



Research on the Role Mechanism of Market Mechanism and Government Regulation in Resource Allocation

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Abstract. The mechanisms of market mechanisms and government regulation in resource allocation are the subjects of this study. This paper explores their interrelationships and mechanisms of action in the process of resource allocation. It first analyzes the basic principles and advantages of the market mechanism, such as the price mechanism, competition mechanism, and supply and demand mechanism, and elaborates on its role in improving resource allocation efficiency. It then examines the necessity and main means of government regulation, including macro-control, industrial policy, and fiscal and taxation measures, and discusses its functions in addressing market failures, ensuring social equity, and promoting sustainable development. The paper further analyzes the complementary relationship and coordination between market mechanisms and government regulation, emphasizing their joint role in achieving optimal resource allocation, supported by case studies and data.

Keywords: Market mechanism; Government regulation; Resource allocation;

1 Introduction

Economics regards resource allocation as one of the core issues, directly affecting economic development and social welfare. In modern economic systems, market mechanisms and government regulation are the two main means of resource allocation and play a crucial role in economic operation [1]. In recent years, with global economic development and structural adjustment, increasing attention has been paid to how these mechanisms function. This article explores the role of market mechanisms and government regulation in resource allocation, analyzing their advantages, limitations, and interrelationships. According to the National Bureau of Statistics, China's GDP growth reached 3.0% in 2022, a relatively strong performance among major economies, yet challenges remain. Therefore, in-depth analysis has important theoretical and practical significance for improving allocation efficiency and promoting sustainable economic development [2].

2 The Role of the Market Mechanism in Resource Allocation

There is a spontaneous order that regulates the allocation of resources through market supply and demand and price signals called the market mechanism. Its core includes the price mechanism, the competition mechanism, and the supply and demand mechanism. Among them, the price mechanism conveys information through price changes to direct resources to the most efficient uses, and the competition mechanism promotes efficiency improvement and innovation through competition among market entities. The supply and demand mechanism achieves the automatic regulation of the market through the interaction of supply and demand, and these mechanisms interact to form the basic operating principles[3] of the market economy.

The market mechanism can respond sensitively and quickly to market changes and use price signals to direct resources to the most urgent areas. For instance, during the COVID-19 pandemic, as soon as there was a change in market demand, the development of related industries such as medical supplies and online education was immediately and rapidly driven. Statistics show that the scale of China's online education market reached 257.3 billion in 2020. A 35.5% increase from the previous year is a good demonstration of the flexibility of the market mechanism[4-5].

3 The Role of Government Regulation in Resource Allocation

3.1 Necessity of Government Regulation

In resource allocation, government regulation plays an irreplaceable role, mainly in making up for market failures, maintaining social equity, and promoting sustainable development. Although market mechanisms can effectively allocate resources in most cases, when market failures such as the supply of public goods, externalities, and information asymmetry occur, it is often difficult to achieve the best results. So the intervention of government regulation is particularly necessary, just as in the response to the COVID-19 pandemic and in safeguarding public health security, the government's active intervention played a key role, effectively controlling the spread of the pandemic and protecting public health.

3.2 The Main Ways of Government Regulation

Macro-control, industrial policy, fiscal and taxation policy, etc. are the main means of government regulation, among which macro-control mainly uses monetary policy and fiscal policy to act on aggregate demand and economic growth. For example, China's implementation of proactive fiscal policy and prudent monetary policy in 2022 dealt well with the downward pressure[6] on the economy. Industrial policies optimize the industrial structure by supporting the development of specific industries. In recent years, China has focused on supporting strategic emerging industries, which account-

ed for 12.2% of GDP in 2021, an increase of 1.5 percentage points compared with 2020. One of the important means of government regulation is fiscal and tax policy. Through measures such as tax incentives and fiscal subsidies, the government can support specific industries or groups and promote balanced regional development, as China did in 2022, when it implemented a large-scale VAT carry-forward tax refund policy, with a cumulative refund of 1.45 trillion yuan. It has effectively alleviated financial pressure on enterprises and supported the development[7] of the real economy.

