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The Modern Transformation and Governance Value of Traditional Township Agreements in Ethnic Regions—Empirical analysis based on the Jinxiu Stone Plaque Law

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Abstract: Based on the traditional village covenant culture and the law of Jinxiu Stone Card, this study explains the importance of traditional village covenant and provides reference for the modern transformation of traditional village covenant. From the two aspects of grassroots governance and cultural inheritance and accumulation, explore the path of promoting the modernization of grassroots governance through township contract governance, and finally achieve the purpose of fully tapping the cultural value of township contract and improving its applicability in rural governance.

Keywords: Shipai Law; Village Rules and Regulations; Governance

1. Research background and significance

Traditional village rules and conventions in ethnic areas often play a more effective governance role than "national laws" in maintaining traditional local social order, standardizing rural social behavior relations, and mediating conflicts and disputes among villagers. In the period of modernization transformation, it is difficult for the rules constructed by the state to effectively exert the effectiveness of grass-roots social governance, absorb the intellectual wisdom of excellent traditional culture, reshape the contemporary value of traditional social rules, promote the modernization of grass-roots governance system and governance capacity, and realize the important choice of rural revitalization. The modernization of the grass-roots governance system and governance capacity constitutes a key part of the modernization of the national governance system and governance capacity. Promoting the modernization of grass-roots governance rules has become a necessary part of the modernization of grass-roots governance system and governance capacity. Rural governance not only affects rural social stability, economic development, and farmers' quality of life, but also directly involves the improvement and modernization of the national governance system[1].It can be seen that the traditional social rules of rural society have practical significance in implementing the needs of national governance, responding to the call of national policies, and promoting the modernization of governance system and governance capacity.

"Shipai Law" of Jinxiu Yao Autonomous County, as a typical traditional township contract in Yao

area, has been well protected and inherited, and plays an important role in rural governance. This project is committed to excavating and explaining its cultural connotation and governance value, exploring the mechanism and conditions for its transformation from tradition to modernization, so as to achieve the purpose of "effective governance" and modernization of rural governance. At the same time, this project is expected to summarize the common rules from the personality, excavate the universal value of the traditional township contract in ethnic areas, and promote the application of its internal governance logic, so as to provide scientific rational thinking for promoting the in-depth construction of "township contract", improving the grass-roots governance system and enhancing the grass-roots governance capacity. In addition, through the interaction and game between the social subjective force and the national dominant force in the modernization process of "traditional township contract", we can deepen the understanding of the theoretical understanding and operation mechanism of the relationship between the state and society. From this perspective, it has certain theoretical significance to analyze the modern transformation and governance value of traditional township contract.

2. The research method, the basic situation of the research place and the research object

2.1 Research method

2.1.1 Text analysis

This study collected information on the "Shipai Law" text and village regulations through various methods, and analyzed the obtained "Shipai Law" text. Through comparison, it was found that the "Shipai Law" had evolved in terms of content, form, and other aspects, with the most significant change being the "Punishment Regulations". The old version of the Shipai Law punished those who violated the regulations in various aspects such as personal life, property, and freedom, while giving the highest power to the Shipai leader to decide life and death. The new version of the Shipai Law deleted the punishment for personal life and freedom, and replaced it with punishment methods such as moral education and participation in public services. By comparing the new and old content of the Shipai Law with other texts, the goal is to achieve a comprehensive and essential understanding of it, providing objective and scientific support for in-depth research on the modern transformation of the Shipai Law.

Table 1: Partial Stone Tablet Law.



2.1.2 Questionnaire survey method

In order to clearly understand the current situation of "Shipai Law" in Jinxiu, the basic situation of its inheritance and development, and the difficulties it is facing in its subsequent development, the author carried out a questionnaire survey in three tun areas by combining network filling with actual filling, relying on relevant institutions and questionnaire network systems in Jinxiu. There were 265 people in Mentou Village, 200 people in Liuxiang Village and 152 people in Liujiatun. 502 questionnaires were collected in total, 350 were effective, and the effective rate was 69.72%.

2.1.3 Interview method

According to the previous questionnaire survey, the current situation of "Shipai Law" has been understood as a whole. Firstly, through the combination of telephone interview and face-to-face interview, I have had good interaction with local grass-roots government staff, village branch secretaries, Shipai leaders, villagers, etc., so as to obtain valuable first-hand information, which provides powerful original materials for this study. Then through the analysis of the interview materials, focus on the analysis of the practice cases of "Shipai Law" in local rural governance, truly reflect the value of "Shipai Law" in local governance; Finally, the research report framework is constructed based on the analysis of data.

2.2 Basic information of the research site

2.2.1 Liuxiang township Mentou village overview

Mentou Village is located in the main mountain range of Dayao mountain Jinxiu Yao Autonomous County Liuxiang Township, a Huaxanyao village, adjacent to Wangtong village, Qingshan village, Daling Village, Liuxiang village, Xiaguchen village, belonging to the Guangxi Jinxiu Yao Autonomous County Jinxiu Town Liuxiang Township under the jurisdiction of the village, according to the local secretary introduction, the whole village of about 265 people. Near Mentou Village, there are Jinxiu Lianhua Mountain, Jinxiu County Shanshui Yaocheng scenic spot, Shengtang Mountain and other tourist attractions to promote the development of local homestay; Jinxiu black tea, Dayaoshan sweet tea, Jinxiu gypenoch tea and other Jinxiu special products increase the income of local residents; In addition, there are Jinxiu Yao wedding customs, Jinxiu Yao medicine, Hongmen festival and other folk culture.

The site of the famous sociologist Fei Xiaotong's social investigation of Hua Lanyao is set up in the village. At the same time, there is also a Chinese Hua Lanyao Museum in the village, which displays the related folk relics of Hua Lanyao, vividly telling the development history of Hua Lanyao and the unique traditional culture of Hua Lanyao such as funeral and marriage customs. As a well-preserved village with Shipai culture, Mentou Village was named the second batch of "Chinese Ethnic Minority Villages" by the State Ethnic Affairs Commission in 2017. Moreover, Mengtou Village has a history of more than 400 years, and the Yao stone plaque culture preserved in it has irreplaceable uniqueness, high research value and large space.

At present, the Jinxiu County People's Court Association and the village committee of Mentou Village are trying to build a "demonstration village of national unity without litigation", build a new pattern of social governance of "Party and government leadership, the main focus of the court, the

linkage of departments, social coordination, stone plate first, Yao old discussion, national unity, and promote development", continue to inherit and innovate the "stone plate culture", and extend the tentacles of "no litigation" to the villages of Yao Township. In addition, the People's Court of Jinxiu Yao Autonomous County, through communication with the Party committee and the government of Liuxiang Township, the township comprehensive governance center, the police station, the judicial office, the people's mediation organization, and the grassroots mass autonomous organization, jointly organized and guided the villagers to go through the democratic resolution process, formulated the "New stone card Law", fully activated the rural mediation resources, and provided great help to standardize the production and life of Yao villages.

2.2.2 Liuxiang Township Liuxiang village overview

Liuxiang Village is located in Liuxiang Township, Jinxiu County, Guangxi, is the township government seat of Liuxiang Township, 96 kilometers away from the county seat, adjacent to Dazhang Township, is a Huaxanyao minority village. According to the local secretary, the village covers an area of about 38 mu, and the village has about 200 people. The questionnaire survey data shows that the education background of the villagers in Liuxiang village is mainly concentrated in junior high school or below, and the villagers' cultural level is low on the whole. The main source of income for the villagers of Liuxiang village is ginger, star anise, welfare forest compensation, etc. The basic infrastructure of the village is perfect, the road in the village is installed with solar street lights, the scenery around the village is beautiful, the climate is pleasant, the ancient trees can be seen anywhere near the village, the traditional ethnic culture, folk customs and style of the village are well preserved.

Liuxiang Village is rich in mineral and water resources, including 35% manganese Simanganite with a reserve of about 20,000 tons, 96% Daling quartz silica ore with a reserve of more than 100,000 tons, and Gubu Ao oxide iron ore. There are two large rivers in the township, with 69,200 kilowatts of water resources reserves and 45,738 kilowatts of installed water resources. The village mainly planted pine, fir, bamboo, star anise, ginger, trichosanthin and tea and other native products. The Yao population in the village accounts for 52% of the total population of the township, mainly Ao Yao, Pan Yao, Hua LAN Yao, Shanziyao four ethnic subdivisions, the world famous scholar Fei Xiaotong once said: "The world Yao culture research center in China, the Chinese Yao culture research center in Jinxiu, Jinxiu Yao culture research center in Liuxiang." Thus it can be seen that Liuxiang Village has great research value for Yao's grass-roots village governance.

2.2.3 Overview of Liujiatun in Changdong Township

Changdong Township is located in the hinterland of Dayao Mountain, located in the southwest of Jinxiu County 28 kilometers, there is a JinLuo highway from the township government seat through. The township is bordered by Jinxiu Town in the north, Luoxiang Township in the east, Liuxiang Township in the south and Dale Township in Xiangzhou County in the west. Changdong Township has ancient geology, complex terrain, gorgeous scenery and charming scenery, and extremely rich tourist resources. Among the five Yao clans in Dayao Mountain, Changdong Township has four clans: Chashan Yao, Shanziyao, Panyyao and Hualangyao. Liujiatun of Changdong Township is surrounded by mountains

and is located in a valley among the mountains. The river flows through the bottom of the valley. The local Yao people build houses on both sides of the river. The local Yao culture is rich and colorful, such as holding Yuntai jumping, climbing the knife mountain, crossing the fire and other stunts. The unique Yao customs and culture, the mysterious Yao folk skills and the mild climate have become extremely valuable tourism resources in Changdong Township. At present, the magnificent Shengtang Mountain, the highest peak in central Guangxi with an altitude of 1979 meters, has been developed into a famous tourist mecca in Guizhong: the colorful drop river rafting and the ancient mysterious ancient Zhan folk customs tourism attract a large number of tourists every year.

In recent years, Octagon has developed into a local leading industry, according to statistics in 2002, the township with scientific methods to the Octagon low change area has reached 20,000 mu, that year, a single Octagon per capita income of farmers reached 1720 yuan, and now has become the main source of income for local farmers. In addition, the township government also guided the masses to vigorously develop short, flat and fast projects such as sweet tea, ginger, spiritual vanilla and gyllenus, forming a good pattern of leading industrial scale development and common development of other economic projects in the township.

It is worth mentioning that under the big Banyan tree in Liujiatun is an important place for villagers to rest and talk after work, and the bulletin board beside the big banyan tree has also become an important source for villagers to understand the village rules and local policies. In May 2021, Changdong Township Party Committee propaganda team went deep into Changdong Village Liujiatun to carry out the theme of party history learning propaganda, and 20 Party members and the masses of Liujiatun Party branch sat under the big banyan tree to listen to the party history story and promote the party history learning and education into the village. At present, most of them are middle-aged and elderly, and most of the young and middle-aged labor force rely on migrant work as a source of income. Despite living in remote mountainous areas, the local Yao people still work hard and earn their own living, maintaining the local folk customs of kindness and simplicity.

2.3 Research object

Table 2: Basic information of the interviewee.

interviewee	Interview content
Government staff	<ol style="list-style-type: none"> 1. The embodiment of the content and spirit of Shipai Law at this stage, its core and its concrete embodiment 2. Attitude and views on the role and effect of Shipai Law Firm at this stage 3. Discuss the future development trend of Shipai Law according to existing policies and laws
First secretary	<ol style="list-style-type: none"> 1. Basic situation of the village 2. How does Shipai Law play a role in rural governance 3. The role played by the village committee in the process of formulation and implementation of the Shipai Law or the

	township regulation covenant
Stone leads people	<ol style="list-style-type: none"> 1. How to become a stone leaders person 2. Specific cases of successful mediation of villagers' conflicts and disputes through the application of Shipai Law in rural governance 3. As a Shipai leader, the relationship or contact with the village committee and the township government
Local villagers	<ol style="list-style-type: none"> 1. The villagers' real living conditions and understanding of Shipai Law 2. Solutions to conflicts and disputes in daily life 3. Attitude and opinion on Shipai law

3. Research on Jinxiu Dayaoshan traditional village covenant

3.1 The evolution of Jinxiu's "Stone Card Law"

3.1.1 The rise and fall of traditional stone card law

The development track of traditional Shipai law in Jinxiu is rising - leading - declining, such an "inverted U-shaped" curve change. Stone plate is a unique form of social organization of Yao people in Dayao Mountain, Jinxiu, Guangxi. According to the Yao experts at home and abroad, the traditional stone plate law of Jinxiu has already appeared in Ming Dynasty. In the early Ming Dynasty, the Yao people moved into Dayao Mountain to avoid the war. After the Yao people entered Jinxiu Yaoshan, the law of Shipai was an agreement made by the Yao people to maintain social order and production order and protect production and life, which was engraved on stone plates or copied on paper and wood for everyone to follow. When the feudal ruling forces failed to play a real role in Jinxiu Yao Mountain, the local Yao people spontaneously organized and formed a system combining politics and law, and used it to restrict and regulate people's behavior. From the Ming Dynasty to the 1930s, Shipai law has replaced the feudal ruling forces in the past dynasties and played a dominant role in Jinxiu Yaoshan.

As a civil autonomy system, Shipai law is the product of the failure of the state power law to exercise its function in Dayao Mountain. Once the state power law goes deep into it and plays its role, Shipai law will lose its realistic foundation of existence. During the 1930s and 1940s, the Kuomintang used force to "civilize" Dayao Mountain, and the living environment of traditional Shipai law suffered great damage. In addition, in 1933, the Kuomintang began to establish a rural Baojia system in Jinxiu Dayao Mountain. All kinds of disputes were resolved by township heads and village heads, and major cases were tried by county governments.

3.1.2 The historical role of traditional stone card law

After 1940, although Shipai Law existed in name only, it gradually disintegrated and collapsed, and

was replaced by the feudal rule of the Kuomintang, but as a national legal cultural tradition, it has been carried on for hundreds of years in Jinxiu Yao society. The Yao people are deeply impressed by its primitive democratic color and its important role and influence on the order of production and life of the Yao people, social security, and the stability of marriage and family life. The Yao people have always consciously restricted their behavior with stone plate rules and regulations, and the stone plate spirit has penetrated into the production activities and social order of the Yao people so far.

In maintaining the order of production and life:

Jinxiu Dayao Mountain is mainly mountainous, generally high elevation, steep terrain, and dense forest in the mountain. The Yao people living in Dayao Mountain adopted the slash-and-burn farming production mode in this environment. Therefore, the provisions on the protection of production in Shipai are mainly based on the division of mountain forest boundaries and the protection of mountain cash crops. The traditional Shipai law not only protects the legitimate rights and interests of individuals, but also provides a basis for the mediation of the mountain forest disputes of Yao people on the basis of avoiding or reducing the disputes in the mountains and fields, so as to promote the harmonious coexistence of villages and villagers and ensure the smooth progress of production. At the same time, they also maintain the crops that the Yao people rely on to survive and ensure that they are fed and clothed in the harsh living environment. In addition, Shipai law can also regulate the order of economic activities of traders and hawkers, ensure the exchange of equal value in economic activities, and enhance the credit concept of all Yao people.

First of all, in terms of mountain and forest boundaries, the Shipai Law clearly stipulates that it is not allowed to infringe on other villages, other people's fields, DAMS, mountain boundaries and land, and it is not allowed to cause trouble in other people's land boundaries, and it is strict to protect undeveloped mountain and forest boundaries, and if there is a violation, it will face a huge monetary punishment.

Secondly, in terms of production protection, for the villagers of Jin Xiu, production and farming is the life of most people, so the Law of Shipai also has strict provisions on production protection, such as not destroying farmland, not stealing other people's crops, not burning mountains, destroying mountain fields, forests and ditches, etc., which has been found to be regarded as a major law and a major crime.

Finally, in terms of maintaining the order of economic activities of traders and hawkers, the law of Shipai also focuses on maintaining economic order, and has relevant provisions in terms of food safety. For example, in 1822, the stone plate of the three villages of Mentou, Xialing and Huangsang clearly stated that sick pigs and dead pigs should not be sold, and violators should be severely punished; In addition, there are provisions on the sale of land in the law of Shipai, for the negotiation of the purchase/sale of land, if one party temporarily renege, it is necessary to compensate the corresponding amount to the other party.

3.1.3 The emergence and development of new Shipai law

In 1951, the Chinese People's Liberation Army successfully completed the task of suppressing bandits in Dayao Mountain, and the Yao people were liberated. Approved by the Government Administration Council of the Central People's Government, Dayaoshan Yao Autonomous Region was formally established on May 28, 1952, and was renamed Jinxiu Yao Autonomous County with the

approval of The State Council in April 1966. After the liberation of the whole country, the Yao people gained a new life, and the new life of Jinxiu Dayaoshan people after liberation provided an opportunity for the generation of new stone plates.

In 1951, during the central delegation to Dayaoshan sympathy, the people's government held a stone plate meeting in the whole of Yaoshan, and with the help of the central delegation, the people of all ethnic groups in Yaoshan signed a stone plate form to promote national unity and liberate productive forces as the goal of Dayaoshan Unity Convention. The first new stone plaque in Dayaoshan, represented by the Dayaoshan Solidarity Convention, promoted the establishment of new stone plaques in each village from the 1980s to the 1990s that were adapted to their own development. For example, the Mentou Village Village Rules and Regulations formulated in March 1982, the Liujia Village Village Stone Plate formulated in June 1990, and the Liuxiang Village Village Rules and Regulations formulated in May 1999, etc.

Entering the 21st century, the Shipai law established in the early period is difficult to adapt to the development of social productive forces and changes in social life. In order to make better use of the traditional governance resources and explore the governance form suitable for the socialist modernization rule of law, the new Shipai law, which has the significance of The Times and governance value, came into being. In recent years, the Party Committee and government departments of Jinxiu Yao Autonomous County, adhering to the concept of promoting ethnic unity, stabilizing social order and developing local production, have organized meetings in various villages and towns, and the heads of resident households have discussed and revised the Shipai Law through the democratic resolution procedure, which has been passed by the grassroots government, reviewed by the judicial department, voted by the villagers' assembly and promulgated and implemented. Formulated the "new stone card law" to adapt to the development of the new era. Jinxiu Dayao Mountain formulated the new Shipai Law as the specific rules for the village to maintain production and life and ensure social order, and integrated the village conflict and dispute management work through the establishment of platforms such as the "Yao Lao Tong" mediation team, the "New Shipai Law" mediation room and the non-litigation Yao Village judge's studio, taking the resolution of conflicts and disputes as the starting point, continuing to inherit and innovate the "Shipai culture". Together with the social forces represented by the Shipai Organization, they are striving to create a new pattern of social governance that integrates national autonomy and the rule of law, aiming to promote socialist core values, and escort the safe countryside and rural revitalization and development, among which the "New Shipai Law of Mentou Village" formulated in 2022 is the most representative.

3.2 The change of Shipai law and its reasons

3.2.1 Shi Pai law changes in content

After the founding of the People's Republic of China in 1949, Shi Pai law made new changes on the basis of the traditional Shi Pai law and began to glow with its vitality. Compared with the traditional Shipai Law, the new Shipai Law in the 1980s and 1990s reflected the firm commitment to the leadership of the Communist Party of China in terms of specific content, which not only involved a specific content in the life of the Yao people, but also increased the morality, health and constraints on the Shipai people

closely related to people's lives according to local conditions. At the same time, the new Shipai Law on the right to deprive of life and health has been abolished, but the economic punishment still exists in the form of heavy to light, which is undoubtedly in conflict with the national law is somewhat, but also laid the foundation for the further development of the new Shipai Law after entering the 21st century. In addition, the stone people of this period were elected and had a certain democratic character. In general, the content of the new Shipai Law is detailed, easy to understand, strong operability, and has the characteristics of modernity.

