

ORIGINAL RESEARCH ARTICLE

Bottom line and boundary: The logic of rational land resource allocation in the perspective of governance

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ABSTRACT

Land is the most basic production factor of social and economic development, and the allocation of land resources is an important means of regulating social and economic development. At present, the contradiction between the needs of economic and social development and the increasingly scarce space resources puts forward new requirements for the allocation of land resources in China, and the importance of rational allocation of land resources is increasing day by day. During the reform period of land and space planning system, rational allocation of land resources not only means intensive and sustainable development, but also becomes a new expression of the will of land and space governance. It is a governance coordination platform linking macro development policies and micro resource utilization, and an important way to achieve high-quality development. Taking spatial governance as a clue, this paper attempts to sort out the evolution of governance logic behind land resource allocation in the Chinese context, traces back the previous logical transformation of land resource allocation that germinated due to the reform of social and economic system, and divides it into four characteristic stages: planned governance, regulatory governance, policy governance and bottom line governance. Based on the analysis of the governance mode and difficulties faced under the background of “bottom line governance”, this paper puts forward the “three bottom lines” of building the governance pattern of land resource allocation, clarifies the functional boundaries of the three main bodies of government, market and society in the process of land resource allocation, and emphasizes the spatial governance mode of government, market and society, so as to provide useful suggestions for the design of future spatial planning system.

Keywords: Land Resources; Space Governance; Bottom Line Governance; Functional Boundaries; System Design

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1. Introduction

Land is the most basic and fixed factor of production in social and economic development^[1]. Land resource allocation is not only a macro means of regulating social and economic development, but also can significantly affect the agglomeration or diffusion of other factors of production. Due to the high coordination cost of land resource pattern change, there is a large “path dependence” in land resource allocation. With the growth of urban population and the development of industrialization and urbanization in China, there has been an imbalance between the scarcity of economic supply of land resources and the growing social demand^[2]. According to the data of the National Bureau of Statistics, the supply of state-owned construction land fell by 3.6% year-on-year in 2019, which is the fifth year of continuous contraction of land supply since 2014. Land supply continues to be tight, and China’s land resources are scarce and begin to show a trend of forced development model transformation.

In March, 2018, the establishment of the land spatial planning system has greatly affected the pattern of land resource allocation and economic and social development needs. The “intensive and sustainable” development emphasized by the State takes the territorial space planning as the starting point, and realizes the effective implementation of national industrial policies and the orderly flow of production factors through the rational allocation of space resources, so as to achieve the scale of space bearing and orderly agglomeration. Rational allocation of land resources not only means intensive and sustainable development, but also becomes a new expression of the will of land space governance. It is an important way to link macro development policies with micro resource utilization and achieve high-quality development.

In China, the allocation of land resources has always been an important part of the national governance system. As early as the period of agricultural civilization, the early idea of coordinating the development of city states with land advantage areas has sprouted in Guanzi, “Yin tian cai, jiu di li (To rely on natural resources, to take advantage of the terrain.)”. Since the reform and opening up, China has vigorously promoted the allocation of land resources to concentrate in advantageous space, and achieved the scale agglomeration of production factors in a market-oriented way of land resource allocation. Since the 21st century, China has established a main functional control area for effective intervention. The logic of land resource allocation has been constantly transformed with the evolution of governance concepts, and the reform of land spatial planning system has placed it under the grand background of national governance modernization, endow the allocation of land resources with more realistic and profound significance.

Therefore, with the change of the overall development environment of the country, the spatial planning governance with land resource allocation as the core should also be actively transformed with the times. This paper attempts to take spatial governance as a clue, sort out the governance logic evolution of land resource allocation in the Chinese context, and on the basis of analyzing the existing

governance models and difficulties, put forward the “three bottom lines” of building the governance pattern of land resource allocation, emphasizing the spatial governance model of government, market and society, so as to provide useful suggestions for the design of the future land spatial planning system.

2. Governance logic evolution of land resource allocation in China: From “planned governance” to “bottom line governance”

In China, the logical change of land resource allocation is inseparable from the reform of social and economic system. On the one hand, the reform of social and economic system has promoted the reform of land system, which has become an important institutional support for the allocation of land resources, and provided corresponding governance guidance for the planning and management of various land use, development and construction activities by improving relevant governance concepts; on the other hand, the allocation of land resources also provides a reasonable land development pattern and appropriate spatial security for the change of social and economic system^[3] (**Figure 1**).

