

# The Efficiency of Alternative Financial Sources in Sustainable Economic Growth

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**Abstract**—This study aims to examine the foundations of economic security, key aspects, and distinguishing features of alternative financial sources in the context of sustainable socio-economic well-being. The research explores the role of innovation support and regulated production in sustainable economic growth, as well as the socio-political and economic methods of international economic interactions.

Furthermore, the study identifies the existing interconnections in global economic policy, their impact on regional socio-economic balance, and the mechanisms ensuring mutual stability. The intensity of economic and trade relations between countries is analyzed, emphasizing the significance of income equality. The research also determines the key factors that support sustainable economic progress. The balance of macroeconomic indicators and the necessity of enhancing socio-economic well-being are directed towards optimizing political-economic regulation. In this context, recommendations are provided for the application of effective mathematical models to ensure sustainable socio-economic development.

**Keywords**—Socio-economic progress, cybersecurity, political-economic diplomacy, socio-economic stability, geo-economic interests.

## I. INTRODUCTION

Political stability is a key factor in ensuring sustainable socio-economic well-being. Socio-economic welfare is considered a fundamental aspect of economic policy, encompassing both individual and societal progress. Given the current political and economic landscape, the increasing globalization and competitiveness of economies necessitate the development of new strategies to ensure the continuous improvement of socio-economic well-being. Institutions such as the World Bank and the International Monetary Fund recognize the sustainable growth model as a fundamental approach to enhancing socio-economic welfare.

Effective economic decisions adopted by countries worldwide contribute to the organization of socio-economic welfare. Historical experience, such as the Industrial Revolution in England, facilitated sustainable growth in production and consumption, while also improving the efficiency and accessibility of education policies to ensure social well-being. Thus, alongside political and economic progress, continuous improvements in human welfare have become essential.

The formation of socio-economic progress requires decision-making not only by state institutions but also by businesses and civil society. For instance, Germany's transition to a green economy integrates economic and social

policies while ensuring environmental protection and economic progress within a unified system. Such a balance has been instrumental in maintaining sustainable socio-economic welfare.

## II. INDICATORS OF SUSTAINABLE GROWTH AND WELFARE

Sustainable socio-economic growth is a fundamental process that ensures the fulfillment of future generations' financial and social needs without compromising current development. This approach extends beyond economic growth indicators, incorporating social, environmental, and cultural aspects. Sustainable growth consists of political, economic, and social components, whose combined influence plays a crucial role in ensuring economic welfare.

Economic components include income growth, productivity enhancement, increased investments, and infrastructure development. Sustainable economic growth relies on the efficient use of resources to maintain long-term economic stability. Social components, on the other hand, encompass access to education, gender equality, and the formation of social equity, all of which are essential for socio-economic well-being.

Economic welfare is primarily assessed based on income levels, which determine individuals' ability to meet their material needs and improve their quality of life. According to the World Bank, poverty reduction is directly linked to economic welfare. For example, over the past 40 years, China has implemented agricultural development and industrialization policies to accelerate economic growth and create new jobs. As a result, millions of people have achieved economic prosperity, significantly improving overall welfare.

Employment levels are another key determinant of economic welfare. Increasing employment opportunities enhances economic well-being and contributes to social stability. This approach highlights the necessity of integrating social policies with economic growth to ensure sustainable progress. Additionally, improvements in education policies are vital for economic welfare, as better access to education enhances quality of life and boosts productivity in economic activities.

Various methods and indicators are used to measure sustainable growth in international practice.

The Human Development Index (HDI), introduced by the United Nations, evaluates human well-being based on income, education, and life expectancy. Similarly, the Sustainable Development Goals (SDGs) serve as key international benchmarks for assessing sustainable growth, targeting

poverty reduction, climate change mitigation, and social equity. For instance, Bangladesh has implemented economic policies aimed at poverty reduction and economic participation, which have significantly contributed to overall welfare.