After entering the 21st century, the new Shipai Law is very different from that of the 1980s and 1990s. With the steady development of society and economy, Jinxiu grassroots government cooperated with Shipai leaders to further modify the law, which mainly focuses on environmental protection, village construction, rural culture, production development, marriage and family, and closely follows national policies and policies. Focus on ecological environmental protection and domestic violence and other emerging issues, adhere to the innovation, reflecting the modernization of the new Shipai law content. At the same time, the new Shipai Law eliminates economic punishment, focuses on education and moral education, and conducts self-government in a more reasonable and legitimate way within the scope authorized by law. To a certain extent, it solves the problem of treating symptoms rather than root causes caused by economic punishment, which is not conducive to conflict mediation and is easy to leave a gap in the minds of villagers, reflecting the modernization of the local Yao people's legal consciousness. It will play a positive role in promoting modern grassroots social governance.

3.2.2. The change of Shi Pai law in form

Any norm needs to use a certain form to better convey its content, and the changes in the form of Shipai law are mainly reflected in the expression, structure and language. In the way of expression, the new Shipai law retains the ancient way of showing stone cards, so that the stone card law has local ethnic characteristics. In the expression structure, the new Shipai law uses a variety of serial numbers such as "one, two, three" to distinguish different contents, and each content is specifically divided into details, reflecting the new Shipai Law is more logical. In terms of expression language, it is the most intuitive that the new Shipai Law, expressed in classical Chinese, is transformed into the expression form of Chinese characters. The new Shipai Law is generally reflected in formal and official language, which is closely related to daily life. Although the content of Shipai Law has a strong folk color, However, the "political and legal departments", "village committees", "Party members and leaders" and "opposition to domestic violence" in the Shipai Regulations all reflect that they have modern characteristics.

3.2.3 Shi Pai law changes in the main body

In the process of applying Shipai law to grassroots governance, the roles of relevant actors have also changed. Villagers occupy the main position in the process of applying the new Shipai law to rural governance, and are the participants and important forces of rural governance, realizing the transformation from "being managed" to actively participating in management activities. As defenders and defenders of the rural governance order and practitioners of the new Shipai Law, Shipaitou people realize the social governance goal -- protecting the interests of villagers through the unified power of

villagers, and play a coordinated and integrated role in rural governance, thus maintaining the rural governance order and showing the vitality of sustainable development of rural governance in the new era. As the center and leader of rural social construction, village committees and township governments play their leading role, mobilize and guide other social forces to participate in public affairs, absorb various social organizations and non-governmental organizations to become public service providers, make up for the "market failure" and "government failure" caused by the government or the market as a single subject to provide public services, and meet public needs. On the basis of providing public services for rural society, improve the quality of public services and implement effective public management.

In general, the post-21st century Shipai Law is more contemporary and modern, combining the characteristics of ethnic areas, adapting to socialism with Chinese characteristics in the new era, realizing the effective integration of rule of law, autonomy and rule of virtue, and promoting the construction of a new pattern of grassroots social governance in the new era.

3.2.4 The reason for the change of new Shipai law

Since the beginning of the 21st century, under the influence of China's gradually increasing comprehensive strength, greatly improved economic development, gradually prominent status of ecological civilization construction and implementation of the western development, Jinxiu County has been committed to building brands such as "World Yao City Health Care Jinxiu", "China Green Capital" and "Southern Yao Medicine Capital". Actively develop tourism with local natural scenery and intangible cultural heritage as its characteristics, so the formulation of Shipai Law began to integrate into the requirements of political, economic, cultural, ecological and environmental protection in the process of national development.

At the same time, with the implementation of basic education, the cultural level of Jinxiu area has been further improved. According to the questionnaire survey of this project, 71.43% of the respondents have a junior high school education or below, and 14.29% have a senior high school education or a secondary school education. The improvement of their educational level makes it easier for local Yao people to understand the spiritual connotation of "governing the country according to law", further improve their legal awareness, and change their ideological concepts. In the process of participating in the formulation of the Shipai Law, the punishment method of touching the national legal boundary was naturally eliminated, making the Shipai Law adapt to social development.

In addition, due to the incomplete development of social forces in our country, the status of government subjects is higher than other subjects, and they are still in the central position in rural governance. Although the Shipai organization represented by the Shipai head has played an indispensable role in mediating the trivial disputes of the Yao people's production and life, it still needs the help and support of the grassroots government in some aspects involving relatively serious disputes or requiring large amounts of funds for infrastructure construction. However, the grassroots government cannot do everything in the lives of the Yao people. When it comes to matters that the government is unable to manage, or that villagers are willing to settle privately, the new Shipai Law complements the absence of national government management. Therefore, the grass-roots government, the Shipai

organization represented by the villagers in the region, and the village "two committees" as a bridge between the two can steadily promote the modernization of social governance and build a new pattern of grassroots social governance.

3.3 The governance value of the new "Stone card law" is presented

Through field investigation, it is found that the new "Shipai Law" still plays a positive role in the governance of modern rural society. It plays an important role in marriage and family relations, social production and life, regional ethnic integration and other aspects, and is a necessary supplement to the grassroots social governance of modern society in Yao area.

3.3.1 The governance value of promoting harmonious marriage and family relations

In the Yao area, folk conventions play an important role in the social life of the Yao people. Jinxiu grass-roots government, in combination with the provisions on marriage and family in the local new Shipai Law, actively pairs with the Shipai people in the Yao villages, borrows the prestige of the Shipai people in the village, invites the Shipai people to participate in the mediation of conflicts and disputes, and explores new ways to resolve conflicts. In this way, the government has realized the change of villagers' concept from "family dirty laundry should not be aired in public" to "find the government if there is anything wrong", which makes the mediation of family disputes achieve twice the effect with half the effort, and effectively promotes the harmony of marriage and family relations among local villagers, as can be seen from the cases collected in the investigation of this project:

[Case 1] On April 30, 2021, Jiang Mou, a villager in Qingshan Tun, Pingmeng Village, Changdong Township, reported that he was beaten by his ex-husband Ling Mou. The original Ling mou want to remarry, Jiang Mou to Ling personality can not live together on the grounds of refused. Ling heart is unwilling, beat Jiang Mou. After understanding the situation, the police station invited the village "stone card man" Jiang Changliang to the scene to participate in mediation, with the law and "stone card law" of the two things to mediate. Finally, the two sides successfully mediated.

[Case 2] At 11:00 PM on June 10, 2022, grid worker Jinli called the police, saying that Pang Mou, a villager in Pingdao Village, Changdong Township, beat his wife Feng Mou after drinking. After receiving the alarm, the police immediately rushed to the scene, while contacting the local Yao old together to mediate. Because both sides are Yao people, the police immediately according to the "peace is precious", "marital love", "family harmony" and other provisions on the law of Stone, to tell them the importance of marital love and the harm of drunk trouble, hope that Pang Mou correct mistakes. After the police and Yao old mediation persuasion, the husband and wife said in the future will communicate more and more exchanges, a good life.

3.3.2 Governance value of resolving

In Yao villages in specific areas, the villagers' production and life are relatively dependent on natural resources such as mountains and forests, and the villagers are prone to conflicts and disputes due to these production and living means closely related to their immediate interests. The role played by Xinshipai Law can be well reflected at this time. In the process of mediating disputes in mountains and

forests, villagers have a high degree of trust in the local elders, Shipai leaders and Shipai law, so the villagers are also very convinced by the result of resolving disputes through the new Shipai Law, which effectively promotes the harmonious coexistence among villagers and maintains the harmony and stability of local social life.

[Case 3] On February 21, 2023, Wenfengtun Li Mou of Mentou Village reflected to the judicial Office that two anise trees planted there were destroyed, the two anise trees were old, the harvest was good, and they died after being destroyed, and the loss was large. After asking the villagers, they learned that it was Wang Santun Hu and asked Hu to compensate for their losses. Liuxiang Judicial Office accepted the case and quickly carried out the relevant investigation work, in order to further resolve contradictions and disputes, Liuxiang Judicial Office jointly with Jinxiu County People's Court, Liuxiang Township Forestry Development Service Center and Mentou Village mediator, organized both parties to go to the scene for mediation. After the on-site staff do a good job of the ideological work of both sides, they make full use of the provisions of the "New Shipai Law" on rural civilization "neighborhood harmony, mutual help" and production development "each mountain, each boundary, shall not cross the boundary" to mediate, hoping that the two sides will understand and compromise. After some mediation, the two parties reached an agreement, to Hu a field as a starting point, to Li a woodland 5 meters as the boundary, the two sides shall not cross the boundary planting, shall not interfere with each other's production, Li also gave up the demand for Hu compensation, the two sides signed a mediation agreement on the spot, the dispute was successfully resolved.

3.3.3 Governance value of promoting integration among ethnic groups in the region

In Yao villages, "door-to-door" is seen as embodying the virtues of loyalty, filial piety, benevolence and justice, respecting the elders of the same ethnic group, and taking into account the rise and fall of the nation, which is a very common phenomenon. Other ethnic groups may have a different understanding of door-to-door from the local Yao people, which inevitably leads to friction between villagers. As for the contradictions and disputes between the people of all ethnic groups due to the differences in folk customs and folk customs, the Jinxiu grass-roots government takes the initiative to explore the multi-dimensional dispute resolution working mechanism, regards resolving contradictions and disputes as the key to enhancing national unity, and makes full use of the "Shipai Law" to resolve the contradictions between the people of all ethnic groups according to the traditional culture of the Yao ethnic group in Dayao Mountain and the traditional customs of handling contradictions and disputes in the village. The governance value of promoting inter-ethnic integration and maintaining local ethnic unity can be seen from the following cases:

[Case 4] In August 2022, the police station received a report that two people were fighting in Triangle Tun, Changdong Village. After the police came to the police to ask the situation that the party is another party Li Mou's niece husband, plate a surname Li home, commonly known as son-in-law. On the same day, plate and Li Mou and other people at home for dinner, Li Mou repeatedly mentioned "door" "inverted door" such words. And plate has been more concerned about his "door to door" son-in-law's identity, so that Li Mou looks down on him, the two sides dispute, and cause physical conflict. After understanding the situation, the police invited the village "stone man" to participate in mediation, using

the stone law of the Yao nationality and combining relevant legal knowledge, to the plate and Li Mou Ming law, understand the reason, inform it to about, in the popularization of equality between men and women and the two ethnic branches of the "door" different understanding of the national cultural differences, plate and Li Mou are aware of their mistakes, the two sides shook hands and made peace, Get back together.

3.4 Jinxiu Shipai Law is facing difficulties and reasons at this stage

Through field investigation and analysis of questionnaire and interview data, it is found that the new Shipai Law promotes marriage and family relations and harmony internally, resolves social production and life contradictions externally, and promotes ethnic integration in Yao areas in general, which is an important part of grassroots social governance. However, at present, the new Shipai Law is still in the period of pilot implementation, due to the short construction time, slow organizational development, lack of mechanism construction and other reasons, there are still some shortcomings in the new Shipai Law, which are reflected in the development momentum, implementation effect, publicity and other aspects.

3.4.1 The dilemma that Shi Pai law is facing at this stage

The internal driving force of Shipai Law's development is limited and the policy implementation is not guaranteed.

Through the collation and research of the interview data, it is concluded that in the early 21st century, due to the lag of its content, the Law of Shipai was out of touch with the modern society in the process of use, and due to this disconnection, the Yao people's trust in the law of Shipai decreased. As a result, the new Shipai law did not play a role in a long period of time or was used intermittently.

At present, the inheritance and development of the new Shipai law mainly comes from the policy promotion and leadership of the local government in Jinxiu, which leads to the problem of insufficient internal power for the development of the new Shipai Law. The development of the new Shipai Law simply relies on the thrust of the government. Other subjects related to the new Shipai Law, such as villagers, Shipai leaders, and Shipai organizations, lack participation and contribution, and do not form an internal logic of self-metabolism, which makes the development of the new Shipai Law fall into the dilemma of insufficient internal power. Secondly, the local government's policy promotion of the new Shipai law lacks the protection of legal policies and corresponding mechanisms. First, the legitimacy status of the new Shipai Law needs the affirmation of legal policies, and the legal theory of its playing a role in grassroots governance effectiveness needs to be supplemented. Second, the supervision mechanism of the local government for the construction of the new stone card law is absent, and the construction, actual operation and implementation of the stone card law, and the development of the stone card organization lack the corresponding information collection and feedback mechanism. The following is the interview data collected:

"Before it was a project, at that time because of the recovery period, so it was a positive and a deputy." However, it was later found that the treaty in the Stone card law did not match or even disjointed with the real society, it was relatively fixed, did not meet the reality, not enough norms, such

as stealing a chicken to fine 20 yuan, which was feasible before, but now, the actual price of a chicken is more than 80 pieces, so there is no binding force, so there was a time when the Stone card law was just like hanging there. It doesn't work, it doesn't keep up with social development, and villagers don't think these treaties are practical." (Jinxu Yao Autonomous County Jinxu Changdong Township six jiatun front stone card leader, male, according to interview data)

It is also being preliminarily planned. Originally, it was also a matter at the village level, and an organization was set up to mediate local conflicts and disputes, which were generally not handled in the county. If it is serious and cannot be reconciled, it will be dealt with in accordance with the law. (Jinxu Yao Autonomous County Jinxu Changdong Township six jiatun front stone card leader, male, according to interview data)

Local attention to Shipai law and publicity is insufficient.

Through the study of the interview data, we found that the frequency of the use of the new Shipai Law in rural governance in some areas has decreased in recent years, and the local Yao people, especially the middle-aged and young residents, have a decreased understanding of the basic situation of Shipai Law.

First of all, the main reason for this situation is that Shipai Law was ignored in the early local grass-roots management, and there was a phenomenon of absence for a long time, and the image of Shipai law was diluted by residents. Secondly, the local grassroots government and stone brand organizations have weak publicity efforts for the new stone brand law, little investment, lack of appropriate resources and support, and the new media platform publicity skills of the publicity agencies are lacking. All these make the new Shipai law less well-known and less influential. The following interview data support:

The people who live here are not necessarily familiar with the content of the stone card law, and we have to gradually deepen their understanding. Before, we did not pay attention to it, that is, only the stone card law here, and did not play a role. (Jinxu Yao Autonomous County Jinxu Changdong Township six jiatun front stone card leader, male, according to interview data)

The information we have here is not archived except on the stone law, only on the stone tablet. There is also this content in our ancestral hall, which is more clear. (Jinxu Yao Autonomous County Jinxu Changdong Township six jiatun front stone card leader, male, according to interview data)

3.4.2 The reason why the development of Shipai Law is facing difficulties at this stage

First of all, Shipai Law lacks its own hematopoietic ability to maintain long-term operation and development, and the local government and Shipai organization lack content innovation and further development of the new Shipai law in specific rural governance work. The regular implementation and long-term implementation of Shipai Law requires not only the guidance and support of the government, but also the extensive participation of farmers and all sectors of society[2]. If we want to obtain the innovative development and creative transformation of Shipai law, and achieve more long-term and effective development, we need to get more powerful support and participation of a wider range of people, and obtain the internal impetus of the development of new Shipai law.

Secondly, Shipai Law not only needs to modify and improve the content of the regulations more in

line with the actual situation of the region, but also needs to promote the implementation work by developing the main force at the practical level. The rural sector has its own unique governance system, cultural structure and mode of operation. Simply relying on "hard law" is not enough to build an integrity system suitable for the rural context[3]. The current application of Shipai Law is mainly based on regulating villagers' disputes and moral education, and it needs to rely on Shipai leaders or village cadres to carry out specific implementation work, while village cadres and Shipai leaders carry out the implementation work of Shipai law more through verbal communication. If they encounter some irrational villagers' malicious destruction, they still need to rely on the power of law. There is also a lack of realistic implementation guarantees. In addition, the law of Shipai in some areas still remains at the form level, and the implementation work of village cadres and Shipai leaders is not in place. Therefore, Shipai people and Shipai organizations and other implementation subjects will truly apply the Shipai law to the villagers' production and life, and maintain the practical interests of the villagers through the village rules and people's agreements according to local conditions, which is the guarantee of the normal operation of the Shipai Law.

Finally, Jinxiu Yao Autonomous County is located in Dayao Mountain area, with widespread hills, scattered villages, inconvenient transportation and lack of information exchange. It not only hindered scholars to conduct academic research in villages, but also limited the promotion of the influence of stone brand culture in the outside world. Nowadays, the information about the content of the law of Stone cards is particularly scarce, only the residual text on some stone cards is preserved, and there is no other archive. Local cadres and people did not pay attention to the protection and inheritance of Shipai law at first, and the repair work of Shipai Law did not start again until the first half of 2022, because of the lack of protection and attention, naturally there is no publicity and inheritance, which has caused the phenomenon that most local young people in Jinxiu do not understand the law of Shipai. In addition, local government staff and Shipai Law organization members lack the knowledge and skills of modern new media publicity, and are not skilled in carrying out publicity work through platforms such as Weibo, wechat public accounts and Douyin, making Shipai Law rarely heard of outside. According to the development status of Shipai Law, the protection and inheritance work of Shipai Law should be carried out, and villagers should be actively educated and edified in related aspects, so as to strengthen the skills and qualities of the propaganda subjects of Shipai Law. After obtaining the recognition and support of villagers, the innovative development of Shipai Law should be promoted, which is conducive to bringing into play the realistic governance value of Shipai law more efficiently

4. Thinking on the path of township contract governance to promote the modernization of grass-roots governance

4.1 Township contract governance combined multiple subjects, stimulate the new Shipai law endogenous power

Rural communities are the "last mile" of rural settlements. With the acceleration of industrialization and urbanization, the rural social structure has changed. The governance of rural communities is weak and lacks action[4]. In the process of applying township contract to governance, it is necessary for multiple subjects to participate in the innovation and development of the content of

Shipai Law to stimulate the internal power. Village cadres timely pay attention to the new situation of rural governance, find new problems in village management, sum up the new law of rural governance, timely make necessary supplements and explanations to Shipai law and village regulations and people's covenant, and coordinate the government and villagers, which is the guarantee to realize the development of rural covenant governance. It is an important measure to promote the modernization of grass-roots governance to formulate and carry out effective publicity and protection policies, educate and edize villagers on relevant knowledge and promote the innovative development of Shipai Law according to the current development of Shipai Law. With the help of laws and township governments, the implementation subjects such as Shipai leaders and Shipai organizations apply Shipai Law to the production and life of villagers, promote the innovative development and creative transformation of Shipai Law, combine with The Times, reflect progress, innovation and national unity, safeguard the interests of villagers and ensure the normal operation of Shipai Law by adapting village rules and conventions to local conditions. Improving the applicability of village contract culture in rural governance is an important guarantee for building a new pattern of social governance at the grassroots level.

4.2 Grassroots governance promotes the construction of the rule of law and helps the implementation of Shipai Law

To promote the orderly advancement of rural governance in the new era and ensure the coordinated development of the "three governance integration", we must fully recognize the important role of the rule of law and clarify the position of the rule of law in the rural governance system[5].The construction of rule of law is an important guarantee for rural social governance. Shipai Law in the early stage assumed the role of symbolic law, with the development of The Times, its ruling and trial function with high coercive force weakened, and the function of regulating the main interests of the parties strengthened. If Shipai law wants to be really implemented in the new era of the rule of law society, it is necessary to promote the procedural and legalization of Shipai law. By building a mediation platform and integrating into the conflict and dispute management work of the village, and strengthening the team construction of the implementation subjects such as village cadres and Shipai leaders, using the law of Shipai to resolve conflicts and disputes to carry out procedural construction, and restricting the behavior of the implementation personnel through an effective supervision mechanism to protect the legitimate rights and interests of villagers and improve the satisfaction of villagers. Let the masses truly become the participants, judges and beneficiaries of "litigation-free villages". Shipai law is used to resolve contradictions and disputes, and the procedural and standardization of law are applied to Shipai law according to local conditions, so as to explore the social governance practice that integrates national autonomy and the rule of law.