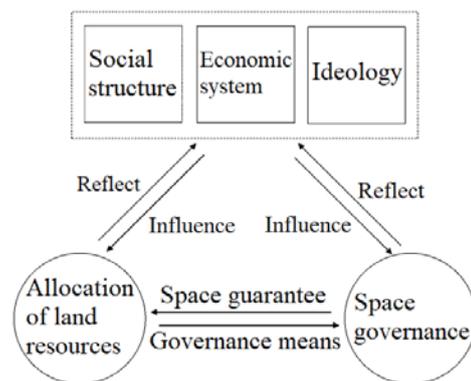


Figure 1. Governance logic of land resource allocation. Source: Self drawn by the author

The allocation of land resources in Chinese cities in different periods reflects the specific socio-economic background and the choice of endogenous governance mode. It always evolves with the alternation of China’s socio-economic system and land system. Looking back on the previous logical transformation of land resource allocation sprouted

due to the reform of social and economic system, it can be divided into four governance characteristic stages to deal with different resource allocation pe-

riods: planned governance, regulatory governance, policy governance and bottom line governance (Figure 2).

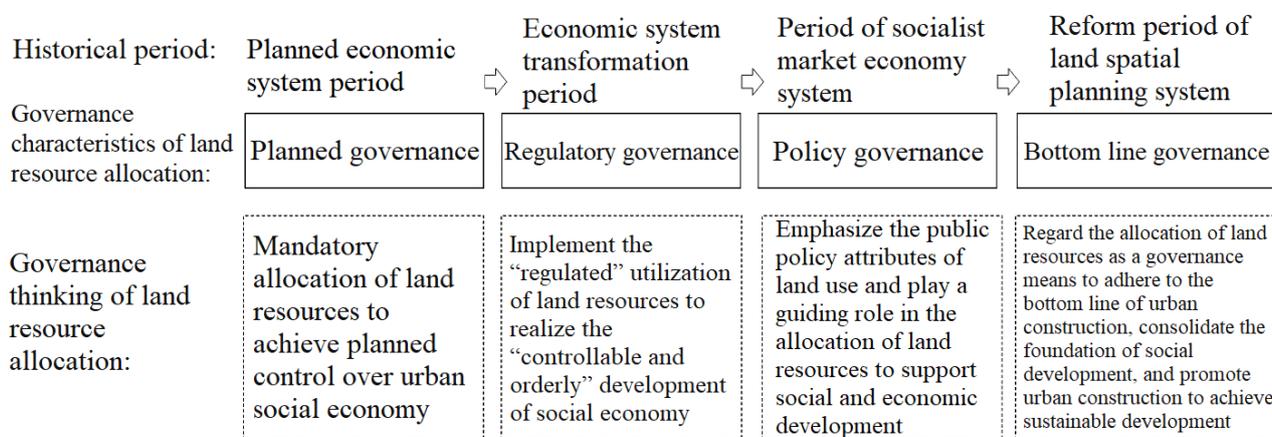


Figure 2. Governance logic evolution of land resource allocation.

Source: Self drawn by the author

2.1 “Planned governance” in the period of planned economic system and land resource allocation

The “planned governance” of land resource allocation refers to the governance thinking that the government limits the threshold of urban and rural spatial production through mandatory means of land resource allocation, so as to realize the planned control of urban social economy. At the beginning of the founding of new China, state-owned and private urban land coexisted. In 1950, the Land Reform Law of the People’s Republic of China¹ established and implemented the ownership of farmers’ land, so as to liberate rural productive forces and develop agricultural production. In 1956, urban land was fully nationalized. The use method of administrative allocation and free use of urban land by the local government excluded the market regulation mechanism, which has obvious characteristics of planned economy. The management system of urban and rural land division and decentralized land use departments^[4] led to serious waste of land resources and low utilization efficiency.

Under the influence of the political situation, the field of urban construction has also entered the “great leap forward” and “people’s commune plan-

ning period”^[5]. The three-tier decentralized construction of “not building a centralized city” made the layout of urban land scattered and the functions disordered during the 10-year turbulence. The heavy industrialization development policy of “supporting industry by agriculture” promotes the single flow of land resources to agricultural production, and the land policy has obvious characteristics of “ideology-oriented governance”. The unilinear governance thinking under the overall planning of “planning consciousness” leads to the process from the government will to land management and then to land supply. The allocation of land resources blindly emphasizes the limitation of the single production function of land, ignoring the complexity of land’s own production capacity and the flexible demand of urban development. Under the background of planned economic system, the allocation of land resources of the Chinese government has an obvious “planned governance” orientation.

