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Methods for Assessing The Tax Potential of a Region

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Abstract: In the context of globalization and economic competition, ensuring the financial independence of local budgets is increasingly dependent on accurately assessing the tax potential of regions. Existing methods for evaluating tax potential often rely on generalized indicators, which inadequately reflect the diverse economic capacities of different regions, highlighting the need for updated analytical approaches. Despite significant attention to tax potential in economic literature, comprehensive models incorporating statistical and sector-specific analyses tailored to regional conditions remain underdeveloped, especially within Uzbekistan's fiscal framework. This study aims to review, classify, and critically evaluate contemporary methods for assessing regional tax potential, offering practical recommendations for enhancing fiscal policy planning. The findings indicate that methods such as the Representative Tax System, regression models, Kalman filtering, and stochastic frontier analysis provide valuable insights, but each has limitations in addressing informal economic activities and regional disparities. By synthesizing international methodologies with regional-specific challenges, the research underscores the necessity of a systemic, hybrid model that integrates both analytical and statistical approaches for a more precise assessment of tax potential. Strengthening the methodologies for tax potential assessment will improve budget revenue forecasting, support equitable fiscal policy development, and contribute to the sustainable economic growth of regions through informed decision-making.

Keywords: Tax Potential, Local Budgets, Tax Revenues, Tax Base, Tax Rate

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1. Introduction

In the context of increasing globalization and intensifying competition, ensuring the economic stability of a state relies heavily on the financial independence of local budgets. From this perspective, accurately and objectively assessing the tax potential of regions and developing strategies for its effective utilization are among the priority directions of state fiscal policy.

Tax potential refers to the maximum amount of tax revenues that can be collected for the budget through the utilization of a region's economic resources. This concept is not only critical for forecasting tax revenues but also plays a significant role in planning regional tax policies and ensuring equitable financial distribution. However, existing assessment methods often rely on generalized indicators and may not fully reflect the actual economic opportunities of a region.

Therefore, there is a growing need to employ modern statistical and economic models, digital technologies, and sector-specific analyses to assess the tax potential of regions.

Literature Review. Effective assessment of a region's tax potential allows for accurate forecasting of tax revenues, which serves as a key indicator of the tax revenue base. This approach plays a central role in forming budget revenues at various levels and shaping tax

policy. A country's tax potential is a macroeconomic category, and its level and realization depend on the region's social welfare and quality of life. Consequently, developing an effective method for assessing tax potential based on general approaches and identifying the factors influencing it remains a relevant and significant issue [1].

According to Gorsky, the concept of tax potential reflects the highest level of tax and mandatory payment revenues within a country's tax system [2].

Pessino and Fenochietto define tax potential as the volume of collectible tax revenues, taking into account a country's economic, social, institutional, and demographic characteristics [3].

Evstafieva notes that assessing a region's tax potential is a process that considers various approaches and influencing factors, aimed at ensuring the stability and consistency of tax revenues [4].

Shogenov argues that a region's tax potential consists of the maximum amount of taxes and mandatory payments that can be collected for the budget within specified periods based on existing tax legislation [5].

Gaspar et al. describe tax potential as the per capita taxes collected by local authorities under uniform taxation conditions across a country's regions during a fiscal year [6].

Brun et al. suggest that the tax potential category involves forming the maximum justified tax revenues for a country's budget, achievable within a given timeframe with defined characteristics [7].

Assessing tax potential effectively is a priority for shaping local budget revenues and forecasting tax collections. One of the most common classifications distinguishes between direct and indirect methods for assessing a region's tax potential. Direct methods are based on indicators of tax revenue formation in a region, while indirect methods rely on indicators of a region's economic activity [8].

Indirect methods, based on economic activity indicators, aim to determine tax potential as a result of specific metrics. For example, assessing tax potential based on gross regional product can be used to evaluate the impact of tax components on a region's economic parameters, particularly with advancements in information security.

Direct methods, based on tax revenue formation indicators, characterize the realization of tax potential and are widely used in the operational activities of tax authorities to enhance the efficiency of the tax system [9].