4.3 The grassroots government has enriched multidimensional publicity and promoted the innovative development of Shipai Law

The development of Shipai law also needs to obtain external recognition, and constantly discover and create "new" value. Through online and offline linkage, grass-roots governments have innovated

activity carriers and actively carried out distinctive publicity and education activities on the protection of Shipai Law. Build the New Era Civilization Practice Center into a public platform for spreading scientific theories[6]. Increase the intensity and breadth of online education publicity, use the official wechat public account to popularize the basic knowledge of Shipai law and township contract, and carry out teaching popularization activities based on the case law; Actively organize villagers to participate in the formulation and implementation of township covenants and expand the influence of publicity. Expand external publicity, carry out publicity activities with unique ethnic culture as the theme, actively connect with the grid administrators of village committees, make full use of grid management channels to carry out various online publicity activities, and effectively improve the coverage and audience. Actively carry out field publicity activities such as township contract knowledge and stone brand knowledge into villages, and effectively improve the coverage, availability and satisfaction of basic knowledge popularization. Give full play to the publicity channels of "hall + external extension" and "online + offline", efficiently and pragmatically carry out various forms of villager education and publicity activities, continue to enhance the sense of identity of villagers, constantly optimize the development environment of Shipai, and help the creative transformation and innovative development of Shipai law.

5. Conclusion and prospect

Rural governance is one of the important contents of rural revitalization[7]. To achieve rural revitalization, we need not only development to lay the foundation for rural areas, but also governance to guide rural development[8]. China has entered a new era. The problems in ethnic regions have become prominent. The decentralized structure and actions of rural governance in ethnic regions have intensified, increasing the risk of rural governance failure[9]. In the period of modernization transformation, it is difficult to effectively exert the effectiveness of social governance at the grass-roots level through the rules of national embedment construction. The grass-roots government should properly absorb the intellectual wisdom of excellent traditional culture and help reshape the contemporary value of traditional social rules, which is an important choice to promote the modernization of the grass-roots governance system and governance capacity and help realize rural revitalization. Improve the grassroots social governance system, improve the grassroots social governance mechanism, and promote the in-depth development of grassroots social governance[10]. The modernization of the grass-roots governance system and governance capacity constitutes a key part of the modernization of the national governance system and governance capacity, and promoting the modernization of the grass-roots governance rules has become a necessary part of the modernization of the grass-roots governance system and governance capacity. It can be seen that the traditional social rules of rural society have far-reaching practical significance in implementing the needs of national governance, responding to the call of national policies, and promoting the modernization of governance system and governance capacity.

The century-old "Shipai Law" is a unique and ancient social organization system of the Yao ethnic group in Jinxiu. It is a concrete carrier of social organization. The Yao people use Shipai Law to mediate the neighborhood relations and conflicts in daily production and life, maintain the traditional local social order of the village and regulate the behavioral relations of the village society, so as to achieve a

good atmosphere of self-restraint, self-management and self-development. We will better maintain order in community-level rural governance. Jinxiu's traditional Shipai law played the role of traditional village contract in rural governance before, and was a concrete manifestation of traditional village contract, providing corresponding templates and norms for villagers' behavior. Jinxiu Shipai Law is not the opposition of national laws, but a special product based on the specific situation of Dayaoshan local society, combined with the local Yao ethnic characteristics, the implementation of Shipai law in the form of monument, in order to ensure that rural governance has laws to rely on and evidence to refer to.

Nowadays, Shipai Law has become a custom system for people's production and life, and the "new Shipai Law" developed from the traditional Shipai Law has also become a powerful guide for the Yao people to solve marriage and love disputes, infringement disputes, commercial disputes and other internal social conflicts. In combination with the characteristics of ethnic areas, the People's Court of Jinxiu Yao Autonomous County uses sincerity in innovating the judiciary for the people, uses real moves in promoting the management of grassroots litigation sources, actively extends the judicial service function, skillfully uses the "new stone card law" and "court +N" to resolve conflicts and disputes, and explores the "Jinxiu model" of social governance that integrates national autonomy and the rule of law. The Jinxiu area is also strengthening the training of mediation organizations and Yao Lao, Shi Pai leaders, Yao Lao equal personnel and organizations, strengthening the source prevention and multiple resolution of grassroots contradictions and disputes, and creating a "multiple resolution of contradictions and disputes" work brand with new era characteristics and Jinxiu characteristics.

Down-to-earth, unremitting efforts; Things have changed, and the results have been fruitful. Looking back, Jinxiu Yao Autonomous County, based on the specific situation of the region, fully absorbed the basis of the excellent components of the traditional township contract, coordinated with multiple governance subjects, jointly promoted the modernization of the traditional township contract, and provided scientific rational thinking and empirical methods for promoting the modernization of the grass-roots governance system and governance capacity. Every initiative is refreshing, and every progress is focused on the needs of the people. It is believed that under the leadership of the Party, Jinxiu grass-roots government will form a "new Shipai Law" relying on the innovation and development of traditional Shipai Law and develop grass-roots rural governance with the help of the "new Shipai Law", and improve the modernization of social governance system and governance capacity in ethnic areas, which will become an excellent sample for realizing the modernization of township governance values and social governance with grass-roots characteristics.

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The Trend of China's Money Supply under the New Situation and the Study of Its Implications

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Abstract: In the past few years, China's economy has encountered a series of intricate internal and external challenges, encompassing the impact of COVID-19, shifts in the global economic landscape, and domestic economic structural adjustments. During the period from 2021 to 2023, several significant changes occurred in the domestic and international economic and financial situations, such as escalating global inflationary pressures, interest rate hikes by the Federal Reserve, and heightened fluctuations in the RMB exchange rate, all of which exerted an influence on the domestic money supply. This study conducts an analysis of the variations in narrow money (M1) and broad money (M2) during the period from 2021 to 2023, delving into the underlying capital flows and their deep-seated reasons.

Key words: Chinese economy; narrow money; broad money; capital flow

1. Introduction

From 2021 to 2023, the balance of broad money (M2) showed a steady growth trend. In 2021, the balance of M2 was 238.29 trillion yuan, a year-on-year growth of 9 percent; in 2022, the balance of M2 reached 266.43 trillion yuan, a year-on-year growth of 11.8 percent; and in 2023, the balance of M2 further grew to 292.27 trillion yuan, a year-on-year growth of 9.7 percent.

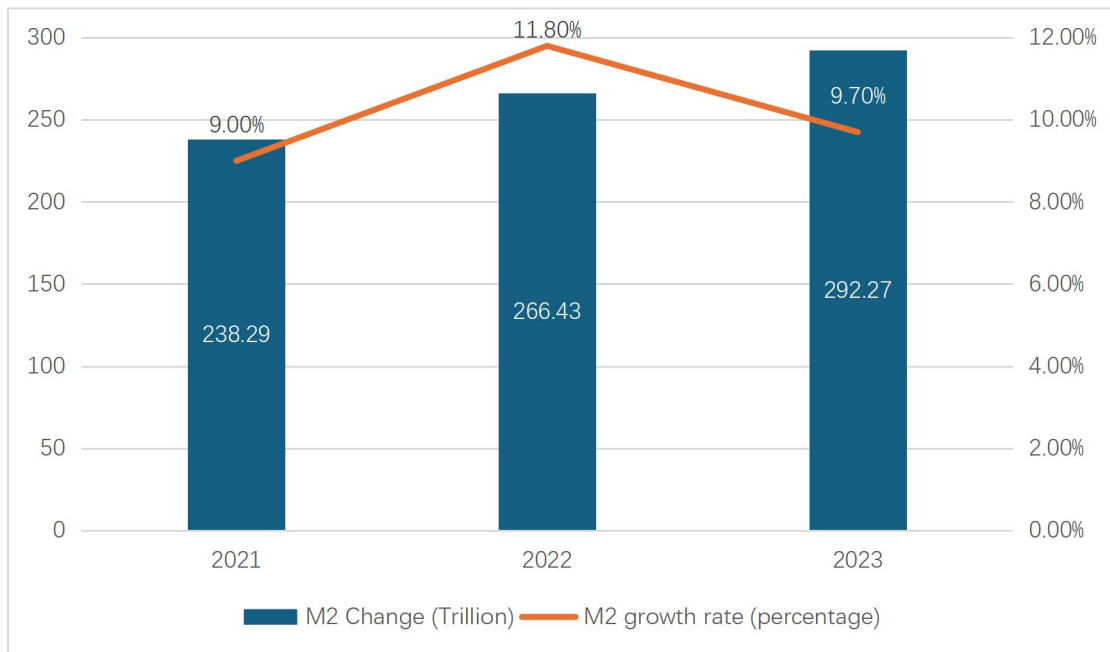


Figure 1 Growth trend of M2 from 2021 to 2023
 Data source: official website of the People's Bank of China

In contrast, narrow money (M1) grew at a slower pace. In 2021, the M1 balance stood at 64.74 trillion yuan, up 3.5 percent year-on-year; in 2022, the M1 balance increased to 67.17 trillion yuan, up 3.7 percent year-on-year; and in 2023, the M1 balance stood at 68.05 trillion yuan, up only 1.3 percent year-on-year.

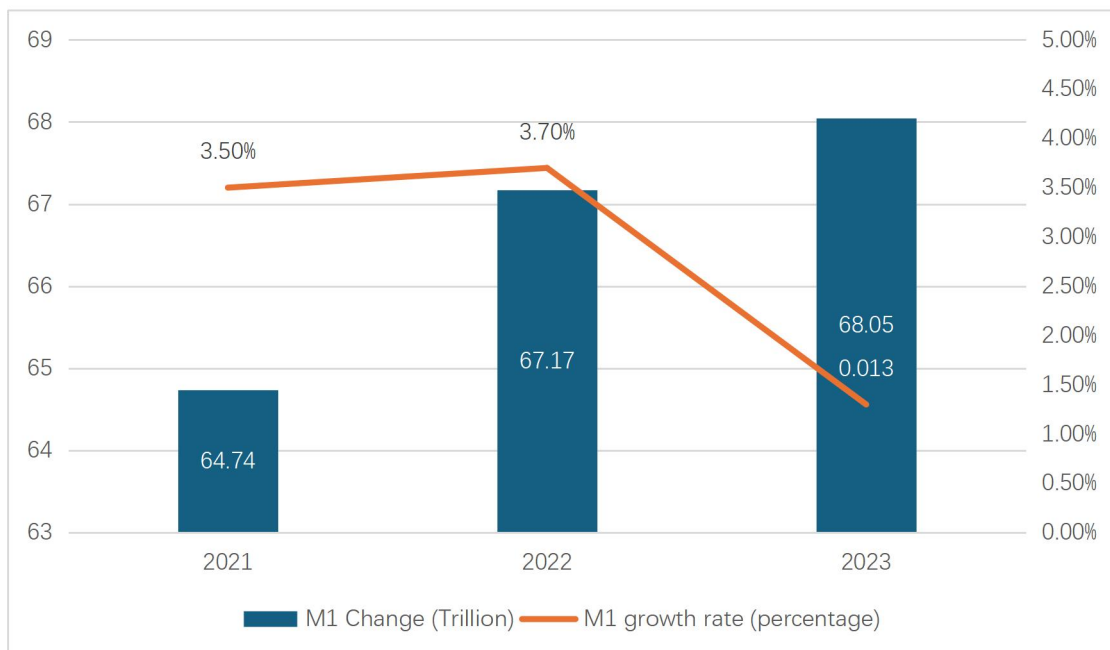


Figure 2 Growth trend of M1 from 2021 to 2023
 Data source: official website of the People's Bank of China

The growth rate of money in circulation (M0) has fluctuated considerably in these three years: in 2021, the M0 balance was 9.08 trillion yuan, a year-on-year increase of 7.7 percent; in 2022, the M0 balance increased sharply to 10.47 trillion yuan, a year-on-year increase of 15.3 percent; and in 2023, it stood at 11.34 trillion yuan, a year-on-year increase of 8.3 percent. Therefore, this paper provides an in-depth analysis of the changes in narrow money (M1) and broad money (M2) from 2021 to 2023, and explores the financial structural problems behind these changes, as well as the intentions of the central bank and the government's macroeconomic policies, with a view to better understanding the operation mechanism of China's monetary policy and its impact on the economy, as well as the policies that should be adopted to deal with the complex economic situation in the midst of the unprecedented changes of the past hundred years. The following is an overview of China's monetary policy and its impact on the economy.

2. Reasons for Changes in Narrow Currency (M1) from 2021 to 2023

The balance of narrow money (M1) in China steadily grew from 64.74 trillion yuan in 2021 to 69.05 trillion yuan in 2023, reflecting a significant trend of stable development in the country's economic market. However, in-depth market research and detailed data analysis reveal that, despite the overall growth of M1, the year-on-year growth rate did not show a continuous upward trend between 2021 and 2023. Specifically, the year-on-year growth rate of M1 was 3.5% in 2021, slightly increased to 3.7% in 2022, but significantly decreased to only 1.3% in 2023.

Based on the data analysis from 2021 to 2023, the development of China's M1 during this period can be divided into two stages. The first stage, from 2021 to 2022, saw a stable growth in M1 balance with a steady upward trend in the year-on-year growth rate. However, when M1 development entered the second stage (from 2022 to 2023), the growth of M1 began to face obstacles, and the year-on-year growth rate experienced a significant decline. This shift may indicate potential structural adjustments in economic activities, the impact of changes in macroeconomic policies, or new challenges and risks facing the economic market. Although the overall growth of M1 reflects the resilience of China's economic market in the face of external shocks such as the COVID-19 pandemic, the fluctuation of its year-on-year growth rate exposes the uncertainty in the development of the financial market. At this historical juncture where the global political and economic landscape is undergoing profound changes, it is even more necessary to seize the opportunities for national development in this once-in-a-century major transformation. It requires a deeper analysis of the internal structure of the economic market and the dynamic relationship between money supply and economic growth, in order to provide accurate data support and scientific research basis for future policy formulation. Such analysis and research, are expected to better identify and respond to potential risks in China's economic market, ensure the stability and sustainability of the financial market, and further promote the healthy development of the national economy.

Firstly, a deep analysis of the stable growth trend of M1 from 2021 to 2022 reveals that its balance continued to increase, with a year-on-year growth rate showing a rising trend year by year. This reflects the robustness of China's economic market in the face of external challenges such as the COVID-19 pandemic. By reviewing the data, it is clear that M1 consists mainly of cash in circulation, corporate

demand deposits, deposits of government agencies and organizations, rural deposits, and individual-held credit card deposits. These components are all funds with high liquidity and flexibility in the economic system. Data released by the central bank shows that by the end of November 2022, the balance of domestic deposits in deposit-taking financial institutions reached 261.11 trillion yuan, an increase of 10.74% compared to the end of 2021. Specifically, household deposit balances were 118.34 trillion yuan, up 14.55% year-on-year; non-financial corporate deposit balances were 77.86 trillion yuan, up 6.89% year-on-year; government agency and organization deposit balances were 33.50 trillion yuan, up 7.43% year-on-year; fiscal deposit balances were 6.11 trillion yuan, up 20.73% year-on-year; and non-deposit financial institution deposit balances were 25.30 trillion yuan, up 8.13% year-on-year. Therefore, the stable growth of M1 in this stage actually reflects important indicators of economic activity, demonstrating good adaptability and robust expansion of core economic elements such as cash in circulation and corporate demand deposits. This growth trend indicates that under external challenges such as the COVID-19 pandemic, China’s economic market has shown strong anti-risk capabilities, providing solid support for sustained and healthy economic development. This phenomenon, occurring against the backdrop of a stable period of the pandemic achieved through strong policy regulation and the united efforts of people from all walks of life, is the result of residents seeking fund safety and liquidity amidst economic uncertainty (Kim et al., 2023). After experiencing the initial impact of the pandemic from 2019 to 2021, Chinese urban and rural residents tended to deposit funds in banks to earn demand interest and set aside funds for various possible emergencies rather than invest in the consumer market from 2021 to 2022. The “China Statistical Yearbook 2021” shows that the balance of RMB household deposits in China increased by 9.9 trillion yuan in 2021, up 11.07% year-on-year. This growth trend continued in 2022, with further increases in household savings deposits, indicating the heightened importance Chinese urban and rural residents placed on fund safety during the pandemic. This trend of increased savings to some extent reflects residents’ precautionary savings in anticipation of future economic uncertainties. The increase in the scale of savings not only affects the size of bank deposits but also reflects the potential for consumption among Chinese residents. When the national economic environment stabilizes and consumer confidence is restored, this portion of savings can be converted into consumption expenditure, thereby stimulating economic growth. Taking 2023 as an example, as the impact of the pandemic gradually weakened, China’s economy gradually recovered, and the consumer confidence index also gradually rose. According to data from the National Bureau of Statistics of China, in the first quarter of 2023, the per capita consumption expenditure of national residents was 6,738 yuan, up 5.4% year-on-year in nominal terms, and up 4.0% in real terms after adjusting for price factors.

Table 2-1 Cumulative Value and Cumulative Growth of Per Capita Consumption Expenditure of Residents in the First to Fourth Quarters of 2022-2023

Index	2023 Q4	2023 Q3	2023 Q2	2023 Q1	2022 Q4	2022 Q3	2022 Q2	2022 Q1
Accumulated per capita consumption	26796	19530	12739	6738	24538	17878	11756	6393

expenditure of residents (yuan)								
Cumulative growth of per capita consumption expenditure of residents (%)	9	8.8	7.6	4	-0.2	1.5	0.8	5.7

(Note: The growth rate of per capita consumption expenditure is the actual growth rate after deducting price factors, and the rest of the growth rates are nominal growth rates. Data source: National Bureau of Statistics of China)

This growth is, to some extent, attributed to the increase in residents’ savings. Moreover, according to market survey data, the growth rate of urban and rural residents’ consumption expenditure in China slowed down from 2021 to 2022, with some consumers choosing to reduce spending on non-essential items and increase savings for future needs. This phenomenon was particularly evident in industries such as catering, tourism, and entertainment, which were significantly impacted during the pandemic, and where consumer confidence and willingness to spend recovered slowly (Yao et al., 2023). Therefore, during this period, the increase in urban and rural residents’ deposits became the main driving force for the growth of M1.

In summary, the stable growth of M1 from 2021 to 2022 not only reflects the overall stability of China’s economic system in the face of the challenges posed by the COVID-19 pandemic but also reveals the adjustment of urban and rural residents’ consumption and savings strategies during extraordinary times. The increase in residents’ demand deposits to cope with future uncertainties, while reducing immediate consumption, provides key insights for analyzing and predicting future economic trends and is of great importance for formulating policies that adapt to economic changes.

To deeply analyze the development trend of M1, it is essential to focus on the key economic indicator of corporate demand deposits. The changes in corporate demand deposits reflect the liquidity and investment activities at the enterprise level and are a significant component of M1. Market research and data analysis clearly show that from 2021 to 2022, corporate demand deposits in China exhibited a trend of stable growth. According to the “Financial Statistical Data Report for the First Three Quarters of 2021,” by the end of September 2021, the balance of RMB deposits in China reached 229.18 trillion yuan, an increase of 8.6% compared to the same period last year. In the first three quarters, the total RMB deposits increased by 16.61 trillion yuan, with non-financial enterprise deposits increasing by 2.02 trillion yuan. In the following fiscal year, this growth trend became even more pronounced. This growth trend is closely related to the concurrent growth rate of M1, indicating an increase in the activity and liquidity of market funds.

Further analysis reveals a significant positive correlation between the growth rate of M1 and corporate profitability. Specifically, when the growth rate of M1 increases, it often means that the growth rate of corporate demand deposits is also increasing correspondingly, reflecting the enhanced activity

and liquidity of market funds. In a favorable economic climate, the profit levels of enterprises are typically boosted. As production inputs accelerate, the cash conversion cycle of enterprises also speeds up, naturally increasing the demand for liquidity. At the same time, with the increase in investment opportunities, corporate investment enthusiasm also rises, further prompting enterprises to convert time deposits into demand deposits to meet investment needs. According to data from the China Association of Automobile Manufacturers, over the course of one year from 2021 to 2022, as the global economy gradually recovered from the COVID-19 pandemic and domestic demand for new energy vehicles remained strong, the Chinese automobile industry experienced significant growth. Many new energy vehicle companies saw a substantial increase in sales revenue, which corresponded positively with their demand deposits in banks. This phenomenon clearly demonstrates the correlation between improved corporate profitability and the growth of demand deposits, reflecting the role of industry prosperity and increased market demand in promoting corporate liquidity. Additionally, according to data released by the China Federation of Logistics and Purchasing, from 2021 to 2022, the Purchasing Managers' Index (PMI) of China's manufacturing industry remained above the boom-bust line, indicating a relatively stable overall operating situation in the manufacturing sector. This stability has contributed to the growth of M1, further promoting stable economic development.