2.2 “Regulation and governance” of economic system transformation period and land resource allocation

The “regulatory governance” of land resource allocation refers to the governance thinking that the government implements the “regulated” utilization of land resources through national macro-control, so as to realize the “controllable and orderly” de-

¹ Land Reform Law of the People’s Republic of China, adopted by the Eighth Session of the Central People’s Government Committee on June 28, 1950.

velopment of social economy. Since the reform and opening up, the transformation of economic system has stimulated the reform of urban land system. In 1982, the constitution was amended to clarify that urban land belongs to the state, and the land ownership structure of public ownership of land was officially established. In the same year, Shenzhen, as a pilot of reform, began to collect land use fees by location and promoted them nationwide. The circulation of land factors was initially market-oriented, but it was still difficult to avoid inefficient land use. In 1988, the Amendment to the Constitution of the People's Republic of China² guaranteed the transfer of land use rights at the legal level. The establishment of the land circulation system further stimulated the activity of the land circulation market, promoted the efficient operation of the flow of land factors, and also laid the institutional foundation for the market to participate in the allocation pattern of land resources under national macro-control. Since then, the land system has completed a profound change in the period of economic system transformation.

The reform of land system has liberated the land circulation market, and the national work focus of 'taking economic construction as the center' is also increasingly dependent on land development and construction activities, and China's urban construction has entered a period of rapid expansion. In 1982, for the sustainable use of land resources, China issued the basic national policy of managing and protecting land resources, emphasizing the "regulated" use of land resources. The emergence of regulatory detailed planning and its focus on land classification and strong regulation of land development intensity mark that China's land resource allocation has entered the period of "regulation and governance". In 1998, the Land Administration Law of the People's Republic of China³ was revised and

passed, and a new land management system with use control as the core was established in legal form for the first time. The allocation of land resources has shifted from "planned governance" that blindly emphasizes the function of land production to "regulatory governance" that is controllable and adjustable and emphasizes the characteristics of land resources. Urban development and construction has moved towards the era of constrained management and control.

During this period, China's land resource allocation focused on centralized and efficient land management, strictly limiting the scale of land development, and comprehensively managing land resources, trying to alleviate the negative external effects caused by paid land use. The multilinear governance thinking of "regulatory governance" runs through the whole process from land management to supply, paying attention to the compound production function of land resources and the development of "regulated", which reflects the governance characteristics of the country "emphasizing regulation and neglecting the market" in the period of economic system transformation.

2.3 "Policy governance" in the period of socialist market economic system and land resource allocation

"Policy governance" of land resource allocation refers to the new thinking of spatial governance that the government regards land resource allocation as a policy means to promote the modernization of national governance, emphasizes the public policy attribute of land use, and plays its guiding role in supporting social and economic development. Since the 21st century, in the face of a series of sustainable development problems caused by blind development, the country has gradually abandoned the traditional concept of development dominated by growth and began to explore a new social and economic development model of win-win economic construction and environmental maintenance. In terms of land control, the Notice on Issues Related to Strengthening Land Regulation in 2006⁴ requires

² Amendment to the Constitution of the People's Republic of China (1988), adopted at the First Session of the Seventh National People's Congress on April 12, 1988, and promulgated and put into effect by a proclamation of the National People's Congress on April 12, 1988.

³ Land Administration Law of the People's Republic of China (1998 Revision) was issued by the Standing Committee of the National People's Congress on August 29, 1998.

⁴ Notice of the State Council on Issues Related to Strengthening Land Regulation and Control (Guofa [2006] No. 31).

“effectively strengthening land regulation”; the 2011 National Plan for Main Functional Zones⁵ defines the concept of spatial control of main functional areas, divides them into four types of main functional areas, and stipulates the corresponding functional positioning and development control principles, aiming to achieve the orderly development and balance of space⁶. In terms of land use, in the transition process of urban land use system from administrative allocation to paid limited term use, urban land use increasingly relies on the role of market mechanism⁷, and also puts forward stricter requirements for urban land planning and management, and the role of urban planning public policy is gradually strengthened. The 2006 Measures for the Preparation of Urban Planning⁶ defines the policy status and function mode of urban planning as “one of the important public policies for regulating urban space resources”.

During this period, planning, as an important government function, embodied the policy guide for the government to guide and manage urban land use⁸, and land resource allocation guided urban development by directly affecting land construction and development and clarifying the trend of land use, so as to achieve the governance goal of regulating spatial order with land resource elements.

The allocation of land resources at this stage can be summarized as the logical characteristics of “strong development, strong control, heavy regulation and heavy market”: focusing on optimizing the stock, transformation and upgrading⁹, the priority development of areas with concentrated production factors and potential areas can be achieved through the rational layout of industrial space; take intensive utilization and ecological maintenance as the development concept, pay attention to the efficiency of land resource utilization, and emphasize the concentration of ecological elements and the restricted development of environmental protection areas; strengthen the macro-control role of land

management, and establish a land supply system controlled from top to bottom; clarify the reasonable price threshold for the transformation between different land uses in the plan¹⁰ to establish a fair and just land market environment. The thinking of “policy governance” focuses on the spatial regulation and development guidance function of land resources, which reflects the governance characteristics of the government’s macro-control of the trend of social and economic development with the help of the spatial governance function of urban land use.