3.3 The Advantages of Government Regulation in Resource Allocation

Government regulation has a unique advantage in resource allocation because it can think and formulate long-term development strategies from a holistic perspective, as China's 14th Five-Year Plan provides a clear direction for economic and social development from 2021 to 2025, and it can also concentrate its efforts on major issues to solve problems that are difficult for the market to cope with. In areas such as infrastructure construction and scientific and technological innovation, government guidance and support play a key role. Statistics show that China's total investment in research and development reached 2.79 trillion yuan in 2021, up 14.2% from the previous year, with government funds accounting for more than 20 percent. Social equity and stability can be better maintained through government regulation, and the gap between the rich and the poor can be alleviated and common prosperity[8] promoted through policies such as social security and income distribution regulation. In 2021, basic old-age insurance covered over 1 billion people and basic medical insurance covered over 1.36 billion people in China, highlighting the important role of the government in ensuring people's livelihood. (As shown in figure 1)

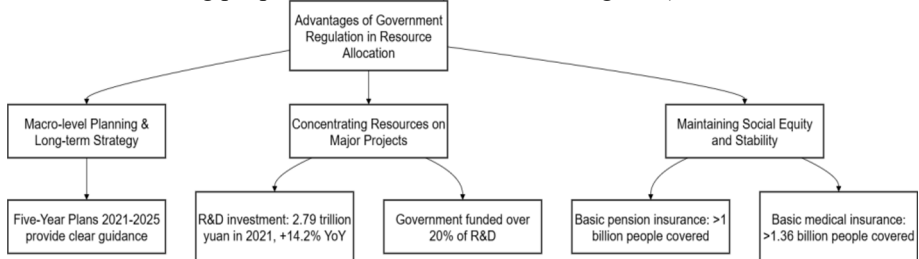


Fig. 1. The advantageous structure of government regulation in resource allocation

3.4 Limitations of Government Regulation in Resource Allocation

Government regulation plays a significant role in resource allocation, but it is not without limitations, because the government may face incomplete information and be unable to precisely control market trends and developments, which may lead to wrong decisions, as some local governments pursue GDP growth blindly while neglecting environmental protection and sustainable development, resulting in wasted resources and polluted[9] environment.

Government intervention may lead to loss of efficiency and rent-seeking, and excessive administrative intervention may distort market price signals and affect the efficient allocation of resources. The World Bank's Doing Business report shows that although China's business environment has been improving over the past few years, there is still room[10] for improvement in areas such as access to credit and cross-border trade.

4 The Synergy Between Market Mechanisms and Government Regulation

4.1 Market Mechanisms and Government Regulation Complement Each Other

In the modern economic system, the complementary relationship between the market mechanism and government regulation is increasingly prominent, and both are the core drivers of resource allocation. The market mechanism effectively guides resources to the most efficient areas through price signals, supply and demand relations, and the competitive environment to promote spontaneous economic equilibrium, but the market mechanism has its own limitations. Such[11] as the inability to properly address externalities, provide public goods, and maintain social equity.

The government has an irreplaceable regulatory role in these areas. It formulates laws and regulations, implements macro-control policies, and provides public services to make up for the deficiencies of market mechanisms, thereby maintaining social equity and justice and promoting long-term stable economic development. Take environmental protection as an example. The government's measures such as setting emission standards and imposing environmental taxes effectively internalize environmental externalities. To boost the green economy, this complementary relationship makes the allocation of resources more efficient and fairer, laying the foundation for sustainable economic and social development.

4.2 The Balance Point Between Market Mechanisms and Government Regulation

One of the core challenges in economic policy-making is to find the best balance point between market mechanisms and government regulation, which is not fixed and can be dynamically adjusted with changes in economic development stages, industrial structures and social demands, and the weights of market mechanisms and government regulation vary[12] in different economic fields and development stages. In general, in highly competitive industries such as consumer goods manufacturing, market mechanisms should be dominant and the government should mainly assume regulatory and service responsibilities, while in strategic industries such as energy and infrastructure, which are crucial to the national economy and people's livelihood, the government needs to increase regulation to ensure the stability of industry development and the public interest of society, just as in the development of the new energy

vehicle industry in China, The government uses subsidy policies and industrial planning to guide market investment and gradually relax market access, thus forming a development model that integrates government guidance and market-driven development. Grasping such a dynamic balance is important for achieving efficient resource allocation and sustainable economic development.