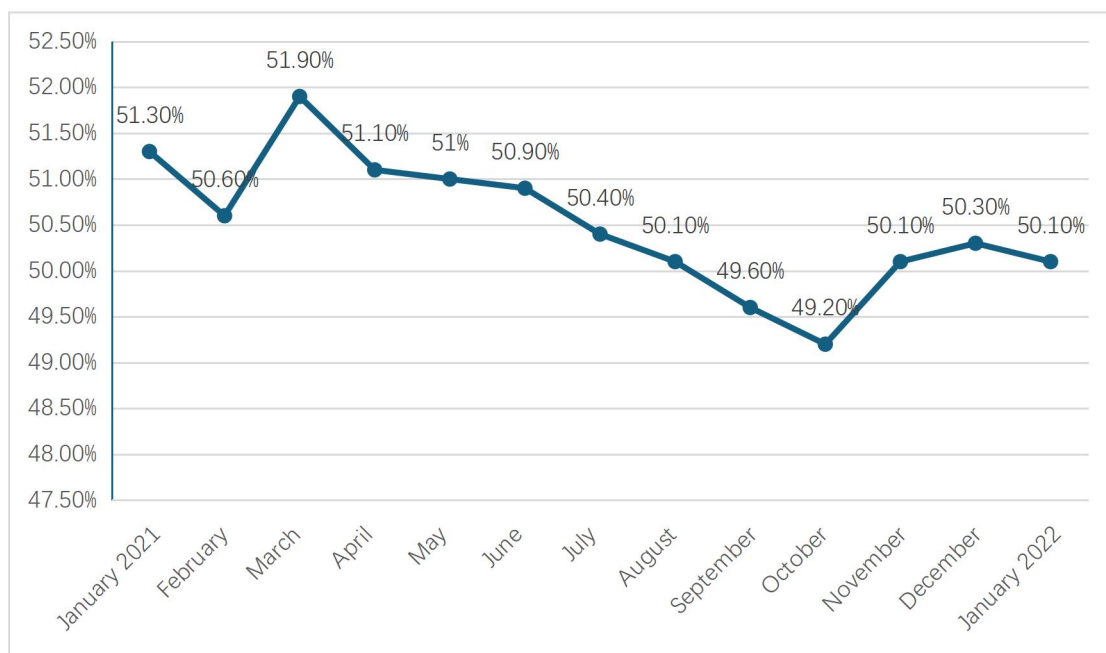


Figure 3 Manufacturing PMI Index (seasonally adjusted)
Data source: official website of the People's Bank of China

During the special period from 2021 to 2022, China's economy showed a relatively stable development trend against the backdrop of pandemic stabilization. Similarly, corporate development during this period also exhibited stability. Consequently, the steady growth of M1 also reflects, to some extent, the stability of corporate development during this time. This finding not only helps in understanding the intrinsic link between M1 and corporate development but also provides an important reference for predicting future economic trends.

Certainly, during this crucial year, China resolutely adopted a series of policies and measures to promote economic growth and financial market stability. These policies had a significant impact on the demand deposits of both enterprises and residents, contributing indispensably to the steady growth of M1. Since 2021, the People's Bank of China has adjusted the reserve requirement ratio multiple times, including across-the-board reductions and targeted cuts to lower reserve requirements. The policy of reducing reserve requirements enabled banks to provide more credit resources, particularly to small and medium-sized enterprises and key areas of the real economy. This helped reduce corporate financing costs and increased corporate demand deposits.

Combining various data sources, it is clear that despite the global economic challenges faced in 2021 and 2022, the Chinese economy demonstrated strong resilience and growth potential. These factors collectively influenced the development of M1, contributing to its steady upward trend during this period.

Next, it is necessary to deeply analyze the phenomenon of M1's growth slowdown from 2022 to 2023. During this period, the global economy was in a period of adjustment following the opening up after the pandemic. In this era of great change, China was no exception. The residual impact of the pandemic caused the year-on-year growth rate of M1 in 2023 to show a continuous downward trend.

In the earlier analysis of the stable rise from 2021 to 2022, it was concluded that the decrease in consumer desire led to an increase in demand deposits. Although this phenomenon still prevails from 2022 to 2023, the year-on-year growth rate of M1 shows a continuous downward trend. This phenomenon suggests that we must deeply analyze the role of corporate demand deposits in this process. Data released by the People's Bank of China shows that in the first half of 2023, the growth rate of M1 has shown a downward trend for six consecutive months. Further investigation found that according to the composition data of new M1 from April to October 2023, the contribution of cash, corporate demand deposits, and other demand deposits to M1 were 54%, -122%, and 168% respectively. This data clearly indicates that in the past six months, the decline in the growth rate of M1 was mainly due to the decrease in corporate demand deposits. Specifically, the year-on-year growth rate of corporate demand deposits dropped significantly from 4.65% in January 2023 to -3.02% in October. Behind this significant change, it is essentially the impact of various challenges faced by large, medium, small, and micro enterprises in China, such as a sluggish sales market, deteriorating business conditions, and limited financing channels. According to data from the National Bureau of Statistics, China's GDP growth rate decreased from 8.4% in 2021 to 3.0% in 2022, reflecting the sluggish sales market. Meanwhile, according to a report released by the China Entrepreneur Survey System, more than 60% of the surveyed enterprises indicated that their business conditions had worsened compared to the same period last year, mainly manifested in reduced orders, increased costs, and decreased profits. Taking a manufacturing enterprise as an example, due to the adjustment period of the market after the pandemic, the economy was even more sluggish than last year, leading to a significant reduction in market demand. The order volume of the enterprise decreased by 30% compared to the same period last year, while the cost of raw materials increased by 20%. In the face of the same severe market environment, the enterprise, in order not to be driven out of the market, still dare not raise prices significantly and can only struggle for survival within a limited price range, which inevitably leads to a significant decline in

corporate profits and a serious impact on its cash flow. At the same time, in order to ensure its own operation, the enterprise has to reduce investment and inventory and use more funds to deal with possible business risks. This has further led to a significant reduction in the enterprise's demand deposits. In addition, due to the bank's concern about the market risks faced by the enterprise and doubts about its ability to cope with the complex market situation, the bank's requirements for the enterprise's loan amount, interest rate, and guarantee conditions are more stringent when considering lending, making it more difficult for enterprises to obtain a large amount of credit support in a short time, resulting in a decrease in their financing willingness. Therefore, enterprises have to use more cash to meet daily operating expenses instead of depositing funds in banks. This further indicates the inevitability of the decrease in corporate demand deposits during this period, which in turn affects the overall growth rate of M1.

Additionally, attention must be paid to the important factor of corporate borrowing relationships. In the daily operations of enterprises, corporate funds may be used extensively for repaying interest to banks and financial institutions or converting cash flow to time deposits due to pessimistic considerations about market prospects and compressing investments, thus not being deposited in demand deposits. Although loan interest rates were lowered in 2023, given the large stock of corporate credit and the rigid nature of interest rates, enterprises still face high interest costs. According to data from the People's Bank of China, as of the first quarter of 2023, the total debt of the non-financial corporate sector reached 85 trillion yuan, a year-on-year increase of 5.6%. In this context, enterprises may be more inclined to use cash flow to repay interest rather than engage in further investment expansion. Since funds used to repay interest are not included in the statistics of M1, this behavior pattern of enterprises has led to a decline in the growth rate of M1. According to data from the National Bureau of Statistics, the year-on-year growth rate of M1 decreased from 3.7% to 1.3% between 2022 and 2023. Therefore, the interest payment burden of the corporate credit stock has had a significant negative impact on the growth rate of M1, further exacerbating the downward trend of M1 growth rate. In summary, a more accurate conclusion can be drawn: the main reason for the continuous decline of M1 from 2022 to 2023 is the decrease in corporate demand deposits and the change in the use of corporate funds. This conclusion provides an important analytical.

3. Reasons for changes in broad money (M2) from 2021 to 2023

In addition to the three-year development trend of M1, which is worth examining and pondering, the change trend of broad money (M2) and the various factors causing this change also need to be considered. After in-depth analysis and comparison of the data on broad money (M2), it is not difficult to find that there is a certain similarity between broad money (M2) and M1 in the overall development trend. Specifically, both showed a stable upward trend during the period from 2021 to 2022. However, entering 2023, the year-on-year growth rate of both decreased. Further data comparison can clearly show that the decline in broad money (M2) is relatively smaller compared to M1. According to data released by the People's Bank of China: compared to 2022, the year-on-year growth rate of M2 decreased by 2.1% in 2023, while the decline in M1 reached 2.4%. It can be known that the slowdown in the growth of broad money (M2) has a relatively lighter impact on the economy and society compared to M1.

Since the composition of broad money (M2) includes M1 as well as time deposits and savings deposits, the influence of M1 cannot be ignored when discussing the change trend of broad money (M2). Given the high consistency in the development trends of both, it can be inferred that there is a strong positive correlation between the overall change trend of broad money (M2) and the movement of M1. Therefore, the overview of the causes of the two stages in M1 is also applicable to the analysis of broad money (M2). Hence, it is necessary to fully consider the impact of M1 on broad money (M2) in order to further delineate and discuss the two development stages of broad money (M2). The first stage is from 2021 to 2022, during which broad money (M2) maintained a stable upward trend, reflecting the overall robustness of the economic system at the macro level. In this stage, the growth trajectory of M2 represented the recovery momentum of economic activities and the positive role of monetary policy in promoting reasonable liquidity abundance. The maintenance of this trend provided a stable monetary environment for the domestic market, supporting the positive recovery and steady upward development of China's real economy. The second stage is from 2022 to 2023, during which the growth of broad money (M2) showed signs of obstruction, likely closely related to the dynamic changes in China's economic market, adjustments in domestic policies, and the complexity of the global economic environment, among other factors. In this stage, although monetary policy remained moderately loose, the growth rate of broad money (M2) still slowed down due to internal and external influences. This phenomenon indicates that in the new economic situation, more attention needs to be paid to the adaptability of monetary policy and the macroeconomic environment to ensure that the implementation of monetary policy can effectively support stable economic growth (Chen et al., 2001).

Firstly, focusing on the first stage, the stable growth phase of broad money (M2) from 2021 to 2022. As an important indicator reflecting the total money supply, the growth trend of broad money (M2) directly indicates the changes in monetary components such as cash, household savings deposits, and corporate deposits. According to the "2022 Financial Statistics Report" released by the People's Bank of China, the total RMB deposits increased by 26.26 trillion yuan in 2022, with household deposits increasing by 17.84 trillion yuan, setting a historical high. In the fourth quarter of 2022, the proportion of residents inclined towards "more savings" reached 61.8%, the highest since statistics began. Dong Ximiao, chief researcher at China Merchants Bank, pointed out that the higher level of M2 growth rate means abundant market liquidity, and it is relatively easier for companies and individuals to obtain loans. Therefore, during this special period of pandemic stabilization from 2021 to 2022, the enhanced loan capabilities of major Chinese enterprises and individuals significantly boosted the rapid growth of broad money (M2). This growth trend created a favorable monetary and financial environment for the recovery and development of the macro economy. During this period, many companies faced cash flow shortages due to the impact of the pandemic. However, the Chinese Communist Party's Central Committee and the State Council introduced a large number of loan policies to support the resumption of work and production of enterprises, prompting many companies with high-quality production resources to successfully obtain low-interest loans from banks, helping a large number of companies on the brink of bankruptcy to overcome difficulties. At the same time, many individual consumers also obtained housing or car loans due to relaxed loan conditions, timely making up for the lack of income sources caused by the pandemic-induced production suspension, thus significantly promoting the

vitality of the consumer market. The increase in these loans directly contributed to the growth of M2. Dong Ximiao's market research further confirmed this point, summarizing that the rise in the M2 growth rate was mainly attributed to the expansion of the loan scale, the active role of fiscal policy, the improvement of banks' money creation ability, and the significant increase in RMB deposits, especially household savings deposits. This reflects the enhanced effectiveness of monetary policy, abundant market liquidity, and increased financial support for the real economy. In summary, the growth of broad money (M2) is the result of the effective guidance of China's party and government under the pandemic background and the increased loan opportunities provided by banks, laying a solid foundation for China's economic stability and recovery.

Turning our attention to the second stage, the period from 2022 to 2023 when the growth of M2 was obstructed. The downward trend in the growth rate of broad money (M2) was mainly affected by two factors. On the one hand, the accelerated issuance of government bonds had a drainage effect on broad money (M2). According to a report by Sina Finance, in 2023, bond financing accounted for 31.6% of the incremental scale of social financing, an increase of 2.9 percentage points from 2022. This indicates that the importance of the bond market in financing the real economy is continuously increasing. In 2023, a total of 71.0 trillion yuan of various bonds were issued in the bond market, a year-on-year increase of 14.8%. Among them, national debt issuance was 11.0 trillion yuan, local government bond issuance was 9.3 trillion yuan, financial bond issuance was 10.2 trillion yuan, and corporate credit bond issuance was 14.0 trillion yuan. Since the deposits formed by government debt financing are not included in the statistical caliber of broad money (M2), they will have a restrictive effect on the growth of broad money (M2) when revenue exceeds expenditures. On the other hand, the significant decrease in the growth rate of household deposits also had an impact on the growth rate of broad money (M2). According to data released by the central bank, the total RMB deposits increased by 25.74 trillion yuan throughout the year in 2023, a decrease of 5101 billion yuan from the previous year. The proportion of residents inclined towards savings also decreased from 61.8% in the previous quarter to 58.0%, indicating a decrease in residents' willingness to save. When comparing the data between 2021-2022 and 2022-2023, it is clearly observed that the growth rate of household savings deposits significantly slowed down during the period from 2022 to 2023, further exacerbating the downward trend in the growth rate of broad money (M2). Therefore, during this special period of pandemic opening, the decline in the growth rate of broad money (M2) is closely related to the continuous decline trend of M1, and both jointly reflect the complexity and uncertainty of economic operation during this period. The change in the growth rate of the money supply reveals the potential risks and challenges in the economic environment, putting forward higher requirements for the formulation and implementation of monetary policy.

In summary, it is evident that despite the similarity in the development trends between broad money (M2) and M1, there are certain differences in their specific manifestations and impacts. Therefore, in the process of monetary policy formulation and economic analysis, it is necessary to comprehensively consider the changes in both to more accurately grasp the pulse of economic operations.

4. Exploring China's macroeconomic regulation through the changes in M1 and M2

In the management of China's macroeconomy, the Communist Party of China, the government, and

the People's Bank of China all play crucial roles. They regulate the money supply through policy formulation and the use of monetary policy tools to achieve goals such as stabilizing prices, promoting employment, and economic growth. Taking the data from 2021 to 2023 as an example, it is evident how the government and the central bank adjust monetary policy in response to changes in the economic situation.

In 2021, facing the impact of the COVID-19 pandemic, China's central bank adopted a moderately loose monetary policy to stabilize the economic foundation and support the resumption of work and production for enterprises. During that year, broad money M2 increased by 9% year-on-year, showing the central bank's efforts to increase the money supply, aiming to reduce the financing costs of the real economy and stimulate economic activity. At the same time, narrow money M1 increased by 3.5% year-on-year, indicating that although liquidity had increased, the demand for cash from enterprises and residents was still relatively moderate. Over the same period, the growth rate of broad money (M2) was significantly higher than that of M1, suggesting that the growth in cash holdings by enterprises and residents was relatively slow. This may reflect that during the economic recovery, enterprises and residents were more inclined to use funds for investment and consumption rather than holding large amounts of cash. Meanwhile, with the development of financial technology, especially the popularization of digital payments and electronic transactions, the demand for traditional cash transactions decreased, which may also have been a factor in the slowdown in M1 growth (Pang et al., 2024a; Pang et al., 2024b). In addition, since M1 includes cash in circulation and corporate demand deposits, the slowdown in its growth rate may also imply changes in corporate liquidity management strategies, with enterprises possibly preferring to use electronic payment methods for transactions. As M1 is mainly composed of cash in circulation (M0) and demand deposits of enterprises and residents, the frequency of cash usage among the general public has also decreased, which similarly limits the growth rate of M1. Furthermore, enterprises and residents may be more cautious in a highly uncertain economic environment, choosing to hold more financial assets with lower liquidity instead of cash and demand deposits, which will also affect the growth of M1. These behaviors will have a certain impact on the growth of M1.

Certainly, during this crucial year, China adopted a series of policy measures to promote economic growth and financial market stability, which also had a significant impact on the demand deposits of enterprises and residents, contributing to the steady growth of M1. Since 2021, the People's Bank of China has adjusted the reserve requirement ratio multiple times, including a general reduction in the reserve ratio and targeted reductions for specific sectors. These policies have enabled banks to provide more credit resources, particularly to SMEs and key areas of the real economy, helping to reduce financing costs for enterprises and increase their demand deposits.

Entering 2022, as the global economy gradually recovered but also faced increased inflationary pressures and supply chain bottlenecks, China maintained stable monetary policy while paying more attention to the flexibility and forward-looking nature of its policies. In 2022, M2 increased by 11.8% year-on-year, with the growth rate higher than the previous year, reflecting the central bank's efforts to maintain reasonable liquidity while guarding against external risks and internal economic downside pressures. M1 increased by 3.7% year-on-year, with a slight increase in growth rate but still lower than

that of M2, indicating that more funds were flowing into investments and consumption rather than simply remaining in cash and demand deposits. In 2022, the balance of M2 further increased to 266.43 trillion yuan, with a year-on-year growth rate of 11.8%, which exceeded the economic growth rate of that year. This was due to the central bank adopting a more relaxed monetary policy to counteract the economic downturn, including reducing commercial banks' demand and time deposits, excess reserve ratios, and the interest rates on rediscounting and relending, as well as encouraging banks to lower lending rates, further increasing the money multiplier.

According to the multiplier model in modern monetary theory, it is represented as

$$M_s = B \times K$$

$$\left\{ \begin{array}{l} M_s: \text{money supply} \\ B: \text{Base currency} \\ K: \text{Money multiplier} \end{array} \right\}$$

$$K = \frac{c' + 1}{c' + e + r_d + r_t \cdot t}$$

$$\left\{ \begin{array}{l} c': \text{cash leakage rate} \\ e: \text{Excess reserve} \\ r_d: \text{Statutory reserve ratio for current deposits} \\ r_t: \text{Statutory reserve ratio for fixed deposits} \\ t: \text{The ratio of fixed deposits to current deposits} \end{array} \right\}$$

As a result, the money supply has increased significantly. At the same time, the continuous development of the financial market promoted by policy regulation during this period has also had a significant impact on the change of China's money supply. The deepening and expansion of the financial market have not only improved the liquidity and efficiency of funds between financial institutions but also changed the composition of broad money (M2), making it include a wider range of financial assets. With the innovation and diversification of the financial market, investors have gained more investment channels and tools, all of which contribute to the growth of M2. Driven by the financial market, the growth of M2 not only reflects the funding needs of the real economy but also includes the transaction and investment activities in the financial market. For example, with the development of financial derivatives, bonds, stocks, and other financial products, the increase in these financial assets will also be included in the statistical category of M2. In addition, operations such as interbank lending and repurchase agreements between financial institutions will also lead to the growth of M2.