2.4 “Bottom line governance” during the reform period of land spatial planning system and land resource allocation

The “bottom line governance” of land resource allocation refers to the new thinking of land space governance that, facing the severe situation of land supply and demand, the government regards land resource allocation as a governance means to adhere to the bottom line of urban construction, promote urban construction to achieve from quantity to quality, from economic development to sustainable development, and give play to the bottom line regulatory role of land resource allocation on social and economic development. With the change of economic system and social background, the planning laws and regulations that emphasized urban and rural development and construction in the past are difficult to adapt to the development will of the times. On January 1st, 2008, the Urban and Rural Planning Law⁷ was issued, emphasizing that urban planning guides the healthy development of cities, standardizes the construction behavior in rural areas, guides the good development of rural areas¹¹, coordinates the role of new urban-rural relations, standardizes the bottom line of urban-rural development, and highlights the public policy attribute of planning in the form of law¹². In terms of land control, the 2008 outline of the National General

⁵ On December 21, 2010, the State Council issued the Notice on the National Plan for Main Functional Zones (Guofa [2010] No.46).

⁶ Measures for the Preparation of Urban Planning, adopted by the 76th executive meeting of the Ministry of Construction on October 28, 2005, shall come into force since April 1, 2006.

⁷ Urban and Rural Planning Law of the People’s Republic of China, the People’s Republic of the Tenth National People’s Congress Standing Committee adopted at its thirtieth meeting on October 28, 2007, is hereby promulgated and shall come into force on January 1, 2008.

Land Use Plan (2006–2020)⁸ proposed to strengthen the bottom line control of land use, control the boundary of urban and rural construction land through the “land space control system”, and delimit land use areas to further clarify the focus of land use control. In terms of land use, the focus of land resource allocation has shifted from focusing on the layout of production factors to focusing on strictly controlling the bottom line of factor development. The 2017 National Land Planning Outline (2016–2030)⁹ emphasizes “adhering to the matching of land development and resource and environmental carrying capacity”, “adhering to the coordination of concentrated development and balanced development”, “based on resource and environmental carrying capacity”, and promoting the optimization of land spatial development pattern and bottom line protection. During the reform period of the land spatial planning system, spatial planning is different from the traditional development and construction oriented urban and rural planning, and from the land use planning with pure control thinking. It is a major adjustment and reconstruction of the logic and methods of spatial planning under the concept of ecological civilization^[13], and a “development guide” for social and economic development based on “rigid control”. Land spatial governance and spatial structure optimization are regarded as the important basis for the implementation of land spatial use control and ecological protection and restoration^[14], and land resource allocation has become a governance tool for regulating land resources, supporting land use and bottom line guarantee, and an important means to promote the modernization of national governance system and governance capacity.

The characteristics of land resource allocation at this stage can be summarized as “overall planning and development, bottom line and height”: take land resource regulation as a means to coordinate the demands of the government, market and society, and coordinate the relationship between

protection and development, efficiency and quality^[12]; give play to the role of macro guidance and planning regulation of land resource allocation^[15], “keep the bottom line and determine the height”, limit land development indicators to adhere to the bottom line of development, and pay attention to spatial characteristics to improve the height of urban development goals. The logic of land resource allocation under the influence of the “bottom line governance” thinking focuses on the bottom line control function and overall development function of land resources, which reflects the elastic, dynamic and sustainable land space governance characteristics under the guidance of ecological civilization during the reform of land space planning system.

3. Land resource allocation dilemma in the context of “bottom line governance”

The resource allocation of urban and rural land in China, from the free allocation and planned allocation in the early days of the founding of new China, to the centralized and efficient regulation in the period of economic system transformation, to the allocation of “strong development, strong control, heavy regulation and heavy market” since the 21st century, to the bottom line regulation under the guidance of ecological civilization in the context of territorial space planning, has gradually formed the resource allocation mode of “rigid control” and “flexible regulation”. At the same time, the governance role of land resource allocation has experienced the evolution path of “planned governance-regulatory governance-policy governance-bottom line governance”, and its governance attribute has been continuously strengthened with the phased transformation of social and economic development goals. In the target context of modernization of national governance system and governance capacity, emphasizing the “bottom line governance” function of land resources has become the main feature of land resource allocation in modern China.

