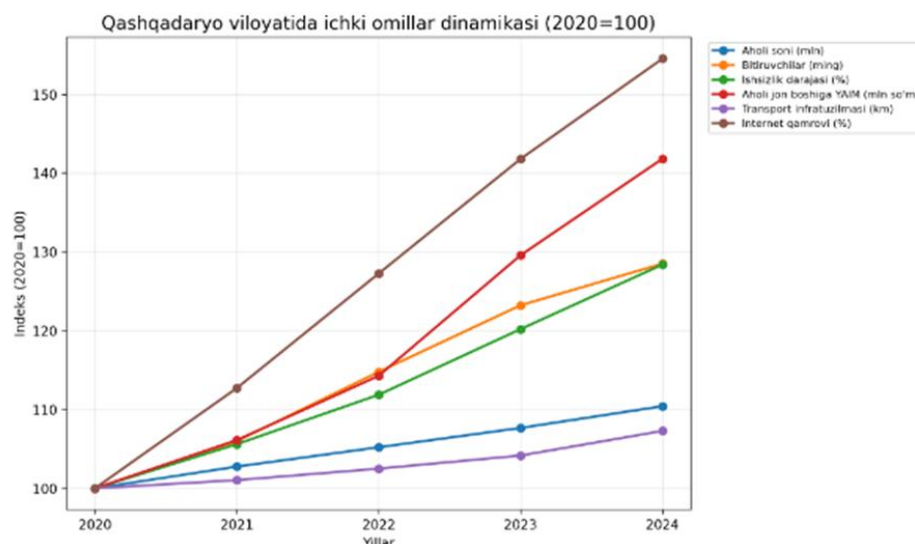


Figure 1. You can provide an in-depth analysis by region as follows.

In Kitab and Shahrisabz districts, tourism, the service sector and the potential of social infrastructure stand out as internal growth factors. In the districts of Guzar and Mirishkor, investment flows, energy and industry are acting as internal economic drivers. In regions such as Koson, Kamashi, Karshi district and Kasbi, agriculture, services and labor resources are the main internal factors. In these districts, economic development is more related to agricultural potential and employment, and their growth potential can be expanded by increasing the level of infrastructure and digitalization. In the districts of Dehqanabad, Yakkabog, Muborak, Nishon, Chiroqchi and Kokdala, the development rates are relatively lower due to the insufficient mobilization of some components of internal factors. In particular, the unevenness of investment flows, insufficient infrastructure and differences in the quality of social services require an integrated approach in these regions. Thus, the analysis by region shows that internal factors are not evenly distributed in the Kashkadarya region, in some regions they have become growth drivers, while in others they remain a development reserve. This justifies the need for a regional differential approach in regional policy, targeted investment policies, and the organization of the activities of social sector organizations in accordance with the real potential of the regions. The dynamics of regional socio-economic indicators serve as an important empirical basis for determining the trends in sustainable development of the region. In the case of the Kashkadarya region, the changes observed in internal factors over the period 2020–2024 indicate that internal drivers of economic growth are being formed in the region. In particular, the increase in the population from 3.26 million to 3.60 million reflects the positive dynamics of natural and migration growth. This leads to an expansion of the consumer market and an increase in the labor resource base in the regional economy. At the same time, the increase in the number of graduates of secondary specialized and higher education from 28.4 thousand to 36.5 thousand indicates the qualitative development of human capital in the region. This factor is manifested as a key resource that increases competitiveness in high-value-added sectors of the economy. Employment indicators also reflect a positive trend. The decrease in the unemployment rate from 11.3 percent to 8.8 percent is explained by the creation of new jobs, the development of entrepreneurship and an increase in investment flows. At the same time, the increase in GDP per capita from 9.8 million soums to 13.9 million soums indicates an improvement in the living standards of the region's population. However, the existence of income inequality requires additional social policy measures in this direction.

Infrastructure and digital factors are also emerging as important components of economic growth. The expansion of transport infrastructure from 4,800 km to 5,150 km has

served to strengthen interregional economic ties, while the increase in internet coverage from 55% to 85% indicates the rapid development of digital transformation processes. This is reflected as a factor increasing efficiency in the services sector, education, and public administration. Analysis conducted by region shows an uneven distribution of internal factors. While services, industry, and investment activity are high in the city of Karshi, Shahrisabz, Kitab, and Guzar districts, infrastructure and investment potential are not sufficiently mobilized in Dehqanabad, Nishon, Mubarak, and some other regions. This justifies the need for a differentiated approach to regional development. The use of modern identification methods is of great importance in the in-depth analysis of regional development. In particular, multi-criteria modeling (MCDA) allows for a comprehensive assessment of regional indicators, cluster analysis serves to group regions by level of development, and principal component analysis (PCA) isolates the most influential factors. Econometric models identify the relationships between factors and develop forecasts. While GIS technologies allow for a visual assessment of regional differences, artificial intelligence and machine learning methods serve as important tools for identifying hidden relationships between factors and developing accurate forecasts. Analyses conducted based on these methods show that the factor that has the greatest impact on GDP growth in the Kashkadarya region is the volume of investments (approximately 38%), followed by the quality of labor resources (25%). As a result of cluster analysis, regions are divided into developed, medium-developed, and underdeveloped groups, which allows for targeted organization of regional policy. Resource-based, institutional, infrastructural, innovative and integrated approaches are used to identify internal factors. These approaches allow for a comprehensive assessment of the natural resources, quality of management, level of infrastructure and innovative potential of the region. Statistical analysis forms the empirical basis of these approaches and scientifically justifies the decision-making process. On this basis, the following priority areas for improving regional development were identified: the use of modern integrated methods in identifying internal factors; the development of differential development strategies across regions; the introduction of monitoring systems based on digital management and artificial intelligence; infrastructure modernization; the development of human capital and innovative potential; and the reduction of disparities between regions.

4. Conclusions

The study demonstrates that the identification and systematic analysis of internal factors is essential for the dynamic development of regional economies. Key factors such as investment activity, employment levels, demographic potential, production and services sector development, infrastructure, and technological advancement directly influence regional growth and determine the main drivers of sustainable economic development. The research also highlights the importance of prioritizing the activities of social sector organizations. Effective social services in education, healthcare, and employment support enhance human capital, improve living standards, strengthen social equity, and contribute to regional economic stability. Efficient governance and resource optimization within these organizations further amplify their impact on socio-economic development.

A clustering-based monitoring model was proposed to dynamically assess regional disparities in real time, considering economic, social, infrastructural, and digital governance indicators. The use of normalized indicators, including inverse normalization for negative indicators, allows for objective comparison and prioritization of regions and sectors. In conclusion, internal factor identification and the optimization of social sector activities are pivotal for developing evidence-based regional policies, enhancing the effectiveness of economic interventions, and ensuring long-term, sustainable growth. This

approach enables regional authorities to allocate resources efficiently, respond to emerging challenges, and strengthen regional economic resilience.

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