By 2023, facing a complex domestic and international economic environment, the central bank continued to implement a prudent monetary policy, emphasizing the avoidance of "flooding" and focusing on improving the transmission mechanism of monetary policy to enhance the precision and effectiveness of policies. The year-on-year growth rate of M2 was 9.7%, which was a slowdown from the previous year but still remained at a high level. The balance of M2 continued to grow to 292.27 trillion yuan, indicating that while maintaining the stability of monetary policy, the central bank was also moderately increasing the money supply to support economic growth. At the same time, the Chinese government implemented a series of fiscal stimulus measures to support economic recovery and development. These measures included supporting business entities to overcome difficulties and develop, expanding domestic effective demand, and accelerating the construction of a modern industrial system, aiming to increase the cash flow of enterprises and residents, improve the profitability of enterprises, and thus increase corporate demand deposits. In addition, the government also

strengthened the regulation of shadow banking and internet finance, promoted the healthy development of the financial market, increased the confidence of market participants, and encouraged funds to flow to more efficient areas, thereby promoting more frequent deposit behavior of enterprises and residents. The implementation of these measures not only directly increased the cash flow of enterprises and residents and improved the profitability of enterprises but also enhanced the efficiency of capital use and strengthened national major strategies and key livelihood guarantees by optimizing the structure of fiscal expenditures (Morris & Shin, 2008).

5. The international factors and capital flows behind the changes in M1 and M2

International trade and capital flows are important external factors affecting the domestic money supply (Rose & Van Wincoop, 2001). As the world's second-largest economy, China's trade and capital flows have a certain impact on its domestic money supply. The trade surplus is one of the main sources of the increase in China's foreign exchange reserves. When China's exports of goods and services exceed imports, a trade surplus is generated, leading to an increase in domestic foreign exchange reserves. These increased foreign exchange reserves are transformed into domestic money supply through the central bank's currency issuance mechanism, thereby affecting the size of M2. During the period from 2021 to 2023, China maintained a large trade surplus, which helped increase foreign exchange reserves and had a positive impact on the growth of M2. Although China's foreign exchange reserves experienced fluctuations during this period, they remained relatively stable as a whole, reflecting China's cautious approach to capital account management. Regarding capital flows, in 2021, broad money M2 increased by 9% year-on-year, while narrow money M1 increased by 3.5% year-on-year. During this period, despite the impact of the COVID-19 pandemic on the Chinese economy, the central bank adopted a moderately loose monetary policy to support economic growth. Despite pressure on capital outflows, the overall impact of capital inflows and outflows may have been relatively small, resulting in M1's growth rate being lower than that of M2. Entering 2022, the balance of broad money M2 increased to 266.43 trillion yuan, a year-on-year increase of 11.8%, while the balance of narrow money M1 increased to 67.17 trillion yuan, a year-on-year increase of 3.7%. In this year, despite the continued uncertainty in the global economic environment, the Chinese economy gradually recovered, and capital inflows may have increased, thereby promoting the growth of M2. At the same time, the growth rate of M1 increased slightly, reflecting the gradual recovery of economic activity. By 2023, the balance of broad money M2 further increased to 292.27 trillion yuan, a year-on-year increase of 9.7%, while the balance of narrow money M1 increased to 68.05 trillion yuan, a year-on-year increase of 1.3%. In this year, despite the slowdown in China's economic growth, the central bank still maintained a moderately loose monetary policy to support economic stability. The impact of capital inflows and outflows may have been relatively small, so the growth rate of M1 continued to be lower than that of M2.

Combining these data, it is clear that in these three years, capital inflows and outflows have had a certain impact on the ratio of M1 to M2, but overall, the growth rate of M1 is still lower than that of M2. This reflects the moderately loose monetary policy measures adopted by the central bank to support economic growth. At the same time, it also indicates that despite the impact of capital inflows and outflows, the changes in the ratio of M1 to M2 are more influenced by domestic economic conditions and

policies. Of course, the differences in the growth rates of M1 and M2, as well as the changes in foreign exchange reserves, reflected in the above data analysis, collectively map out China's strategic choices in monetary policy and its adaptation to changes in the internal and external economic environment.

6. Conclusion

By analyzing the changes in narrow money (M1) and broad money (M2) from 2021 to 2023, we can observe that the dynamics of China's money supply are influenced by a variety of factors. These changes not only reflect the demands of economic growth and the state of financial market development but also demonstrate the central bank's intentions in policy control. Over these three years, the growth rate of broad money M2 has been relatively stable, indicating that while the central bank has maintained a moderate increase in money supply, it has also sought to balance economic growth with inflation risks. The slower growth rate of narrow money M1 may indicate certain structural issues within the economy, such as a decline in corporate investment willingness and cautious consumer spending. In the coming period, it is necessary to continue monitoring the impact of these factors on money supply and their potential effects on economic growth and inflation. With the deepening of global economic integration, changes in capital flows and international trade will have an even greater impact on the domestic money supply. Additionally, with the continuous development of financial markets and advancements in financial technology, the management of money supply will face new challenges.

Therefore, the central bank needs to continue using various monetary policy tools, including reserve requirements, interest rates, and open market operations, to regulate the money supply, promote monetary equilibrium, and balance social aggregate supply to achieve the ultimate goals of monetary policy. The central bank must continuously monitor the dynamics of the financial market to maintain financial stability and prevent systemic risks. Additionally, we should strengthen the supervision and risk management of the financial market to ensure its robust and sustainable development. As the financial market continues to deepen and innovate, the financial risks faced are also gradually increasing. Therefore, regulatory agencies such as the National Financial Supervision and Management Bureau need to adjust their regulatory strategies in a timely manner to adapt to the trends in the financial market.

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The Development of Local Energy in Guangxi from the Perspective of Energy Crisis: Focusing on the Period of Second Sino-Japanese War

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Abstract: Since the late Qing Dynasty, Guangxi has been facing an energy dilemma characterized by a scarcity of coal and oil, which was particularly pronounced during the period of second sino-Japanese war. This paper focuses on the development of local energy resources in Guangxi during second sino-Japanese war, analyzing how Guangxi coped with energy shortages by developing indigenous resources such as charcoal, coal mines, plant oils, and hydropower. The government played a leading role in this process, promoting the development of the energy industry through policy support and financial investment. At the same time, the participation of private capital and technology provided innovative momentum for energy development. Despite issues such as uneven distribution of energy resources in time and space and unbalanced regional development, Guangxi's experience in energy development provides valuable lessons for modern China's energy security and structural transformation, emphasizing the importance of government and private sector collaboration in promoting the development of the energy industry.

Key words: Energy Crisis; Second Sino-Japanese War; Guangxi; Energy Development

1. Introduction

Energy is an essential foundation for the development of human society and plays a significant role in economic development. Since the late Qing Dynasty, Guangxi has been facing an energy dilemma characterized by a scarcity of coal and oil, which was particularly evident during the period of second sino-Japanese war. Before second sino-Japanese war, the energy structure in Guangxi primarily relied on locally produced charcoal and imported diesel. After the second sino-Japanese war, the war led to the interruption of import channels, making it difficult to obtain imported diesel, resulting in a continuous shortage of oil supply in Guangxi and a constant increase in oil prices. At the same time, the relocation of industries from the eastern regions exacerbated the energy crisis, prompting people to seek methods to resolve the energy crisis.

At present, domestic scholars' research on the history of modern Chinese energy is mostly holistic or

focuses primarily on the study of oil and coal as two types of energy. The research tends to concentrate on the development process and impact of specific energy development and supply, with less attention given to combining the transformation of modern energy with the early industrialization of China. There is also a scarcity of studies that focus on the development of energy in modern Guangxi from the perspective of energy history.

Regarding the holistic historical research on modern Chinese energy, many scholars have focused on the overall development of energy in modern China. Wang Qingyi (1988), in his editorial work "China's Energy," comprehensively elaborates on the process, current status, and prospects of China's energy development from the perspectives of coal, oil, natural gas, electricity, and new energy sources, but only briefly mentions the history of the development of modern Chinese electric power energy^[75]. Wang Anzhong (2011, 2012) believes that before the outbreak of second sino-Japanese war, the growth in energy demand driven by multiple factors led to an imbalance in energy supply. After the outbreak of the war, the Nanjing National Government intensified the research and application of alternative energy sources such as charcoal, alcohol, and substitute gasoline. However, the alternative energy sources widely used during this period were costly and not suitable for widespread promotion in times of peace^{[73][74]}. Xing Xinxin (2015) has combed through the history of China's energy development and utilization, and explored the changes in China's energy policies^[78]. Zhang Weibao (2020) believes that the development of modern energy industry and its limitations due to the insufficient reserves of primary energy sources such as coal and oil help to understand the special significance of energy security in China. He uses seven case studies from the late Qing Dynasty to the period of second sino-Japanese war to reveal the multiple twists and turns that energy security faced in modern China^[80].

Domestic academia in China has primarily focused on the study of coal and oil in the context of modern Chinese energy. For instance, Shen Lisheng (1980), the editor-in-chief of "History of China's Petroleum Industry," and the Compilation Group of the History of Modern Chinese Coal Mines (1990), which authored "The History of Modern Chinese Coal Mines," have respectively elaborated on how two different types of energy—oil and coal—were developed, marketed, and how technical workers were trained between 1840 and 1949. They emphasize the role of oil and coal as industrial fuels^[52]. Zhu Yingui (2020) believes that the development of China's mechanized coal mining industry was driven by societal energy demands. At the same time, the development of the mechanized coal mining industry also provided abundant and inexpensive energy, which in turn propelled the development of transportation, industry, and electricity^[84]. Huangfu Qiushi and Jia Qinhan (2020) narrated the process in the mid-to-late 1930s where Gu Weijun connected the forces of private enterprises, foreign capital, and the government to jointly develop the petroleum resources in Northwest China. Although production had not yet begun, it laid the foundation for the subsequent development of the Yumen Oilfield^[25]. Regarding the research on the history of modern Guangxi's energy, some scholars focus on the development of primary energy in modern Guangxi. For example, Wei Liuyuan (2009) only briefly mentioned the history of the development of coal in modern Guangxi^[76]. Fu Rongshou, Jiang Tingyu, Wei Youqun, and others (1993) mentioned in their book "the

use of fire energy, hydropower, wind energy, and animal power in rural Guangxi before the founding of the People's Republic of China^[15]."

In summary, it is evident that there is a rich body of research on the history of modern Chinese energy. However, most of these studies focus on the history of the industry and enterprises, or on the development history of primary energy sources. There is a lack of research on the development of local energy in modern Guangxi. Therefore, we should explore the development and application of local energy in the frontier regions from the framework of energy crises, and its impact on the stability and security of energy supply in the economic system of the rear areas.

2.The Blockade by Japan in the Early Stage of Second Sino-Japanese War and the Energy Supply Crisis in the Rear Areas

2.1 The Emergence of Energy Supply Crisis from 1937 to 1940

Since modern times, China has primarily relied on coal and oil, with some cities also beginning to use electricity. A portion of the coal comes from domestic production, while another part is imported from abroad. Oil, on the other hand, is mostly imported. Therefore, an energy structure like China's, which depends heavily on imports, is not stable and secure enough. Before the outbreak of second sino-Japanese war, China had made several attempts to establish a more stable energy structure, but with limited success.

The impetus for domestic energy supply crises in China has a long history. As early as before the outbreak of second sino-Japanese war, foreign troops had been plundering China's energy resources. According to statistics: "From 1912 to 1937, the coal production directly mined by foreign troops accounted for 64% of the national coal production^[31]." Among the foreign troops, Japan was the most aggressive in plundering China's coal resources. After the 1930s, such aggression intensified. Following the "Mukden Incident" (also known as the "September 18 Incident"), Japanese troops swept into the Northeast region of China. Since the fall of Harbin in 1932, the Northeast region of China completely became a Japanese colony. Japan transported the coal from Northeast China out for sale or back to Japan by building railways, which caused tremendous losses to China's coal resources.

At the same time, geopolitical conflicts in the 1930s were intense, and the looming shadow of war in Europe also led to instability in the import of foreign oil. According to the "Historical Materials of the Old Customs of China (1859-1948)," from 1930 to 1936, the import volume of diesel, an important energy source for Guangxi at the time, plummeted from 4896 metric tons to just 1 metric ton. The import volume of gasoline also declined, and even in 1932, the customs import volume of gasoline in Guangxi was 0 metric tons^[62]. This clearly indicates that before the outbreak of second sino-Japanese war, Guangxi was already facing unstable factors in its oil imports.

Table 1: Import Volume of Diesel and Gasoline in Guangxi from 1930 to 1936 (Unit: Metric Tons)^{[60] [62] [63]}

Product/Year	1930	1931	1932	1933	1934	1935	1936
Diesel	2,487	4896	1176	745	537	400	1
Gasoline	12115 3	363156	0	7505	94736	73609	83617

Since the outbreak of second sino-Japanese war, the crisis in China's domestic energy supply has become increasingly apparent. After the "Marco Polo Bridge Incident," Japanese troops launched attacks on North China, Central China, and the southeastern coastal regions of our country. In the following year and three months, cities such as Beijing, Tianjin, Shanghai, Nanjing, Wuhan, Guangzhou, and a large area of our country's territory fell one after another. Japan formed an energy blockade of the eastern coastal regions of China, making energy imports difficult. All the coal-producing areas in North China, Central China, and South China fell, leading to a reduction in domestic coal production, and the energy crisis in China continued to intensify.

In Guangxi, the outbreak of second sino-Japanese war also led to changes in the channels for energy transportation. The disruption of the original energy channels exacerbated the energy crisis. Before second sino-Japanese war, the energy structure in Guangxi was primarily based on the import of foreign oil and the use of locally produced charcoal. Prior to second sino-Japanese war, the import of petroleum in Guangxi mainly followed two channels: The first channel, which began in 1890, involved oil from the United Kingdom and the United States landing at the Beihai Customs, and then being transferred from Beihai Customs to Longzhou Customs for use in Longzhou and neighboring counties. The second channel, established after Wuzhou was opened to foreign trade in 1897, allowed oil from the United Kingdom and the United States to directly reach Wuzhou Customs from Hong Kong, or to be transferred from Hong Kong via Guangzhou to Wuzhou Customs. From Wuzhou Customs, the oil was then distributed via waterways to various counties in Guangxi, including Nanning, Guilin, and Liuzhou^[33] ^[44]. During the period of second sino-Japanese war, most of Guangdong Province was invaded by the Japanese forces, and the Pearl River Delta was occupied. The Pearl River and related waterways were blockaded, disrupting the waterway transportation from Hong Kong to Wuzhou, leading to a disruption in supplies and causing Wuzhou to lose its original function. After Guangzhou fell in October 1938, Haiphong in Vietnam became an important port for the import and export of energy in China. The main international energy transportation routes shifted to the Guangxi-Vietnam line in Guangxi and the Yunnan-Vietnam and Yunnan-Burma lines in Yunnan^[4]. After the fall of Nanning, the Longnan Highway and Yongzhen Highway of the Guangxi-Vietnam line could no longer be used. To ensure the entry of aid materials to China, in February 1940, the Nanjing National Government allocated funds to rebuild the Heyue Highway. This highway developed into an important international transportation line of the Guangxi-Vietnam route^[59].

2.2 The Complete Cutoff of External Energy Supply to Guangxi from 1941 to 1945.

During wartime, energy can be a crucial strategic material that affects the outcome of the war. In July 1940, the U.S. government "imposed restrictions on the export of all petroleum and scrap metal," marking the first time the United States had imposed energy restrictions on Japan^[48]. On July 26, 1941, the U.S. government announced that it would impose economic controls on Japan and freeze all Japanese assets in the United States. Subsequently, the United Kingdom and the Dutch East Indies also adopted the same policy as the U.S. government. The U.S., the UK, and the Dutch not only froze Japanese assets overseas but also ceased the sale of oil to Japan. This made it impossible for Japan

to import any oil from foreign countries^[30]. Under the global "oil embargo," Japan faced a very severe oil crisis. To resolve this crisis, Japan accelerated the plunder of China's energy resources, conducting a more thorough plundering of coal and other resources in the occupied areas, and imposing stricter restrictions on China's energy imports. Especially after the Pacific War in 1941, the crisis in China's energy supply became even more severe. Although the rear areas could enjoy priority in energy supply, under the large-scale relocation of factories, the demand for energy in the rear areas continued to grow, and such priority supply was just a drop in the bucket. Therefore, after 1941, the energy crisis in the rear areas continued to intensify, and Guangxi was also affected. Overall, compared with the period before 1941, in the rear areas at that time, especially in Guangxi, the oil import crisis after 1941 continued to worsen. Such an energy dilemma has affected industrial development, threatened social stability, and endangered the success or failure of the war.

3. Development of Indigenous Energy Resources

To address the increasingly prominent energy crisis, Guangxi began to explore the development of local energy resources. The region undertook large-scale development of charcoal, coal mines, plant oils, and hydropower to alleviate the shortage of energy.

3.1 Traditional Energy: The Development of Charcoal and Coal

To alleviate the shortage of petroleum, Guangxi embarked on a large-scale development of coal mines and charcoal to substitute for diesel and other petroleum products, thus promoting an energy transition. Guangxi continuously developed charcoal resources and cultivated fuelwood forests. Guangxi's "mild climate and abundant rainfall are suitable for forest growth, and forests are distributed throughout all counties" ^[9], which means it has a rich reserve of forest resources. However, after extensive development of these forest resources in the first three decades of the 20th century, the charcoal produced was not only used by local factories and for the daily life of the local people but also exported to places like Shanghai, Guangdong, and Hong Kong ^[61]. Such unregulated development led to a decline in the area of natural forest resources in Guangxi, and the huge demand for charcoal in the province "could not be supplied by nearby rural areas"^[82]. The fuelwood forests in the province were mostly artificially planted pine forests or mixed forests, which could be harvested every four or five years, so as early as before second sino-Japanese war, Guangxi began to plant artificial forests, and by 1934, several major state-owned forests in Guangxi had a total afforestation area of 21,237 acres ^[8]. Since second sino-Japanese war, the Guangxi provincial government has paid more attention to "organizing state-owned forests and promoting public and private-owned forests" and has planted a large number of trees in various affiliated forests of the Guangxi Agricultural Experiment Station, with particular emphasis on "fuelwood and pine forest cultivation"^{[9][32]}. In addition to the government's large-scale planting of fuelwood forests, the government vigorously promoted the policy of private forests, leading to the emergence of many privately planted fuelwood forests in places like Beiliu, Rong Xian, Pingnan, Mengjiang, and Teng Xian, most of which were harvested by the owners themselves or sold to firewood merchants for harvesting, and then processed into charcoal for sale by the firewood merchants ^[83]. During the period of second sino-Japanese war, the cultivation and development of fuelwood forests were also aimed at replacing

diesel for power generation. Chen Xiong, the director of the Construction Department of the Guangxi provincial government, believed that "due to the high cost of fuel and the air raids by enemy aircraft since the war, it was decided to modify the machinery of various power plants to burn charcoal as much as possible^[5]".