At the same time, the public attribute of land resources^[16] determines the pattern of government,

⁸ Notice of the State Council on the Issuance of the Outline of the National General Land Use Plan (2006-2020) (Guofa [2008] No. 33).

⁹ Notice of the State Council on the Issuance of the National Land Planning Outline (2016-2030) (Guofa [2017] No. 3).

public sector, market and public participation in land resource allocation: land resource allocation is a continuous process in which conflicting or different interests of land owners and users can be reconciled and take joint action^[17], and attention needs to be paid to the concept of balanced redistribution of land rights and interests between government, market and society and the interaction between public power and society^[18]. Therefore, the context of “bottom line governance” not only emphasizes the multidimensional and composite land resource allocation mode and efficient resource allocation efficiency, but also puts forward phased requirements for the governance subjects participating in land resource allocation, which also means that the current governance pattern of land resource allocation in China is facing great challenges.

3.1 Inefficient monopoly of the government

Allocation pattern: Moloch believes that land resource utilization is the source of power for social development, and land resource utilization planning and programming is an important means for local governments to implement economic and social policies^[19]. For a long time, the land resource allocation modeled by the Chinese government has provided a strong driving force for the development of industrialization and urbanization^[20], forming a hierarchical land resource allocation pattern with central government macro-control, provincial government policy transmission, and local government administrative guidance. As a macro subject, the central government reasonably controls the land supply and the necessary land supply regulation through administrative means, thereby affecting the growth elasticity of population land and the land utilization rate, ensuring the spatial demand of foreign capital, so as to promote the decision-making goal of rational allocation of resources. Based on the competition standard, the provincial government implements a relatively loose control of land resources, focuses on the role of policy transmission and innovation, realizes the targeted regulation of land resources, carries out both protection and security, and carries out innovation and exploration.

Local governments are the micro main body of land resource allocation, taking benefits as an important basis for decision-making^[21], and changing the pattern of resource allocation by influencing land prices and land use structure, so as to achieve the corresponding assessment indicators and economic performance goals. The government changes the pattern of land resource allocation through hierarchical policy regulation. If it lacks macro-administrative regulation and relies only on the role of market mechanism, it will lead to the disorderly expansion and vicious competition of urban space, and cause structural imbalance and instability in social and economic development^[22].

Governance dilemma: However, this land resource allocation model based on the perspective of God often leads to blind spots in the effective operation of land resources. Governments at all levels often ignore the long-term planning of urban land resources in the context of “bottom line governance” because of short-term economic goals. Because the management motivation and information of land managers and users are not equal, and government decisions often serve the performance goals other than economic development, the “high cost and low efficiency” allocation of urban land resources is inevitable. The government has long relied on the income from land sales as a source of funding for infrastructure construction, resulting in unreasonable land use structure within the city; for a long time, the contradictions and conflicts between government departments and enterprises have led to the extensive use of a large number of industrial land sold at low prices, and the poor information dialogue has led to a large number of industrial land resources flowing to the inefficient enterprise market; the division of administrative divisions limits the role of market mechanism and makes it difficult to achieve the optimal allocation of land^[23]; there is a lack of standardized management of the land market, and the phenomenon of random reduction and exemption of land prices occurs from time to time. The contradiction between the decision-making goal of the superior government acting on the land quantity and pursuing the maximization of the comprehensive benefits of land

and the development goal of the subordinate government acting on the land price and pursuing the maximization of the economic benefits of land is the main reason for the dilemma of land resource allocation and governance. With the deepening of market-oriented reform, the “economic man” attribute of the government is further intensified, and the “entrepreneurial” government forms a solid interest alliance with developers, placing land resources in a vicious circle of “low price transfer-low efficiency utilization”. In the context of “bottom line governance”, with the depletion of land resources and the comprehensive socialist economic market-oriented reform, the government led land resource allocation model will face a huge impact.

3.2 Inefficient regulation of the market

Allocation pattern: After the short withdrawal of the market mechanism in the early days of the founding of new China, the government is deeply aware that giving full play to the allocation function of market resources is one of the essential characteristics of the socialist market economy. As the main allocation mode of land resources, the market has a profound impact on the adjustment behavior of the main factors. Since the 1980s, the allocation mode of urban land resources has been constantly adjusted with China’s market-oriented transformation, realizing the transformation from the unified allocation of planning to the land transfer system with supply and demand, competition and price as the core mechanism^[24]. On the one hand, the market mechanism realizes the behavioral motivation symmetry between land managers and users by building a bridge of information interaction, and the existence of land rent and land price reduces the probability of land users to idle or waste land through financial constraints. The combination of market led land price signals and government led land quantity signals further improves the efficiency of land management and the decision-making level of relevant departments^[25]; on the other hand, the market mechanism coordinates the differential income of enterprises caused by regional advantages by coordinating the measurement and dis-

tribution of land income, gives land users the power to make efficient use of land resources, and creates an equal competition environment for enterprises. The market mechanism gives full play to its dynamic resource allocation advantages, and promotes the efficient allocation and rational use of land by making up for the defects of government regulation.