Gross Domestic Product (GDP) remains the primary measure of sustainable economic growth. However, GDP primarily reflects economic factors and does not fully capture social dimensions. As a result, modern approaches complement GDP with additional social and environmental indicators to provide a more comprehensive evaluation.

Sustainable economic growth and welfare progress are inherently interconnected. A thorough analysis of international experience enables countries to develop optimal policies tailored to their specific conditions. For Azerbaijan, these criteria should be prioritized, and sustainable growth strategies must be implemented accordingly.

Traditional economic decision-making is often based on rational choice theory, which assumes that decision-makers evaluate existing criteria to maximize benefits. This approach is particularly relevant for economic management and resource allocation.

### III. BEHAVIORAL ECONOMICS AND RATIONAL CHOICE THEORY

Behavioral economics and rational choice theory regulate the emotionality and perception patterns of decision-making entities. For example, the development of effective strategies for designing social programs and enhancing human well-being is considered essential.

To ensure sustainable growth, the implementation of progressive methods and sustainability impact assessment mechanisms creates favorable conditions for more accurate forecasting of long-term decision outcomes. The application of this approach in Azerbaijan will contribute to achieving exemplary results in the socio-economic sphere. Thus, the effectiveness of decisions plays a significant role in economic welfare growth.

Such economic methods have a more empirical impact on sustainable welfare growth in Azerbaijan, and the real outcomes of the adopted decisions determine the effective organization of economic policy. A comprehensive analysis of sustainable welfare growth and the scientific refinement of decision-making processes accelerate the implementation of an economic progress model. To achieve these goals, research and strategies must emphasize comparative and interconnected approaches.

Comparison of social welfare based on sustainable growth. Table 1

Criteria	Azerbaijan (2024)	OECD Countries
GDP Growth Rate	4.19%	23.6%
Income Equality (Gini Index)	34.7	29.5
Economic Growth Rate	41.9	68.3
Share of Green Energy	19.5%	6.83%

In the current political-economic environment, state innovation policy plays a crucial role in the progress of socio-economic well-being. Innovation policy is not only aimed at increasing production efficiency but also at improving overall societal welfare. The human factor constitutes the foundation of economic policy and determines the progress of human well-being based on governance models [5].

### IV. THE IMPACT OF STATE INNOVATION POLICY ON HUMAN WELFARE

The state's innovation policy not only ensures human welfare in various sectors of the economy but also has an impact in different directions. Such innovation policies are classified as follows.

Educational innovations condition the accessibility of knowledge and skills in science and education and support economic progress opportunities.

Industrial and manufacturing innovations enable the realization of consumer goods by increasing productivity and enhance the welfare level of consumers.

The human factor in economic policy is conditioned not only by general economic development but also by ensuring social equality and creating new opportunities in the labor market. Thus, based on these criteria, we can determine the direct impact of innovations on human welfare:

The application of innovation in agriculture allows for more productive and environmentally friendly production, increasing food security and raising the socio-economic incomes of people based on the state's employment program in the agricultural sector.

Economic policy in service sectors contributes to the increase in labor productivity and the creation of new working conditions while also ensuring citizen welfare.

Thus, according to the Davud economic model, the proper regulation of innovation policy is necessary as a result of the balance between capital (E) and wealth (E). Based on this model, it is conditioned as follows:

1. Criteria determining progress (NDA): The necessity of innovation support in state policy.
2. Sustainable capital growth (GDA): The implementation of innovative policies should ensure political-economic, scientific, and educational orientation.
3. Wealth (EDA): Innovation support applied as the foundation of the state's political-economic and legal governance is considered a criterion for progress.

This method conditions not only economic efficiency but also the increase in social welfare.

### V. APPLICATION OF ECONOMIC MODELS IN INNOVATION POLICY

Innovation policy is considered the main criterion of economic progress. In this context, economic models, by targeting the primary focus of innovation, form strategies aimed at increasing production and social welfare. The presented Davud economic model ensures sustainable economic growth through the application of innovation policy, strengthening the interrelation between capital (G), wealth (E), and state support.