To mitigate the instability of imported petroleum energy, Guangxi not only vigorously developed charcoal resources but also continuously developed coal resources. During this period, the development of coal in Guangxi was government-led. First, the government regulated coal mining through the introduction of relevant policies, stipulating that "before coal mining, the government should send personnel to conduct surveys to reduce the time and costs for the public^[26]". In 1937, the Ministry of Industry issued the "Methods for Operating Coal Mines during Wartime," which made specific provisions for the establishment of coal mines during second sino-Japanese war^[18]. In 1938, the Guangxi provincial government announced the "Request for Mining Rights Regulations," which stipulated that the exploration and mining of coal mines must be approved by the Provincial Construction Department^[71]. It has long been a practice for businessmen to invite experts or cooperate with the government to send experts to explore coal mines in various places in Guangxi. As early as 1935, Heshan Coal Mine Company hired engineer Lin Qinliu from Chaozhou, Guangdong, to conduct a field survey in Guangxi, discovering the Lilan and Dalong coal seams^[23]. In the same year, the Guangxi provincial government invited the Chinese Society of Engineers to organize a Guangxi investigation team to inspect Heshan, making suggestions for the mining work of Heshan coal mine^[11]. Since second sino-Japanese war, the exploration of coal mines in Guangxi has been mainly led by the government, with experts dispatched by the central or provincial government to conduct coal mine exploration. In 1938, Xie Jiarong and Wang Zhi from the Economic Geology Survey Institute conducted a geological survey in the Fuhe Zhong area of Guangxi and wrote "Geology of the Coalfield between He Xian and Zhongshan in Guangxi^[34]". The Guangxi Provincial Construction Department dispatched Chen Shoujun, Tao Shaoqin, Niu Zhaowen, Qiu Jiakui, and others to inspect coal mines in Guangxi, writing a large number of coal mine investigation reports such as "Inspection Report on Enyang Baise Coal Mine in Napo Xian," "Inspection Report on Chang'an Midong Coal Mine in Rong Xian," and "Investigation Report on Maping Waikouling Coal Mine," laying a theoretical foundation for the mining of coal mines in Guangxi^[35]. At the same time, the relocation of research institutes after the outbreak of the war also promoted the exploration of coal mines in Guangxi. In 1937, with the outbreak of the resistance against Japan, the Geological Survey Institute of the Central Research Institute moved to Guilin^[35]. The following year, the Geological Research Institute of the Central Research Institute cooperated with the Guangxi Construction Department, with Si Xingjian, Zhang Wenyou, and Li Youjue conducting a coal resource survey in the Dapu area of Liucheng; Zhang Wenyou from the Geological Research Institute of the Central Research Institute led Yanjing University students to inspect Heshan, believing that the local coal mines have development prospects^[81].

Then, the Resources Committee, the Guangxi Provincial Government, and the Bank of Guangxi invested or took shares in the development of coal resources, providing equipment support. In July 1938, the Resources Committee and the Guangxi Provincial Government invested five million yuan to

prepare the Pinggui Mining Bureau in Babu, which was officially established in October of the same year^[1]. The Xiwan coal field under the jurisdiction of the bureau, due to the lack of power equipment, only produced 5 tons of coal per day, leading to a "coal shortage," with "mine merchants often urging at the door." However, at that time, the Babu Power Plant of the Pinggui Mining Bureau could not yet supply electricity, so the Xiwan coal field requested the original 150-horsepower steam engine and 100KVA AC generator set from the Wuzhou Sulfuric Acid Factory to be transported to Xiwan for use, which was supported by the provincial government^{[2][13]}. After obtaining electricity for pumping water, the coal output increased significantly, alleviating the "coal shortage." In July 1938, the Guangxi Provincial Government and the General Office of the Bank of China jointly took over the "Qianjiang Heshan Coal Mine Joint Stock Company," officially establishing the Heshan Coal Mine Joint Stock Limited Company to operate coal mining^{[7][34]}. The government also encouraged private development of coal mines, stating that "coal mines are allowed to be operated privately, and specialized technicians are dispatched to help improve them^[26]". Many private coal mines sprang up in various parts of Guangxi, with more than 500 private coal mines established in Tianhe, Luocheng, Liucheng, Enyang, Laibin, Baise, Yongning, and other counties. Among them, the larger ones included the Simen Company in Luocheng, which produced 200 metric tons of coal per month^{[19][35]}.

In response to the central government's call to "establish power plants by the government and develop coal mines for supply," the Guangxi provincial government and the central government developed many coal mines, among which the development of Xiwan Coal Mine and Heshan Coal Mine was mainly for power generation^[71]. The coal produced by the Xiwan Coal Mine was primarily supplied to the power plant of the Pinggui Mining Bureau for electricity generation. The surplus was used for self-consumption by the bureau's own factories such as the tin smelting plant and iron smelting plant, as well as by nearby tin mining companies. The coal produced by the Heshan Coal Mine, in addition to being used by the Heshan Coal Mine Power Plant, was also transported through the Hunan- Guangxi -Guizhou Railway to Liuzhou via the transit in Laibin, supplying the Liuzhou Power Plant for electricity generation^{[36] [45] [46]}.

Between 1937 and 1940, with the joint efforts of the government and private forces, the coal and charcoal resources in Guangxi were developed. During these four years, the total coal production in Guangxi reached 173,624 tons, and the total area of new afforestation in county forestry farms was 9,437,623.01 mu (a traditional Chinese unit of area)^{[9] [28] [29]}. Abundant coal and charcoal resources propelled the Pinggui Mining Bureau Power Plant, Heshan Coal Mine Power Plant, Liuzhou Power Plant, and 15 other power plants to use coal and charcoal as substitutes for diesel for electricity generation. The ample electricity supplied by these power plants also enabled some mining areas to use electric power for mining. For instance, numerous tin mining companies in He Xian at that time used electricity from the Pinggui Mining Bureau Power Plant to mine tin^{[12] [21]}.

Compared to the period from 1937 to 1940, Guangxi faced a more severe predicament in coal supply from 1941 to 1945. After the Japanese forces approached the northern part of Hunan, the source of coal from Hunan became very difficult. In order to provide a stable supply of coal for wartime, Guangxi continued to strive to develop coal mines and increase coal production. First, the Guangxi provincial government continued to explore coal resources. In 1943, the coal exploration

team of Liucheng in Guangxi conducted an exploration of the coal resources in Liucheng^[34]. In addition to exploring new coal resources, ensuring the stable supply of existing coal mines was also crucial during the war. In 1943, the Xiwan Coal Mine faced a severe challenge when it was flooded and the coal mines collapsed, making recovery difficult. With the stockpiled coal depleted within a few months, it was imperative to address the impact on the railway department and the power plant of the bureau. Consequently, Heshan Coal Mine Co., Ltd. requested the Pinggui Mineral Bureau to lend electrical drainage equipment, which was supported by the Guangxi provincial government, allowing Heshan Coal Mine to resume work smoothly^[42] ^[43]. Finally, the Guangxi provincial government provided financial support to ensure the supply of coal mines. With the approval of the provincial government, Heshan Coal Mine obtained a loan of 500,000 national currency from the Bank of Guangxi for the resumption of mining operations^[27].

With the concerted efforts of all parties, during this period, the coal production in Guangxi province continued to rise. Heshan Coal Mine and Xiwan Coal Mine became the two largest coal mines in Guangxi at that time. As can be seen from Table 3, from 1940 to the fall of Heshan in 1944, the coal production of Heshan Coal Mine generally showed an upward trend, increasing by 24 times. The coal was mainly "supplied to relocated factories and railway locomotives," and it was acclaimed as the "second largest coal mine in the southwest^[35]." The Xiwan Coal Mine also ensured stable mining and supply of coal during the wartime.

Table 2: Coal Production of Heshan and Xiwan Coal Mines from 1938 to 1944 (Unit: Tons)^[17] ^[77]

Year	1938	1939	1940	1941	1942	1943	1944
Heshan Coal Mine	4100	3800	3200	1410	40000	94000	80000
Xiwan Coal Mine	3671	17550	38313	53100	50949	27688	—

3.2 Exploration of the Development of New Energy from Plant Oils

Guangxi is known for its "hills overlapping and a lot of wasteland, which is extremely suitable for the development of forestry." In addition to firewood, the most important forest products include tung oil, tea oil, and anise oil, etc^[37]. Before second sino-Japanese war, Guangxi had very rich economic forest resources and a thriving oil extraction industry^[39]. According to the records in the second edition of the Guangxi Yearbook, in 1933, Guangxi produced 240,022 piculs of tung oil and 173,943 piculs of tea oil^[8]. These products, with a small portion used for local handicraft industries within the province, were largely collected and distributed through Wuzhou, then shipped to Hong Kong for sale in countries such as Britain, the United States, and Japan. In the one or two years before second sino-Japanese war, the export of tung oil from Guangxi accounted for about 15% of the national exports. In 1937, the total value of tung oil exports was more than 10 million yuan, accounting for about 23.5% of Guangxi's total export value, making it the leading export product; the export of tea oil from Guangxi accounted for 17.83% of the national exports^[6] ^[37] ^[64].

Since the outbreak of second sino-Japanese war, Guangxi has seen the establishment of many reclamation companies in counties such as Liucheng, Liujiang, and Luorong, which have been

engaged in large-scale planting of tung forests. Additionally, the cultivation of oil tea trees has been flourishing in places like Liujiang, Rong Xian, and Fuchuan^{[3][37]}. As Table 4 indicates, the production of tung oil and tea oil at that time was quite considerable. However, due to the impact of the war, transportation was obstructed, exports were hindered, and the sales channels were affected. According to Table 5, from 1937 to 1939, the export volumes of tung oil and tea oil in Guangxi both showed a downward trend. Consequently, with the poor export of plant oils, coupled with the shortage of imported petroleum, although people at that time used tea oil as a substitute for kerosene for lighting, the cost of fuel was "often more than the cost of electricity, and the brightness, aesthetics, cleanliness, and convenience of the lamps were not as good as electric lights^[47]."

Table 3: Production of Tung Oil and Tea Oil in Guangxi from 1937 to 1940 (Unit: Piculs)^[9]

Year/ Product	Tung Oil	Tea Oil
1937	359641	229469
1938	295199	155532
1939	388093	239493
1940	338671	192188

Table 4: Export Volume of Tung Oil and Tea Oil in Guangxi from 1937 to 1942 (Unit: Metric Tons)^{[64][65]}
[66]

Year/ Product	1937	1938	1939	1940	1941	1942
Tea Oil	23011	55274	2276	---	---	---
Tung Oil	108175	63456	80860	14112	---	---

The exploration of using plant oils as energy in Guangxi began during the period of second sino-Japanese war, although as early as 1935, Shen Yijia, a Chinese mining engineer who studied in France, had already conducted experiments with Chinese plant oils in European factories, successfully refining gasoline, kerosene, lubricating oil, and other petroleum products^[40]. However, the technology of large-scale plant oil refining into petroleum products for power generation had not yet been introduced to Guangxi before second sino-Japanese war. Since the outbreak of second sino-Japanese war, some power plants in Guangxi began to explore the use of plant oils for power generation. In 1938, due to the frequent shortage of diesel sources in Guangxi, to ensure the normal supply of electricity, the Liuzhou Branch of Guangxi Power Plant used tea oil as a substitute for oil residue (i.e., heavy diesel) to inject into the oil residue engine for power generation, and found that the effect of tea oil replacing oil residue for power generation was very good^[38]. At that time, people commented on the success of the Liuzhou Power Plant in using tea oil for power generation in the following way: "Our province has an abundant daily production of tea oil. If we can switch to using tea oil, there is no need to rely on imported goods. This can not only replace the needs during the war but also promote the production of tea oil in our province^[38]." After the successful trial of tea oil at the Liuzhou Power Plant, other power plants in Guangxi gradually began to use tea oil and other plant oils for power generation. However, using direct plant oils as a substitute for oil residue for power

generation can also lead to some problems. For instance, engineers at the Guilin Power Plant mentioned, "The fuel oil residue used by our factory is not only expensive but also the source has been cut off. It cannot be purchased within the province, so we have no choice but to switch to tea oil as a substitute." Additionally, due to "the cold weather today, causing the tea oil to freeze," this has led to occasional "dimness in the electric lights in the city"^[57].

Affected by the limitations left over from the two decades before second sino-Japanese war, many power plants and other factories in Guangxi still mainly relied on diesel engines for their large power machinery. Many power plants, due to the lack of petroleum, found it difficult to continue power generation and tried to purchase diesel through various means. However, due to the "petroleum monopoly" policy at the time, it was very difficult for factories in Guangxi to obtain enough petroleum^[70]. At the same time, although power plants in Guangxi directly injected plant oils into diesel engines for power generation from 1937 to 1940, such attempts did not solve the problem of diesel shortages in Guangxi and led to many limitations. For example, because the solidification point of tea oil is relatively high and the winter temperatures in Guangxi are relatively low, tea oil is prone to freezing, which led to the city's lights occasionally becoming dim.

Under the aforementioned circumstances, Guangxi quickly adjusted its plant oil development strategy and began to explore the refining of locally produced plant oils into substitute gasoline and diesel. During the period of second sino-Japanese war, a large number of scientists responded to the national call and came to the rear area of Guangxi to conduct experiments on the refining of plant oils into substitute petroleum products. Wu Yixin, a Bachelor of Science from Central University, and Zhu Jiahu, a Bachelor of Science from Guanghua University, are typical representatives of this endeavor. They used "local raw materials such as rosin to refine diesel," and conducted experiments with the finished products in Guilin, finding that the substitute diesel performed well, with "no ash or residue left inside the machine" after use. It was also tested by various institutions in Guilin, and they "all expressed great satisfaction"^[49]. Due to the fact that the substitute diesel they produced "does not contain acidity or impurities, making it most suitable for power use," in 1942, they established the "Kaiyuan Liquid Fuel Factory" near the county town. The factory used locally produced rosin to produce substitute diesel, with a monthly output of 4 tons of substitute diesel. They also set up sales points in Guilin, Liuzhou, Hengyang, and other places^[55] ^[68]. In addition to scientists establishing factories to refine substitute petroleum products, the Nanjing National Government and the Guangxi provincial government also set up a number of factories that used refined substitute diesel and gasoline. Among them, the larger factories included the Liuzhou Branch of the China Plant Oil Factory and the Guangxi Enterprise Company Oil Refinery. In 1942, due to "the current lack of gasoline sources and the abundant production of tung oil in the province," the Guangxi Enterprise Company co-established the Guangxi Enterprise Company Oil Refinery with the Bank of Guangxi. This factory used rosin, pine roots, and tung oil to refine gasoline. In February of the same year, the China Plant Oil Factory, funded by the Nanjing National Government's Ministry of Economics, set up a branch in Liuzhou. This factory specialized in treating domestic plant oils through deacidification and degumming, and then "according to European and American specified methods," manufactured gasoline, kerosene, diesel, and refined fuel oils, and other substitutes for petroleum. The product

performance was good, and people at that time commented that the product "in terms of heat resistance, lubricity, and oil consumption, is said to be similar to imported mineral machine oils^[56]."

During this period, the production of substitute diesel, substitute gasoline, and other substitute petroleum products in Guangxi could not be separated from the financial support of the Nanjing National Government. The government encouraged the production of substitute petroleum products through bank loans. In 1942, the 110th meeting of the Joint Conference of the Four-Bank General Office, which was jointly discussed by the Central Bank, the Bank of China, the Bank of Communications, and the Farmers Bank, was convened. The meeting decided to "reorganize, expand, or establish public and private plant oil refining factories," and to make full use of tung oil to refine substitute petroleum products^[67]. In July of the same year, the Ministry of Economics of the Nanjing National Government "assisted existing private refineries to expand their equipment and increase production," granting a loan of 50,000 yuan to the Kaiyuan Liquid Fuel Factory^[67]. In addition to private refineries, the Ministry of Economics also strongly supported state-owned refineries in the production of substitute petroleum products, providing a loan of 800,000 yuan to the China Plant Oil Factory^[67].

With the joint efforts of the government and the private sector, the manufacturing of substitute diesel, substitute gasoline, and other alternative petroleum products in Guangxi developed rapidly, providing a continuous supply of fuel for power plants and other factories. During the period of second sino-Japanese war, the Nanjing National Government implemented a monopoly on petroleum, and "apart from a portion supplied by Gansu Oil Mine, other needs were met by various substitutes^[53]." At that time, the generators of Guangxi Hydropower Company could "use domestic oil residue (diesel) as fuel." Not only was the fuel readily available, but it also had the advantage of low cost. According to precise calculations by people at that time, "the cost per kilowatt-hour of electricity was twelve yuan and three cents and four mills^[50]." We speculate that the domestic diesel used by Guangxi Hydropower Company is the substitute diesel refined from plant oils produced in the province. In addition, at that time, many factories in Guangxi also used locally produced substitute diesel, which provided sufficient fuel for power generation and factory production, thereby alleviating the energy crisis to some extent.

3.3 Attempts to Develop Hydropower

In addition to encouraging the use of plant oils to refine substitutes for diesel and gasoline, Guangxi is also actively developing a new source of energy — hydropower. Guangxi, with its "abundance of high mountains and rapid rivers, has many places suitable for the construction of hydroelectric power stations^[16]." "Before second sino-Japanese war, Guangxi had already begun to plan the development of hydropower, but the use of hydropower for electricity generation was still "in the research phase^[10] ." In 1932, Guangxi Governor Ma Junwu and Li Zongren invited water conservancy experts Mai Yunyu and Wang Silian to inspect potential sites for hydroelectric power generation in Quanzhou, Liuzhou, He Xian, and other places. However, due to "lack of funds, the project could not be implemented."^[20] At that time, the Fuhe Zhong mining area in Guangxi also utilized hydropower for mining. They "constructed aqueducts, installed water pipes, and channeled

mountain streams to use the flow of water to flush the mining area and extract minerals^[10]. " Guangxi also had the idea of hydroelectric power generation: The Guangxi provincial government planned to "establish a hydroelectric power plant in Babu, He Xian," using the water power of the He River for electricity generation to meet "the needs of developing mining affairs," but later "abandoned the plan due to the high cost of electricity^[10]." In addition to the government's initiatives, there were also practical attempts at harnessing hydropower by the local people in Liuzhou. According to Yun Zhen's report from the Guangxi Inspection Team, at that time, someone had built a dam near Jila, hoping it could be used for "a large-scale rice milling factory." However, due to a lack of understanding of engineering principles, the design and construction were not well done, leading to the collapse of the water dam and all previous efforts being wasted^[10].

Since the outbreak of second sino-Japanese war, the Nanjing National Government has encouraged all regions to "make full use of the naturally endowed water resources to plan and build hydroelectric power plants, in order to supply power for relocated and newly established factories." Subsequently, the Resources Committee also regarded "focusing on hydroelectric power generation" as one of the three principles for the development of electricity^{[69] [72] [79]}. In response to the electricity industry in Guangxi, people at that time believed that "where there is a water source available for power generation, hydroelectric generators should be installed to save raw materials. Efforts are being made to quickly handle the establishment of hydroelectric power plants, in order to achieve widespread power supply^[54]." During this period, the exploration of hydropower resources in Guangxi could not be separated from the dual forces of the government and the private sector. It can even be said that the successful exploration of hydropower generation in Guangxi during the period of second sino-Japanese war more reflected the wisdom of the local working people. Among them, the development of hydropower in He Xian is a good example. In 1941, brothers Huang Shizhen and Huang Dezhan founded Zhenji Agricultural Company at the Chushuitang in Xiadao Village, Etang Town. They installed a 3-kilowatt generator set, "using spring water as power to mechanically comprehensively process rice, flour, sugarcane, and bone meal^{[22] [24]}." In the same year, the Dacheng Machinery Factory in He Xian invented a type of water-powered engine capable of generating thirty horsepower, which could be used for rice milling, flour, sugar and oil extraction, and was awarded and publicized by the government^{[15] [41]}. In 1943, more than 50 investors, including overseas Chinese from Guangdong and local capitalists, jointly invested more than 70,000 yuan to establish the He Xian Guangming Chemical Factory. Yu Hexiang and others developed the hydropower resources of Guposhan and utilized a canal left over from the discontinued Dadong Mining Company to build a small hydropower station with an actual power output of 93 kilowatts and an annual electricity generation of 670,000 kilowatt-hours^[22]. Compared to the achievements made by private sector hydropower development, during this period, although the Guangxi provincial government made numerous attempts to develop hydroelectric power, all ended in failure.

4. Conclusion

During the period of second sino-Japanese war, Guangxi vigorously developed local resources, making full use of the province's resource endowment advantages, and widely developed coal,

charcoal, plant oil, hydropower, and other energy sources. The aim was to open up a path of localized energy development under Japan's energy blockade, ensuring a stable supply of energy during wartime. Although there were many limitations in the development of local energy during this period, such as the inability to solve the uneven distribution of energy in time and space and the very unbalanced regional development, the government-led energy supply system ensured the security of energy supply in Guangxi. Additionally, from the development and application of local energy in Guangxi during the period of second sino-Japanese war, we can also see the relationship between the government and the private sector behind it.