Governance dilemma: However, the market mechanism cannot achieve the complete allocation efficiency of urban land resources. First of all, the market’s indulgence in land prices has increased the competitiveness of the land transaction market, raised house prices and land prices with “land” as a competitive chip^[26], intensified the local government’s dependence on “land finance” and “land investment”, affected the government’s land transfer motivation, and then led to the imbalance between supply and demand of land. Secondly, the “land hoarding behavior” of enterprises holding land for sale leads to a certain degree of monopoly in land supply. Taking land as a “value-added means” means that a large number of land exist in the form of open space or low utilization rate, the effective supply of land is reduced, and the land price is further increased^[24]. The excessive market-oriented allocation mechanism places land resources in the vicious circle of “high price transfer-high price supply”. The mismatch of resource supply intensifies the endless contradictions between the government, enterprises and the people, which will affect the orderly operation of the whole society, which is obviously contrary to the spirit of the new era that pays attention to the quality of development in the context of “bottom line governance”.

3.3 Inefficient social participation

Allocation pattern: As a social wealth with value preservation and appreciation functions, there are problems of who owns land and how to occupy it more fairly^[26]. Unlike the government and the market, which focus on the economic benefits of land resources, social forces often participate in the allocation of land resources from the starting point of fairness and justice. Compared with the strength of government policy implementation and the flexibility of market regulation, the main force of socie-

ty in the land resource allocation pattern is slightly weakened, and under the current urban-rural dual structure system, there are differences in the ways in which urban and rural social subjects participate in land resource allocation^[27].

Governance dilemma: Similarly, the participation of urban and rural social subjects in the allocation of land resources also faces different problems. The relevant regulations of the Land Administration Law of the People's Republic of China, "the use right of farmers' collectively owned land shall not be transferred, assigned or leased for non-agricultural construction" restrict the circulation of the use right of collective construction land. The aphasia of the market mechanism makes the unreasonable distribution of economic benefits and other contradictions in the process of land acquisition and circulation under the guidance of the government highlighted^[28], which has promoted the development of the "invisible market" of rural land in recent years¹⁰. A large number of circulation methods such as evading the control of land planning and land management taxes and fees by renting instead of levying have become increasingly fierce. The channels for citizens to participate in the allocation of land resources are more limited. The transfer of land development rights and interests will occur only when the land enters the stage of renewal and development. On the one hand, the serious absence of the role of the market in the allocation of rural land resources has led to the continuous breeding of "invisible" land transactions, making the semi solidified rural land market more passive; on the other hand, due to the unequal information channels, the development and use rights of urban land are directly seized by investment enterprises, and follow the principle of "buy low and sell high" of market economy, which is threatening the personal interests of property owners^[29]. In the process of land resource allocation, under the strong role of the market and the government, the absence of the public participation system further restricts

the development of social equity, and the weak social forces appear to be wavering. The lack of "good governance" attribute of land resource allocation leads to the fierce conflict between personal interests and public interests, the social "bottom line" is difficult to develop well, and spatial governance is in a dilemma.

4. Construct the "three bottom lines" of land resource allocation pattern

In the context of "bottom line governance", facing the requirements of land resource allocation in the new era, China's spatial governance pattern presents imbalances such as the absence of government control, excessive market participation, and the decline of social forces. A series of interest relationship changes and conflicts caused by land resource allocation pose challenges to governance transformation. In the face of the imbalance of the pattern and the reshuffle of land interest subjects and interest relations, spatial governance must change the situation of the inefficient monopoly of the government on resource allocation, the inefficient regulation of the market and the inefficient participation of society. By building the "three bottom lines" of the governance pattern of land resource allocation, we should clarify the core requirements for the governance subjects to participate in resource allocation, improve government efficiency, activate market investment and encourage social participation, to actively respond to the challenges of the bottom line governance period (Figure 3).

4.1 Government bottom line—Delimit the efficiency boundary of control intervention

Land resource allocation, as a spatial control means to meet the needs of social activities and sustainable development by adjusting the spatial distribution of resources and the interests of land stakeholders, has the characteristics of control intervention. The "economic man" attribute and decision-making inclination of enterprises and individuals determine the dominant position of the government in the pattern of resource allocation.