Thus, the policy of sustainable economic growth is considered necessary in the social welfare context in accordance with the Davud economic model. These trends are conditioned by the formation of balance based on the criteria aimed at ensuring the continuous growth of GDP and the political-economic forces equilibrium. The Davud model, which regulates aggregate income and expenditures on a broader scale of political-economic balance, conditions

economic efficiency, the material total of financial criteria, and the acceptance of young people's planned higher education.

### EDA growth guarantee = GDA + NDA + DIA

This mathematical economic model reflects the aggregate demand that conditions economic activity efficiency and income growth based on:

- Production (DIA)
- The state's wealth criterion (EDA)
- State support (NDA)
- State benefit (GDA)

The effectiveness of such political-economic analyses necessitates the socio-economic balance based on the application of the Davud economic model, which aligns with the projected GDP growth rate in Azerbaijan. Economic efficiency has significant importance in this context. The consumer price index (CPI) applied in basic price equilibrium characterizes "inflation" and the GDP deflator as the general price criterion of all goods and services acquired for consumption.

GDP calculated at the current economic condition is considered nominal gross domestic product (GDP). This expresses the total value of all production within a country's territory during a year. Thus, the assessment of sustainable economic growth characterizes the comparison of these criteria with previous years.

Such a comparison is calculated with GDP at current prices, reflecting the real value. Consequently, the GDP deflator results in the price and quality of all consumer products produced domestically.

In this context, on a broader scale of political-economic balance, the Davud model, which regulates aggregate profit, expresses economic efficiency as the material total of economic welfare growth.

## VI. SUSTAINABLE ECONOMIC PROGRESS AND ECOLOGICAL DEVELOPMENT

The innovation policy aligns with an effective approach that ensures progress in the balance of capital growth (G) and wealth (Θ) within an environmentally sustainable economic model. These criteria reflect the following principles:

- Ensuring a more efficient use of alternative energy sources compared to traditional economic growth resources helps maintain balance.
- The implementation of sustainable economic growth generates additional economic effects in both production and consumption.
- Ecological innovations have a direct impact on social welfare, leading to changes in legal and economic systems.

**Progress rate of the welfare index (2020–2024) – Table 2**

Year	Average Monthly Income (AZN)	Employment Rate (%)	Education Criteria (Optimal Growth Rate)
2020	735	91.5	9.19
2021	757	92.2	63
2022	819	93.1	65

2023	859	93.8	67
2024	915	94.5	75.19

## Human capital in science and education

The successful implementation of innovation policy strengthens human capital and aligns with the sustainable economic model. This model reflects real progress and ensures financial efficiency within this context.

- In agriculture, smart farming systems enhance productivity and strengthen food security.
- In financial policy, directing alternative financial resources towards human well-being helps optimize human capital.
- In economic development, the efficiency of innovation policy plays a key role in ensuring more effective production and consumption processes.

## VII. CONCLUSION

The application of the Davud economic model developed by the author within the context of innovation policy, fosters sustainable economic progress by integrating innovative approaches into capital and labor exchange, as well as production and consumption. This economic model plays a crucial role in regulating social-economic and ecological stability. The state's innovation policy across various economic sectors contributes to the continuous improvement of human well-being. Thus, in areas such as science and education, agriculture, renewable energy, and sustainable economic growth, innovation policy becomes essential for ensuring social welfare.

The continuous improvement of socio-economic well-being is a key factor in achieving economic progress, social prosperity, environmental protection, and human capital development. Furthermore, based on international experience, investments in human capital, ensuring social equity, and maintaining ecological balance are fundamental pillars of sustainable development.

The implementation of state innovation policy in economic and social sectors enhances resource efficiency and contributes to overall welfare growth.

- Increasing investments in human capital: Modern education and vocational training programs should be developed in accordance with international standards, and the younger generation's digital skills should be strengthened.
- Transition to green economy principles: Expanding the use of green economy practices and alternative energy sources is essential for maintaining ecological balance and fostering social well-being.

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