Our research on the power energy construction in Guangxi during second sino-Japanese war is of great significance for energy security and energy transformation in modern China. Since the reform and opening up, while pursuing high economic growth, China's energy structure has gradually become unbalanced due to the imbalance between economic development and energy demand. Fortunately, since Xi Jinping became of the General Secretary of the Central Committee in 2012, China has refocused its attention on low-carbon transition and high-quality development. The energy development of Guangxi during second sino-Japanese war also has important reference significance for the transformation of modern energy structure and the embodiment of safe energy supply.

Firstly, Guangxi has been alleviating the tension of traditional power generation resources (such as coal, charcoal, and oil) in some areas by developing renewable energy sources—hydropower, through hydroelectric power generation. Secondly, it is important to pay attention to the relationship between the government and the private sector behind energy development. In this process, cooperation between the government and the private sector is crucial. The government needs to formulate reasonable policies and regulatory measures to ensure the sustainability of energy development and the fairness of the market, while encouraging the participation of private capital to stimulate market vitality and technological innovation. Private enterprises should actively respond to policy guidance, invest in funds and technology, and promote the improvement of energy development efficiency, achieving a win-win situation for both economic and social benefits. Through this collaborative cooperation between the government and the private sector, the healthy development of the energy industry can be effectively promoted, ensuring national energy security and promoting the continuous growth of the economy. Finally, we should actively build a safe energy system. From the energy transformation process in Guangxi during the comprehensive resistance period, we can see that promoting energy transformation and supply security, and using government power to increase the adjustment of industrial structure and energy structure, plays an important role in building a strong barrier for national energy security.

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A Study on the Application of BOPPPS Teaching Model Based on Core Competence in English Classroom Reading Teaching

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Abstract: under the background of the core literacy of the discipline put forward by the New Curriculum Standard, it has become the top priority of school education to improve students' interest in reading, shape correct values, develop key abilities and form necessary character. As a new teaching model, BOPPPS helps to build hierarchical and measurable teaching modules. This model fully integrates the links of introduction, goal, pre-test, participatory learning, post-test and summary, and gradually guides students to read articles, grasp the main idea, learn to use grammar in real situations, and finally through homework and students' self-evaluation form, test the degree of students' achievement of teaching goals. In this paper, the classroom teaching of "He Spent about Twenty Hours in Space", the first unit reading course of English Module 7 of Grade 6, is taken as an example to carry out teaching design by using the six stages of BOPPPS teaching model, in order to provide reference for the effective implementation of English reading class in primary schools.

Key words: BOPPPS model; core literacy; primary school English; reading teaching

0. Introduction

The core literacy requirements put forward in the English Curriculum Standard for compulsory Education (2022 Edition) (hereinafter referred to as the "New Curriculum Standard") emphasize "putting learning into practice and giving priority to practice" ^[1]. Reading is an important form of practice, but in the process of learning, students generally lack interest in reading, lack of motivation ^[2], and reading teaching is generally fragmented and mechanized. In this context, the improvement and promotion of English reading teaching has become a top priority ^[3]. As a new teaching model, BOPPPS helps to build hierarchical and measurable teaching modules. This model fully integrates the links of introduction, goal, pre-test, participatory learning, post-test and summary ^[4], and gradually guides students to read articles, grasp the main idea, and learn to use grammar in real situations. Finally, through homework and students' self-evaluation form, test the degree of students' achievement of teaching goals.

The purpose of this study is to explore the current situation and problems of English classroom reading teaching based on core literacy, and to analyze its role and influence in cultivating students'

core literacy. The relevant data and materials are collected and sorted out through the methods of literature research, classroom observation and case analysis. The expected results will reveal the effective models and strategies of English classroom reading teaching based on core literacy, provide useful reference and guidance for English teachers, and improve the quality and effectiveness of English classroom reading teaching. At the same time, this study will help to promote the development of students' English reading ability, cultivate their core qualities such as language ability, thinking quality, cultural awareness and learning ability, and lay a solid foundation for students' all-round development and future study and life. The significance of this study is to enrich the theory and practice of English classroom reading teaching, promote the reform and development of English education, and contribute to the cultivation of high-quality talents who can meet the needs of the times.

1. Interpretation of BOPPPS teaching model.

The BOPPPS model originates from the Canadian teacher work ISW project, which is based on constructivism and communicative approach, emphasizing student-centered and improving student participation^[4]. The teaching model is student-centered, encourages students to participate and explore, and helps students build the ability of deep understanding and application of knowledge. It provides a structured teaching process for students to help teachers better organize and manage the classroom and improve students' learning effect. Its main characteristics are student-centered, emphasizing students' active participation and interaction; paying attention to the clarity of teaching objectives to make teaching activities more targeted; at the same time, timely understanding of students' learning through pre-test and post-test, easy to adjust teaching strategies.

The implementation steps are clear and clear: first, attract students' attention and stimulate interest in learning through the introduction; then clearly explain the learning goals to let students know clearly the tasks to be achieved; then carry out pre-tests to understand the initial state of students; in the process of participatory learning, encourage students to actively participate and cultivate their various abilities; post-test is used to evaluate students' learning effect; finally, summarize and strengthen key knowledge. The application of BOPPPS teaching model is not limited to 10 minutes, not only to a class, but also to a course. Through the introduction of the overview, the arrangement of the whole chapter and the examination requirements at the beginning of the course, students can look forward to the course, define their learning goals, and grasp their interest in learning. Pre-test is very important for students' participatory learning, and participatory learning should run through the learning process of the whole course. The view that teaching quality can be effectively improved through BOPPPS teaching mode. In addition, participatory learning and goal setting are important. The application advantage in teaching is very significant, it can effectively improve the teaching quality, make the teaching process more systematic and scientific, enhance students' learning enthusiasm and participation, improve learning effect, promote teachers' professional growth, and improve teaching ability.

Typically, the BOPPPS mode consists of the following six modules:

Table 1 BOPPPS schema

Modules	Main task
Bridge-in	Teachers ask questions and share relevant stories or examples.

Objective	Clear curriculum objectives and learning objectives.
Pre-assessment	Assess students' previous knowledge and understanding through quizzes or questions.
Participatory Learning	Group discussions, problem solving activities, case studies, etc.
Post-assessment	Evaluate the results of group projects, papers, lectures, etc.
Summary	The review emphasizes important knowledge points.

The above tasks form a complete reading teaching process in series, which mainly includes the following contents:

(1) Select the text. Teachers should choose appropriate reading materials in the light of curriculum objectives and learning conditions.

(2) content prediction. Teachers should give some hints according to what they have learned in this lesson, so that students can understand the content.

(3) read the text. Teachers should guide students to skim and read the text carefully to find out the general idea and details of the text.

(4) thinking expansion. Through the form of group cooperation and discussion, we can improve students' understanding of the text and divergence of thinking.

(5) summarize and reflect, summarize the learning achievements through inter-group evaluation, students' self-evaluation and teacher evaluation.

2. The application of BOPPPS teaching model in English reading teaching in junior middle school.

(1) text selection.

This case is an in-class reading material, which belongs to the theme context of "people and Society". This text belongs to the first unit He Spent about Twenty Hours in Space of module 7 in the second volume of Grade 6 (2013 edition) of Foreign language Teaching and Research Press. After integrating the learning content, teachers interpret the article from the perspective of "space", carry out reading teaching, explore the significance of the theme, learn the good quality of characters, stimulate students' interest in learning, cultivate patriotic enthusiasm, and carry out ideal education to achieve the goal of educating people. The discourse analysis is as follows: the text is a narrative about the deeds of Yang Liwei written by Yang Liwei's son. In October 2003, Yang Liwei went into space by Shenzhou V manned spaceship and flew in space for about 21 hours.

He did a lot of things in space, filmed videos, and then returned to Earth.

Yang Liwei's son is proud of his father and hopes to go to space one day.

The unit task is to introduce the life stories of role models in the simple past tense.

The teaching objectives of this course are as follows:

After this class, students will be able to:

1. grasp , read, speak and write words in class with the prompt of pictures and recordings;
2. correctly understand the text information and imitate the target language correctly and loudly with the help of text illustrations, text recordings, text animation, task lists.
3. retell the text according to the prompts, and describe events in simple past tense.
4. introduce the deeds of outstanding people, learn the qualities of celebrities and build their

dreams and love for the country.

(2) content prediction.

This part allows students to form learning expectations, connect their own experience with learning content, find cognitive gaps and generate learning motivation. Teachers can warm up the scene by playing videos, giving pictures, or organizing Mini Game to attract students' interest in reading and learning. Guide the students to think positively and have a preliminary understanding of what they have learned in this lesson. Let students introduce astronauts in simple language, know something about them, and activate their existing knowledge reserves. Through group discussion, students prepare materials, extract information, fully understand the topic, perceive the structure and content of the text, and have a preliminary understanding of the thematic meaning of this lesson, so as to stimulate students' interest in English communication, which is conducive to the cultivation of students' English core literacy. Teachers can give space photos and tips and ask questions: Do you know aliens? How much do you know? The student gives an answer, then gives some pictures of space, and then goes on to ask: What do you know about space? You can discuss in groups according to the following parts: size, color, weight, lives, ect. Leading from space to astronauts, that is, the theme of this course: But there must be some people there, who are they? Can you introduce us some of them? Ask the students to introduce some astronauts they know well. Led by astronauts to Yang Liwei, the protagonist of this class. The teacher gave a picture of Yang Liwei and asked the students to make an introduction: Who is he? Please introduce him to us. After the students answered, the teacher pointed out that the content of this lesson was related to Yang Liwei and asked the students to predict the main content of this lesson: Please make a guess about today's story. Finally, ask the students to read the article quickly and check whether the prediction is correct.

(3) read the text.

This part allows students to actively participate in and experience the learning content. Teachers mainly assign tasks to students and create situations so that students can participate deeply and make real interactions. In this way, students can deeply experience and recognize the learning content. Students understand the story, extract information, fully understand the text and perceive the thematic meaning of the text. under the guidance of teachers, through careful observation, they find the past tense of verbs, and independently sum up the changing rules of the past tense of verb words. then use it in the actual situation to solve problems, give students the opportunity to practice, and really apply the language to life. The teacher gives several questions for students to read with questions to explore the gist of the text: When did Yang Liwei sent into space? How did he went into space? What did he do in space? The teacher put the three questions side by side and asked the students to find out the changes in tenses. And find more examples in the article. After the students finish skimming, the teacher gives the question word When,Where,How,What happened to guide the students to find out the details of the article according to the question words, and then generalizes the text according to these question words.

(4) expansion of thinking.

This part is used to expand students' thinking and test whether students fully understand the teaching content. Teachers can test whether they have achieved the expected results or whether there is

a gap in understanding through writing and speaking exercises. Considering the knowledge structure and thinking ability of the senior students, and in order to exercise the students' comprehensive ability, this stage encourages the students to think actively under the background of the text, which not only practices the newly learned language, but also enriches the imagination. The teacher organizes student group discussions and gives the following hints: What will you do if you are sent into space? You can discuss in groups. After the students' discussion is completed, the representatives are selected to make a speech. Finally, the students are asked to evaluate each other between groups according to grammatical correctness and imagination.

(5) Summary and reflection.

The purpose of the summary is to summarize and sort out the content learned and leave a deep impression. Summary is the end of the learning stage, which provides teachers and students with the opportunity to review the learning content and summarize the results. At this stage, teachers first ask students to summarize their learning achievements in order to understand their mastery and memory of knowledge, and then supplement and guide them. At the end of the study, students can use this form to test the achievement of their learning goals, so as to facilitate students to check and fill the gaps and review and consolidate. Teachers organize students to think about the bright points and excellent qualities that can be learned from the characters, and to express their admiration for the outstanding people and the motherland. Finally, the teacher distributes the learning effect test form to the students (see table below). The design of the table is mainly based on the teaching objectives of this course, and new projects related to classroom cooperation are added. The effect of classroom group cooperative learning also plays a vital role in the learning results of this course.

Table 2 self-evaluation table of students' learning effect

In this class, you:	Mark your score				
Learn about basic information of Yang Liwei and space.	1	2	3	4	5
Can cooperate with your group members effectively.	1	2	3	4	5
Can grasp the admirable points of Yang Liwei.	1	2	3	4	5
Can use simple past tense to describe things happened in the past.	1	2	3	4	5

The summary and reflection of teaching can also be based on homework. Teachers assign open assignments and choose topics according to students' interests, and students can choose by themselves.

Must do homework: Use the simple past tense to introduce another famous astronaut and try to choose the words in the book.

Choose to do homework: Check the information to see what activities astronauts have in space and describe them in the general past tense.

Table 3 list of students' writing requirements

Perspectives	Requirements
Language	Brief, correct, no grammatical mistakes
Contents	Related to the passage
Structure	Clear and logical

3. Conclusion.

This thesis has achieved some results through the in-depth study of English classroom reading teaching based on core literacy. In the process of research, it is deeply aware of the importance and positive influence of core literacy in English classroom reading teaching.

The English classroom reading teaching model based on core literacy can not only improve students' reading ability, but also promote their all-round development. By cultivating students' language ability, thinking quality, cultural awareness and learning ability, we have laid a solid foundation for students' future. To sum up, with the deepening of education reform, under the background of "establishing morality and cultivating people", the use of BOPPPS teaching model in primary school English teaching has become an important choice, which not only defines the train of thought and direction for the current primary school English teaching innovation, but also enriches the educational connotation of English teaching.

As far as teachers are concerned, in the process of teaching design, it should give full play to the leading role of core literacy, determine curriculum objectives, select curriculum contents and innovate teaching methods on the basis of subject core literacy, construct hierarchical and measurable teaching modules based on BOPPPS teaching model, gradually guide students to read articles, grasp the main idea, learn to use grammar in real situations, and do a good job in timely detection and evaluation. In order to maximize students' participation and learning effect ^[7], and then help students to master scientific learning methods and learn to solve problems.

However, it is also aware that there are still some problems and challenges in practice, which need us to explore and improve constantly. It is need to further optimize teaching methods and improve teachers' professional literacy in order to better adapt to the changing educational environment.

Although this study has achieved some results, there are still many aspects that need to be further studied and discussed. It is believe that English classroom reading teaching based on core literacy will continue to play an important role. It will continue to devote ourselves to the research and practice in this field and contribute to the development of English education. It is also expected that more educators to pay attention to and participate in this research, jointly explore innovative teaching models and methods, and strive to cultivate a new generation of talents with core qualities.

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Research on the generation path of ideology and politics in auditing courses from the perspective of " Three-Dimensional Holistic Education "

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Abstract: The construction of "curriculum ideology and politics" is of great significance for colleges and universities to adhere to the socialist direction of running schools, implement the fundamental task of cultivating people with virtue, and ensure that the work of educating people runs through the whole process of education and teaching. As an important tool to maintain and stabilize the capital market, it is necessary to cultivate audit talents with "firm beliefs, proficient in business, pragmatic style, integrity and integrity". Therefore, this paper takes the perspective of "three comprehensive education" as the starting point, and focuses on the current problems in the ideological and political education of the auditing major, such as the poor connection of the integrated all-staff education team, the discontinuity of the whole process of education, and the lack of organic linkage of all-round education. The synergistic effect of ideological and political education and professional education is not significant, and the supply of ideological and political work is not matched with the growth needs of students, and it is impossible to integrate ideological and political concepts into all stages of education. In order to clarify the logical way of thinking, adhere to the problem-oriented, focus on the four dimensions of "governance, concept, channel, supply and demand", take governance as the foundation, and use concept and channel Supply and demand are connected as pillars, and innovative practice paths are used to promote the integration of professional knowledge of auditing and ideological and political concepts, so as to achieve the effect of collaborative education.

Key words: Audit; Three-dimensional education; Ideological and political courses

1. Introduction

"What kind of people to cultivate, how to train people, and for whom to train people" is the fundamental issue of college education. In the face of the current disconnect between ideological and political education and general education and professional theory education in colleges and universities, some teachers attach too much importance to "knowledge transfer" and ignore "value guidance" in the teaching process, which makes some students have a lack of recognition of the course and self-worth High Questions. Therefore, there is a need reform the higher education system. How can the reform be

carried out? General Secretary Xi Jinping pointed out the direction for us in the ideological and political conference of colleges and universities, and we should adhere to the principle of cultivating people with virtue as the central link, run ideological and political work through the whole process of education and teaching, realize the education of all staff, the whole process of education, and all-round education, and strive to create a new situation in the development of China's higher education. Subsequently, President Xi Jinping proposed that to do a good job in the ideological and political education of college students, it is necessary not only to strengthen and improve ideological and political theory courses, but also to make all kinds of courses and ideological and political theory courses go in the same direction to form a synergistic effect. In order to realize that in the process of in-depth promotion of "three comprehensive education", grasp the common points of ideological and political education, general education and professional education, build a collaborative system of curriculum ideological and political education and professional courses, and integrate ideological and political concepts into the teaching design, teaching process, teaching evaluation and other processes of each subject, so as to form a "curriculum ideological and political education, three comprehensive education model".

As an independent third party to verify the financial statements prepared by the enterprise, the audit is an important basis for the financial credibility of the enterprise and an important influencing factor for investors when making decisions. Therefore, audit plays an important role in maintaining and stabilizing the capital market. As an important tool for maintaining and stabilizing the capital market, auditing needs auditors with correct socialist core values as a strong backing. However, in the process of training audit talents, it has not fully explored the scientific spirit, humanistic spirit, independent spirit and national spirit of auditing embodied in the audit course group, and the combination of audit value guidance and knowledge transfer is blunt, and the value leadership awareness and ideological and political education ability are insufficient, resulting in insufficient value leading function validity. This will eventually lead to the students we cultivate not being aware of their own role and the importance of professional quality, resulting in the lack of students' sense of value experience and value shaping ability. Therefore, it is necessary to strengthen the synergistic effect of ideological and political education and professional courses. By telling the audit story, spreading the spirit of auditing, and publicizing the value of auditing in the auditing course. In order to achieve the dual educational purpose of "knowledge transfer" and "value guidance", and cultivate audit talents with good values.

2. Research on the relationship between "three comprehensive education" and "curriculum ideology and politics".

2.1 Research on "three comprehensive education".

The "Outline for the Implementation of the Project for Improving the Quality of Ideological and Political Work in Colleges and Universities" points out that it is necessary to "build an integrated quality system of ideological and political work in colleges and universities with perfect content, sound standards, scientific operation, strong guarantee and remarkable results, and form a pattern of all-round education for all staff and the whole process". The proposal of "three comprehensive education" has put forward new requirements for the organization, team, resources and environment of college education.

Li Haihan (2019)^[1] and Zhang Rui(2020)^[2] carried out the "three-comprehensive education" with curriculum ideology and politics. It is believed that the all-staff, whole-process and all-round education is

an important measure to improve the level and quality of ideological and political education from the collaborative perspective of "big ideology and politics" in colleges and universities, and the implementation path of synergy effect is discussed from the three dimensions of factor synergy, relationship synergy and spatial synergy. Gu Yuwen (2015)^[3] analyzed and studied the ideological and political work of college teachers from the perspective of "three comprehensive education", and put forward better guidance for ideological and political education in colleges and universities through the establishment of monitoring mechanism, evaluation mechanism, and incentive mechanism.

Yang Xiaohui (2018)^[4] expounded the practical dilemma of not forming a joint force of education, the poor connection of the education process, and the organic linkage in the process of educating people in colleges and universities, and gave the corresponding path selection according to the dilemma.

Through the review of domestic research literature, most of the research on "three-dimensional education" is based on the specific education methods of how to realize the whole staff, the whole process and the all-round education, and the research is developing in a more detailed direction, which enhances the actual influence of ideological and political education to a certain extent, and brings theoretical support for reference to the work of ideological and political education.