¹⁰ The invisible market for land is the sum of the economic relationships that occur during the flow of land property rights of the type not officially recognized by the state that exists in reality.

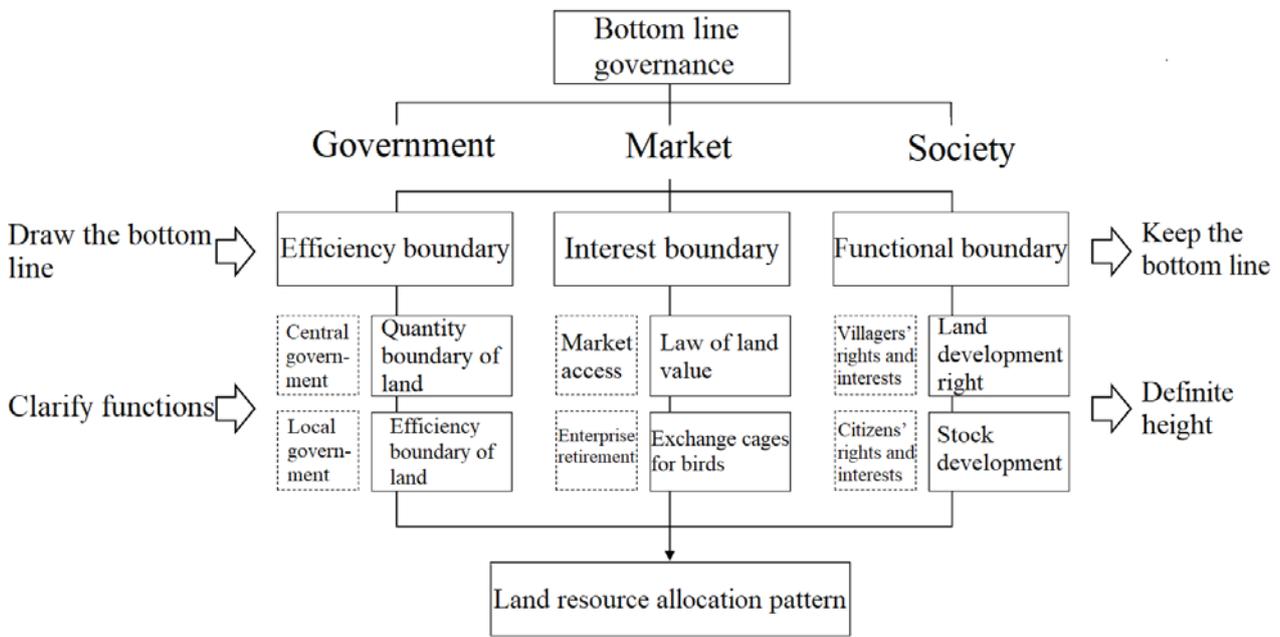


Figure 3. “Three bottom lines” of constructing land resource allocation pattern.

Source: Self drawn by the author

Therefore, as the centralized representative of public interests, the central government first needs to firmly control the “quantitative boundary” of land resource allocation, and gradually set an insurmountable “red line” for the sustainable development of land space on the basis of “1.8 billion mu cultivated land red line” and “urban growth boundary”; secondly, we need to strictly grasp the “quality boundary” of land resource allocation through reasonable control of land supply and necessary land supply regulation, ensure the balance of land use, reduce the proportion of land resource mismatch from the source, and seek to maximize the efficiency of resources.

At the same time, local governments should divest the economic attribute of participating in land management as soon as possible, delegate power appropriately, take allocation efficiency and social benefits as the action criteria for control intervention, and submit the land index formulation process to fair and open social criteria by establishing a series of “transparent” planning and decision-making channels. Repositioning the role of local governments in resource allocation, value neutrality and benefit supremacy are the core guidance for local governments to participate in decision-making. By setting up a planning committee

with multiple-participation, we should strengthen the accuracy of decision-making, and the corresponding judicial evaluation institutions should clarify land pricing and property ownership to limit market monopoly behavior, adhere to the efficiency bottom line of control and intervention, and then give full play to the pivotal function of the government’s macro planning.

4.2 Market bottom line—Clarify the benefit boundary of value adjustment

Existing studies have shown that when local governments deliberately intervene in land transfer due to financial pressure, the role of marketization in regulating local government behavior is more obvious, and the improvement of land allocation efficiency is greater^[21]. At present, a series of preferential policies, such as simplifying examination and approval and lowering the threshold of access, implemented by local governments due to fiscal tightening, have provided favorable conditions for good market development and construction, and the market is facing more open opportunities. At the same time, a wider range of public participation in construction is also a good opportunity to regulate market behavior and clarify the market as a benchmark for the law of land value. The appropriate de-

centralization of government power is conducive to the diversified opening of the market. However, what is more important is that the market itself needs to grasp the interest boundary of participating in the land operation. All market behaviors must be guided by the law of value, clarify the bottom line of market power, and give play to the market value under certain government intervention.