2. Materials and Methods

This study employed a theoretical and analytical approach to examine the methods for assessing the tax potential of regions, focusing on their application in ensuring the financial independence of local budgets. The research utilized scientific abstraction, analysis and synthesis, induction and deduction, and comparative analysis to explore existing definitions, frameworks, and techniques. Primary sources included economic literature, legislative documents, and international research studies addressing tax potential assessment. Comparative analysis was conducted by examining the Representative Tax System (RTS) method, regression models, Kalman filtering, and stochastic frontier analysis to evaluate their applicability in forecasting regional tax revenues. Special attention was paid to understanding how these methods account for economic, social, demographic, and institutional factors influencing a region's fiscal capacity. Data interpretation relied on general economic indicators and theoretical modeling rather than empirical regional statistics, allowing for a critical evaluation of each method's strengths and limitations. The study synthesized different approaches to highlight the necessity of combining analytical and statistical models in assessing tax potential accurately. This integrative methodology provided a comprehensive framework for identifying gaps in current practices and for recommending improvements that align

regional fiscal assessments with broader economic realities. Through a structured theoretical review, the study offered a refined perspective on the methodological foundations necessary for the effective and realistic forecasting of tax revenues in regional economies.

3. Results and Discussion

According to many economists, the Representative Tax System (RTS) method, recommended by the U.S. Advisory Commission on Intergovernmental Relations, is one of the primary methods for assessing a region's tax potential. This method calculates tax potential by applying average tax rates to tax bases, determining the potential tax amount collectible for the budget. Effective implementation of this method requires creating a comprehensive database of taxpayers, utilizing data on tax bases across all regions [10].

Currently, theoretical and scientific economic literature offers various approaches and methods for assessing tax potential based on different indicators. When comparing countries, caution is needed in interpreting tax potential determined by any method, as each country's economic, political, and institutional characteristics are unique, and generalizations may lead to errors. In general, economists have classified methods for assessing tax potential, which can be characterized by the following main approaches:

1. Representative Tax System;
2. Regression Models;
3. Simulations Using the Kalman Filter;
4. Stochastic Frontier Analysis.

The Representative Tax System method is one of the classic approaches to assessing a region's tax potential. It calculates tax potential by applying average tax rates to tax bases. The RTS primarily identifies the maximum collectible tax amount based on the availability of tax sources in a region and the revenues generated from them [11].

This method calculates the potential tax revenue from a tax base using established tax rates, which is crucial for evaluating the efficiency of the tax system and shaping tax strategies [12].

A key feature of the RTS method is its role as a primary indicator for identifying tax sources for local budgets and establishing tax policies. However, its implementation requires a comprehensive system of data on tax bases across all regions and their analysis [13].

The main advantage of this method is that it considers not only tax rates but also their realization level, making it effective for forecasting tax revenues accurately [14].

The regression models method is a statistical and economic analysis approach that examines how one or more independent variables (e.g., economic, social, or political factors) affect tax revenues (the dependent variable). Through regression models, relationships between various economic factors and the tax system are identified, aiding in assessing tax potential. This method supports decision-making in developing tax systems and fiscal strategies [15].

Regression models analyze relationships between variables. They identify connections between one or more independent factors (e.g., production volume or population income) and outcomes (tax revenues or tax potential). This method helps understand how specific factors impact tax collections [16].

In assessing tax potential, data on economic indicators, tax revenues, and other factors are often used. These datasets may contain errors or uncertainties. The Kalman Filter helps analyze updated data at each step and minimize errors [17].

Stochastic Frontier Analysis is another statistical modeling method for assessing tax potential. Compared to other methods, it treats tax potential as the expected average value of tax revenues, enabling its assessment as the maximum achievable tax collection [18].

4. Conclusion

The methods for assessing a region's tax potential discussed do not account for indicators identifying revenues in the shadow economy, meaning they determine the maximum tax revenues based on existing tax legislation. Researchers do not always rely on a single group of methods for assessing tax potential. Therefore, studying various economists' research suggests that developing an effective method for assessing tax potential requires simultaneously constructing analytical and statistical models.

Several economists' studies identify relationships between the current level and composition of tax potential and discrepancies between taxpayers' registered locations and actual activities. These characteristics are reflected in various methods for assessing tax potential proposed by economists.

Based on the above, it is worth noting that no single method for assessing tax potential can be singled out. The formation and development of a region's tax potential are directly and indirectly influenced by a combination of socioeconomic, political, demographic, and environmental factors. The foundation of a systematic approach lies in analysis and synthesis, and their appropriateness is explained by the systemic nature of tax potential as a category.

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