2.2 Research on "Curriculum Ideology and Politics".

"Ideological and Political Education Courses" are compulsory for university students, serving as a vital pathway to help them establish correct outlooks on life, values, and the world, as well as an important means to understand the construction of socialism with Chinese characteristics. "Curriculum-based Ideological and Political Education" refers to infiltrating ideological and political education into the process of imparting knowledge, experience, and activities, transforming the acquired knowledge into inherent moral character during the process of knowledge transmission. The challenge of effectively transitioning from "Ideological and Political Education Courses" to "Curriculum-based Ideological and Political Education" constitutes a major difficulty in ideological and political teaching in universities and is a hotly debated topic among scholars. Qiu Weiguang (2017)^[5] suggests that the generation path of "Curriculum-based Ideological and Political Education" is influenced by multiple factors, with teachers being the key, textbooks the foundation, resource excavation a prerequisite, and institutional construction the fundamental guarantee. Teachers should, on the basis of imparting course knowledge, guide students to transform the knowledge they have learned into inherent moral character.

By sorting through the relevant literature reviews on curriculum-based ideological and political education, we can discern that the research scope encompasses various aspects such as the relationship between "Ideological and Political Education Courses" and "Curriculum-based Ideological and Political Education," the value origins of "Curriculum-based Ideological and Political Education," the current status of the specialized ideological and political curriculum system, and the reform of the ideological and political curriculum system. These studies provide a theoretical foundation and reference for the construction of curriculum-based ideological and political education. Nevertheless, there are still some deficiencies in the existing research. For instance, the research scope tends to be broad, lacking specific integration with various disciplines and resulting in a lack of targeted focus. Moreover, the depth of research is relatively shallow, with most studies taking a holistic approach but lacking logical

considerations on issues such as how to conduct classes and achieve teaching objectives, leading to weak integration between ideological and political courses and specialized courses. These gaps represent the direction for future research on curriculum-based ideological and political education.

2.3 Research on the Relationship between Holistic Education and Ideological and Political Education Embedded in Courses

How to integrate the concept of ideological and political education into the process of "holistic education that encompasses all personnel, all stages, and all aspects" is a hot topic among scholars. Firstly, holistic education is conducive to forming a joint force for moral education in the ideological and political education of college students. Holistic education requires all faculty and staff to play their role in educating students during the teaching process. Therefore, integrating ideological and political education with the concept of holistic education involves breaking down the specific goals of ideological and political education into specific departments and individuals and linking them to performance. This requires each teacher to enhance their own ideological and political thinking and subtly impart ideological and political awareness to students during the teaching process, thereby creating a synergistic effect and ensuring that all tasks are implemented effectively.

Secondly, holistic education throughout the entire process is conducive to achieving continuity in students' ideological and political education. In implementing curriculum-based ideological and political education, it is essential to pay attention to the characteristics of students at different stages and integrate ideological and political education into each phase of their education. Teaching content should be adjusted promptly based on specific implementation situations to ensure the continuity of ideological and political education. Due to the long-term, complex, and frequent nature of holistic education throughout the process, it requires coordination among departments, as well as strengthening of discipline development, organizational construction, and other aspects. For example, interdepartmental coordination necessitates that all departments and secondary colleges within the university address questions such as "what should be done?", "what can be done?", and "what are the shortcomings?" During the promotion of comprehensive education. After understanding the strengths and weaknesses of each department and college, efforts should be made to achieve platform integration, complementary advantages, and resource sharing. Strengthening discipline development requires relying on the university's existing theoretical research centers to further integrate expert resources from related disciplines, advance curriculum and textbook development, and enhance the timeliness and attractiveness of courses. Strengthening party organization construction necessitates sufficient attention to party organization construction from the top down, encompassing the university, secondary colleges, and student party branches. With the concept of socialism with Chinese characteristics at its core, collaborative efforts should be made to advance ideological and political work, harness the enthusiasm and initiative of party members, foster exemplary role models, and drive overall improvements in students' ideological and political awareness through targeted interventions that spread from point to area.

Lastly, holistic education in all dimensions enhances the effectiveness of ideological and political education for college students. It necessitates the comprehensive utilization of various carriers, forms, and content to integrate resources and foster students' all-round development. In this process, teachers

can gather current affairs, examples of exemplary figures, and other content to integrate with professional knowledge, engaging students in discussions and evaluations through videos, case studies, and other methods in the classroom. This allows students to not only acquire knowledge but also elevate these forces and use them as inner role models to inspire themselves. Furthermore, a "second classroom" can be established through social practice, volunteer services, campus culture activities, and other initiatives to promote the organic integration of ideological and political education with socialist values.

3. Shortcomings in the Construction of Ideological and Political Education in Audit Courses from the Perspective of "Three-Comprehensive Education"

3.1 The integration and coordination of the all-staff education team is inadequate

The concept of "all-staff education" is conducive to forming a collaborative educational force for ideological and political education among university students. It requires all faculty and staff to play their educational roles in the teaching process. However, currently, universities face challenges in the effective integration of educational forces under the all-staff education model. Firstly, ideological and political education for university students primarily revolves around specialized political courses, without synergistic development with professional courses. Political teachers are primarily responsible for disseminating ideological and political concepts, while professional teachers impart specialized knowledge, operating in parallel tracks without achieving a collaborative educational force or fostering a subject-based educational mindset. Secondly, administrative and service staff at universities have frequent interactions with students in their academic and daily lives, yet most of them only perform tasks assigned by the university, believing that the responsibility for student education lies solely with academic teachers, thus neglecting their own role modeling responsibilities as "teachers" in practical work. Lastly, students themselves lack sufficient self-awareness. The university stage is crucial for cultivating self-control and learning abilities, during which the guidance of schools and teachers is pivotal. Additionally, self-education among university students is equally important. However, at present, students do not demonstrate high levels of interest in national political events or sensitivity to national development and current affairs, which inevitably affects the effectiveness of ideological and political education, thereby hindering the formation and advancement of the collaborative educational force.

3.2 The synergistic effect between ideological and political education and professional education is not significant.

The stronger the knowledge and abilities of the students we cultivate, the greater their potential contribution to society in the future. However, what determines this potential? It depends on their values. Therefore, value shaping plays a crucial guiding role in the growth of students. In auditing teaching, however, we have not fully explored the ideological and political elements embodied in the courses, such as scientific spirit, humanistic spirit, and value guidance. The integration of ideological and political concepts with knowledge imparting is clumsy, and there is a lack of awareness of value guidance and ideological and political education capabilities, leading to insufficient effectiveness of value guidance functions. Ultimately, this will result in our students being unable to create maximum value for society.

3.3 The supply of ideological and political work does not accurately match the growth needs of students.

"Teaching students in accordance with their aptitudes" refers to the formulation of talent cultivation plans and tailored education based on students' characteristics, aspirations for development, as well as current social needs and the themes of the times. However, at present, the ideological and political work in universities falls short in terms of system establishment, staffing, technological empowerment, and precise governance. This results in a mismatch between the supply of ideological and political work and the growth needs of students, creating a dilemma where "students are running with the times, while ideological and political workers are chasing after them."

3.4 The goal of comprehensive education has not achieved organic integration and coordination

Currently, schools are continuously encouraging teachers to fully explore moral education resources in the classroom and conduct moral education. While some progress has been made, it still remains at the level of knowledge education, failing to effectively integrate theory with practice, resulting in insufficient organic linkage between in-class and out-of-class activities. Secondly, the integration between the small classroom within the school and the larger classroom of society is not close enough. For students to apply and contribute their learned knowledge to society, they need to practice and refine it in the broader context of society. However, current teaching tends to focus more on the small classroom within the school, preventing students from applying their knowledge in practice, which leads to weaker internalization of knowledge. Lastly, with the development of the times, many teachers have tried online teaching methods such as micro-lectures and MOOCs, but these methods still involve replicating knowledge onto the internet for teaching, where students still passively receive knowledge without effective teacher-student interaction, resulting in insufficient linkage between online and offline learning.

4 . A Conceptual Framework for Researching the Path of Ideological and Political Construction in Audit Courses under the Perspective of "Three-Comprehensive Education"

The ideological and political work in universities, when integrated into the talent cultivation system, should follow a logical approach, adhere to a problem-oriented mindset, and focus on the four dimensions of "governance, concepts, channels, and supply-demand." With governance integration as the foundation, and the integration of concepts, channels, and supply-demand as the pillars, innovative practical paths should be explored.

4.1 Governance Integration: Establishing an Integrated Education System

The fundamental aspect of integrating ideological and political work into the talent cultivation system in universities in the new era lies in establishing a sound, comprehensive, scientifically standardized, and effectively operated system and mechanism, thereby constructing an "integrated" education system that is adapted to the modern university governance system.

4.1.1 Strengthening the Overall Planning of Party-led Education

Strengthening the party's overall leadership over education is the fundamental guarantee for running socialist education with Chinese characteristics and achieving normalization of holistic education. Firstly, it is necessary to implement the responsibility of university party committees as the main body for the normalization of holistic education, giving full play to their important role in setting

directions, managing overall situations, making decisions, and promoting implementation. Secondly, it is crucial to improve the system of school leaders taking the lead in educating students, enhancing and promoting institutional arrangements for leaders to go deep into the front lines of students to understand their ideological trends and serve their needs, thereby carrying out the overall planning of ideological and political construction from the top level.

4.1.2 Clarifying the Responsibility of Holistic Education and Enhancing the Sense of Responsibility for Active Participation

University teachers are the main force in holistic education, but for a long time, the division of responsibilities within universities has been relatively strict, with significant fragmentation between teaching, management, and service functions. Apart from the ideological and political course teachers and student affairs staff, other faculty members in different departments tend to prioritize their professional work over education to varying degrees. Therefore, universities should establish a list of educational responsibilities for each department, tailored to the job attributes, content scope, and service targets of faculty members. By linking this educational responsibility list with faculty members' performance evaluations and professional title assessments, universities can fully mobilize the awareness of active participation in holistic education among all staff members.

4.1.3 Establishing Role Models to Inspire Students' Intrinsic Motivation for Self-Improvement

Students are both the recipients and the subjects of educational activities, and they need to play an active role in self-education and educating others while receiving education. Therefore, in the process of holistic education, it is also necessary to fully mobilize the initiative of the educational subjects themselves. This can be achieved by establishing role models and selecting a group of outstanding students and exemplary Party members as examples or implementing a one-on-one mentoring system. By using people and events from their immediate surroundings to build bridges of education among students, the synergistic and collaborative educational effects of peer role models can be fully leveraged.

4.2 Concept Integration: Promoting the Deep Integration of Ideological and Political Education with Professional Education

Auditing, as an independent third-party assurance structure, plays a vital role in maintaining and stabilizing the capital market. As an essential tool for safeguarding and stabilizing the capital market, auditing requires auditors with correct socialist core values as its backbone. Therefore, during the training process, emphasis should be placed on nurturing students' professional qualities such as serving the public, honesty in service, and a balanced development of both morality and law. The values of "responsibility, loyalty, integrity, law-abiding, independence, and dedication" must be seamlessly integrated into students' consciousness. In promoting the deep integration of ideological and political education with professional education, we can proceed from various dimensions: From the perspective of sentiment, integrate ideological and political elements of national confidence, cultural confidence, and patriotism to cultivate auditing talents with a professional sentiment; From the perspective of quality, integrate ideological and political elements such as adhering to principles, impartial law enforcement, honesty and integrity, and trustworthiness to nurture auditing talents with professional ethics; From the perspective of consciousness, integrate ideological and political elements of quality

awareness, standard awareness, and national awareness to cultivate auditing talents with a bottom-line consciousness in their profession; From the perspective of ability, integrate ideological and political elements related to governing the country, serving the people, and cultural inheritance to develop auditing talents with professional competence.

4.3 Supply-Demand Integration: Implementing a Comprehensive "Precision Ideological and Political Education" Initiative

To address the mismatch between the supply of ideological and political work and the growth needs of students, individualized teaching is essential. Firstly, to solve the problem of mismatch between content supply and student demand, it is crucial to focus on understanding what students truly need. This requires educators in universities to conduct thorough research, dynamically monitor students' individual characteristics and growth patterns, and have a clear understanding of their current growth needs, thereby enabling precise teaching. Secondly, to address the mismatch between the methods of delivery and the unique growth characteristics of students, universities need to achieve a synergistic effect between explicit and implicit education. The growth environment of post-2000s students, who form the majority of the new generation of university students, has shaped their lively minds and strong self-awareness. Traditional didactic teaching methods may elicit resentment and disregard from students. Therefore, during the teaching process, it is necessary to change teaching methods and emphasize the integration of "transmission-based" explicit education with "culturally immersive" implicit education.

4.4 Channel Integration: Establishing a Comprehensive Education Channel

4.4.1 Building a Comprehensive Service-Oriented Education Mechanism Both Inside and Outside the Classroom

The ideological and political work in universities permeates the entire talent cultivation system, with the effective connection between in-class (first classroom) and out-of-class (second classroom) activities being the key. The first classroom focuses on imparting knowledge but often weakens practical cognition. Hence, the second classroom serves as a complementary force, reinforcing students' subjective cognition and personal experiences through practical activities such as social practice, volunteer services, and campus culture. In this way, the shaping of values is subtly imparted into students' hearts.

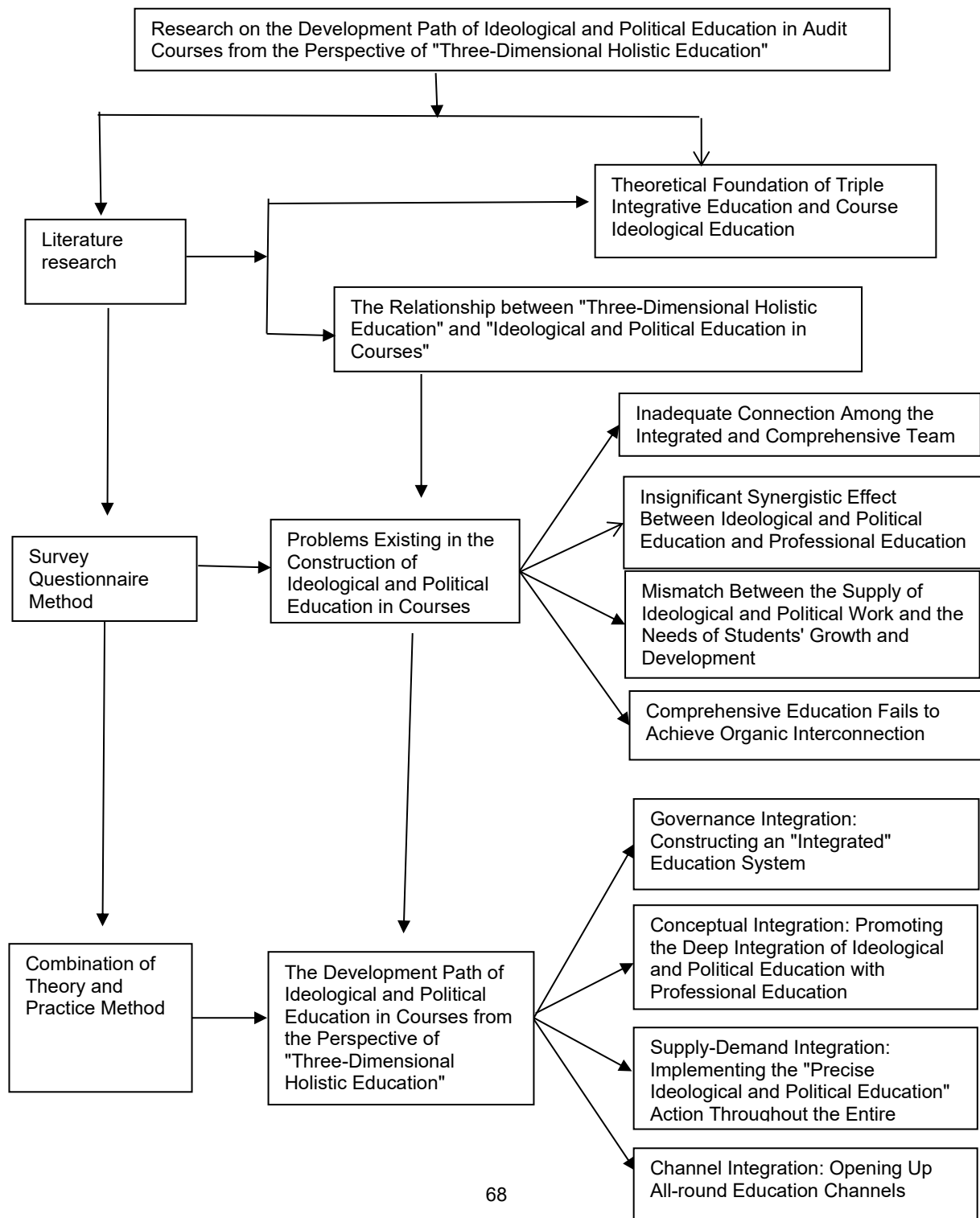
4.4.2 Building a Comprehensive Service-Oriented Education Mechanism Combining Internal and External Resources

The ideological and political work in universities necessitates the integration of the small classroom of ideological and political education within the campus with the broader social classroom. Within the campus, the ideological and political classroom fuses professional knowledge with ideological and political awareness to provide students with value guidance and shaping services. By expanding students' professional theoretical knowledge base, their theoretical accomplishments and values are further refined. The broader social classroom, on the other hand, offers value application services to students, enabling them to develop clear and correct values in the process of analyzing and solving Social hot topics, difficult issues, and everyday problems.

4.4.3 Building an Omni-directional Education Mechanism Combining Online and Offline Approaches

In the era of the Internet and knowledge sharing, platforms such as "China University MOOCs, iCourse, and Learning Power" have become primary channels for students' self-directed learning. President Xi also emphasized that "new media and new technologies are the trend of the times, and we must fully promote the deep integration of the traditional advantages of ideological and political work with information technology." Therefore, in the process of establishing an omni-directional education mechanism that combines online and offline approaches, universities should fully enhance the strengths and roles of ideological and political work. Especially amidst ideological clashes and the blending of diverse social thoughts, it is imperative to leverage the role of ideological and political education, turning cyberspace into a primary battlefield for students' self-directed learning, and achieving a resonant synergy between knowledge education and values education.

Picture1: Structural Thought Diagram



5. Conclusion

The introduction of "ideological and political education in curriculum" in universities is a necessity to improve and strengthen ideological and political work, a manifestation of fulfilling the primary responsibility of educating people, an inevitable requirement to promote the realization of comprehensive, all-for-one, and all-through-the-course education, and a powerful driving force to comprehensively enhance the level and quality of ideological and political work in universities. Therefore, during the education process, universities should establish a curriculum system that explores the value implications of each course to ensure the smooth achievement of ideological and political education goals.

Due to its characteristics of supervision and evaluation, auditing plays the role of an economic health check in the new era of socialism with Chinese characteristics and bears the historical mission of safeguarding public interests through oversight. Consequently, as an auditor, one must possess a deep sense of patriotism and always make safeguarding national and public interests the starting point for professional activities and judgments. Furthermore, auditors should uphold the standards set forth by President Xi for the construction of the auditing team: "firm beliefs, proficient in business, pragmatic in style, and upright and incorruptible." By studying the generation path of ideological and political education in auditing courses from the perspective of "comprehensive, all-for-one, and all-through-the-course education," we can provide direction for the construction of ideological and political education in auditing, ultimately achieving the effect of collaborative education.

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Retraction Notice

Reference of the retracted article:

YIN, Yulai, and ZHANG Xiaoyu. (2024). "Body Mass Index and Causal Relationships with Four Characteristic Female Cancers: A Two-Sample Mendelian Randomization Study." *Global Academic Frontiers*, 2(1), 8-18.

The publishers of *Global Academic Frontiers* have received a formal request for retraction from the author, Yulai Yin, regarding the aforementioned article.

After thorough review and careful consideration of the author's request, we have decided to grant the retraction and hereby remove the article from our publication. However, due to the open-access nature of our journal, the article may still be accessible on certain websites and indexing services beyond our immediate control. Despite our best efforts, we may not be able to remove it from all such platforms.

We sincerely apologize for any inconvenience or confusion this retraction may cause to our readers and the wider academic community. We appreciate your understanding and cooperation in this matter.

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