Therefore, while opening up public investment channels as soon as possible, the government should build an open bidding platform, maintain the order of land investment, and limit inefficient enterprise behaviors such as “hoarding land and raising prices” to promote the intensive use of land. Establish a reward and punishment system with clear rewards and punishments, conduct a thorough investigation on land acquisition enterprises on a large scale, find out the allocation efficiency of allocated land, and crack down on monopoly and illegal construction. For example, Shenzhen’s “cage for bird” strategy, through the matchmaking of government departments at all levels, the establishment of secondary market platforms and other measures, establishes a “forced + incentive” working mechanism, and vacates zombie enterprises that can no longer operate. At this time, the market will no longer be a vested interest in land development, but a mediator who adheres to the interest boundary of value regulation and plays the role of a flexible coordination platform.

4.3 Social bottom line—Broadening the power and function boundary of public participation

For the vast rural areas, the implementation of collective operating land into the market has strengthened the participation of the market mechanism. The increase in the freedom of land transactions can promote the overall allocation of urban and rural land resources to a certain extent, and the collective interests of villagers can be guaranteed. However, the impact of commercial land on the market is limited, and the scale of collective land transactions is very small. It is difficult to continuously protect the public rights and interests of social subjects only by virtue of policy opportunities ra-

ther than mechanism reform. For urban areas, in the development process of stock space, we need to realize that the ultimate goal of maintaining public interests is Pareto optimality¹¹ rather than Kaldor optimality¹². We should not only pursue the optimization of the overall interests of the society, but also protect individual interests.

Therefore, the urgent task is to broaden the power boundary of public participation and build corresponding public participation channels according to local conditions. Build a unified land transaction negotiation procedure in rural areas, protect the economic interests and public rights and interests of villagers in the form of agreement, set up a community autonomy mechanism in cities, and let the land use right holder assume part of the governance functions, and expand the channels of public participation through hearings, network platforms, data monitoring, public opinion surveys, etc., so as to strengthen the organizational foundation of public participation. The government must create governance awareness that social equity is higher than economic efficiency, set up an open, flexible and multi-channel public participation and coordination mechanism, alleviate the contradiction between personal interests and public interests, and promote long-term social stability.

5. Conclusion

The allocation of land resources in Chinese cities in different periods reflects the specific socio-economic background and the choice of endogenous governance mode. It always evolves with the alternation of China’s socio-economic system and land system. From the planned economic system to the socialist market economic system, from “planned governance” to “bottom line governance”, affected by the social structure and ideology of different historical stages, the land resource allocation pattern often shows specific characteristics of the

¹¹ Pareto optimality, which is a change that does not reduce the welfare of any member of society on the basis of an increase in the welfare of at least one member of society.

¹² Kaldor optimality, by definition, improves overall efficiency if one person’s situation is better as a result of the reform, so that it compensates for the loss of another person and there is a surplus.

times, and the governance logic behind it also shows obvious phased differences. In response to the needs of the times for the modernization of the national governance system and governance capacity, China's current land resource allocation model should convey the will of "bottom line governance", take land as the medium to coordinate the development of the "bottom line and height", and emphasize the bottom line management and control role and overall planning function of land resources. Therefore, different resource allocation and governance subjects are facing the transformation of governance thinking. This paper believes that the first thing to clarify the bottom line of urban development is to clarify the bottom line of governance. It proposes to delimit the functional boundaries of the three main bodies of government, market and society in the process of land resource allocation by constructing the three bottom lines of land resource allocation pattern, emphasize the spatial governance mode of government, market and society, and take advantage of the spatial allocation of land resources to strengthen the role and efficiency of governance, try to provide useful suggestions for the future planning system design.

Land resource allocation is a grand topic, which is not only related to the efficiency of resource allocation in economics and the governance logic of politics, but also closely related to the distribution of power in law and the spatial governance of urban and rural planning. This paper only analyzes this grand topic based on the governance dimension, and there is still a lot of research space to be studied. However, no matter from which angle, we should recognize that the core of land resource allocation is a material contract to ensure the orderly development of society, and urban planning should play a role on the basis of public interest and arrange land space with reasonable grounds. At any time, social interests should become the core "bottom line" and original intention maintained by all construction activities.

Conflict of interest

The authors declare that they have no conflict of interest.

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