4.3 A Comprehensive Strategy for Optimizing Resource Allocation

To achieve the optimal allocation of resources, it is necessary to combine market mechanisms with government regulation and formulate comprehensive and flexible strategies. First, the market system should be further improved to make the price formation mechanism more sound and promote the reform of market-based allocation of factors to stimulate the vitality of market entities. Also, market regulation should be strengthened to maintain a fair competitive environment and avoid monopolies and unfair competition. Macro-control methods need to be optimized by the government to make policies more precise and effective, such as fiscal policy can guide enterprises to increase R&D investment through structural tax cuts and fee reductions, and monetary policy can support the real economy through the innovation of financial tools, and the government also needs to strengthen institutional building, Improve legal systems such as property rights protection and intellectual property rights protection to create a favorable institutional environment for market entities.

5 Conclusions

This study examines the mechanisms of market mechanisms and government regulation in resource allocation and reveals their complementary relationship. Both are indispensable in the modern economic system and jointly drive resource allocation. Through price signals, competition, and supply–demand relations, market mechanisms can efficiently allocate resources and promote equilibrium, but they are limited in addressing externalities, public goods, and social equity. Government regulation compensates for these shortcomings through laws, macro-control policies, and public services. The optimal balance between market mechanisms and government regulation is dynamic and varies across economic development stages, industrial structures, and social demands. Therefore, optimizing resource allocation requires combining both mechanisms and adopting flexible strategies. This study deepens theoretical research on resource allocation and provides guidance for practical economic policy-making, with implications for future research under technological change and globalization.

References

1. Song, C., Li, D., & Wu, L. (2024). Green finance reform and corporate risk-taking: Evidence from China's pilot zones. *Journal of Cleaner Production*, 435, 139667. <https://doi.org/10.1016/j.jclepro.2024.139667>
2. Li, H., Qi, S., & Luo, Y. (2022). Carbon trading schemes and firms' innovation quality. *Energy Policy*, 169, 113204. <https://doi.org/10.1016/j.enpol.2022.113204>
3. Peng, B., Yan, C., & Elahi, E. (2022). Impact of carbon emission trading on green technological innovation. *Technological Forecasting & Social Change*, 185, 122015. <https://doi.org/10.1016/j.techfore.2022.122015>
4. Wu, Y., Zhang, L., & Chen, S. (2024). Market-oriented reforms and misallocation: Evidence from China's financial liberalization. *Economic Modelling*, 134, 106517. <https://doi.org/10.1016/j.econmod.2024.106517>
5. Chen, Y., Liu, J., & Xu, H. (2025). Capital market liberalization and firm total factor productivity: New evidence from emerging markets. *Journal of Empirical Finance*, 85, 103456. <https://doi.org/10.1016/j.jempfin.2025.103456>
6. Hao, G., Zhou, H., & Li, S. (2023). Financial development, marketization, and allocation efficiency. *Finance Research Letters*, 60, 104314. <https://doi.org/10.1016/j.frl.2023.104314>
7. Wang, J., & Lin, S. (2023). Does government intervention promote or hinder resource allocation? Evidence from regional policy reforms in China. *China Economic Review*, 79, 102007. <https://doi.org/10.1016/j.chieco.2023.102007>
8. Zhai, S., Li, P., & Liu, Y. (2024). Government intervention, marketization, and resource allocation efficiency: A re-examination using multi-dimensional indicators. *Structural Change and Economic Dynamics*, 68, 101345. <https://doi.org/10.1016/j.strueco.2023.101345>
9. Liu, H., Peng, F., & Chen, Y. (2024). Administrative governance, market order, and resource reallocation. *Governance*, 37(2), 345–366. <https://doi.org/10.1111/gove.12708>
10. Zhang, C., Yang, Y., & Sun, B. (2023). Government incentives, market competition, and efficient resource allocation. *Journal of Economic Behavior & Organization*, 211, 667–682. <https://doi.org/10.1016/j.jebo.2023.03.015>
11. Sun, R., Xu, Y., & Tao, R. (2024). Marketization, government support, and technological resource allocation efficiency. *Technovation*, 134, 102736. <https://doi.org/10.1016/j.technovation.2023.102736>
12. Li, S., & Zhang, T. (2022). Land resource allocation under mixed market-administrative systems. *Land Use Policy*, 118, 106156. <https://doi.org/10.1016/j.landusepol.2022.106156>

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