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**RESEARCH ON EXTREME POVERTY GOVERNANCE
BASED ON SOCIAL NETWORK ANALYSIS**

LEI WENYONG

SINGAPORE MANAGEMENT UNIVERSITY
2019

Research on Extreme Poverty Governance Based on Social Network Analysis

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Submitted to Lee Kong Chian School of Business in partial fulfillment of the requirements for the Degree of Doctor of Business Administration

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2019

Declaration

I hereby declare that this PhD dissertation is my original work
and it has been written by me in its entirety.

I have duly acknowledged all the sources of information
which have been used in this dissertation.

This PhD dissertation has also not been submitted for any degree
in any university previously



[

LEI WEN YONG

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7 May 2019

Abstract

Research on Extreme Poverty Governance Based on Social Network Analysis

LEI WENYONG

In The "Mitigate Extreme Poverty through Dual-Network Embedding Strategy", Wenyong LEI goes inside some of China's most remote and poorest villages and tries to reveal the determinants, correlates and strategies to address the gap of existing poverty governance system and the complexity and diversity of poor population. He offers in-depth insights into what the poor people think about poverty with two major indicators, identifies evidence on the feasibility of dual-network embedding strategy to reduce poverty, and explains how diverse groups hit by extreme poverty could develop entrepreneurship relationship with diversified market and available social economic resources. Drawing on examples that take place in Xide County, a remote and poor village in Sichuan Province, Wenyong offers specific strategies that trigger trust, spark value, restore right, and drive positive change.

The rigorous analysis and consultation used in developing this dissertation found that commercial mechanism in combination with social assistance framework enable those deprived of rights for basic living and development to build up entrepreneurship by inviting and inspiring them to get involved in diversified market with promised investment through elements of cooperation among resources, assets and capital.

Wenyong unearths the intertwined interdependent relationship between social and industry networks, which play a key role to mitigate extreme poverty so that the poor people could obtain knowledge, capability and resources through social assistance framework while practice industry operation and management in a diversified market. He identifies three key measurement deliverables as component of a three-dimensional model to evaluate to what extent this dual-network embedding strategy has reshaped the expectation and practice of poor villagers in the field of trust, value and right. Same model can also be adopted to analyze the ongoing situation and barricades that need to be addressed when coping with poverty reduction.

Keywords: Extreme Poverty; Social Network Analysis; Dual-Network Embedding Strategy; Entrepreneurship; Diversified Market

Table of Contents

Chapter1 Introduction	1
1.1 Research Background and Significance.....	1
1.1.1 Research Background	1
1.1.2 Research significance.....	8
1.2 Research content and innovation points	10
1.2.1 Research content	10
1.2.2 Innovation points	13
1.3 Research method and technology roadmap.....	14
1.3.1 Research method.....	14
1.3.2 Technology roadmap.....	16
Chapter2 Poverty and anti-poverty	18
2.1 What is "poverty"?.	18
2.1.1 Income poverty	19
2.1.2 Capabilities poverty	20
2.1.3 Entitlement poverty.....	21
2.1.4 Conceptual relationship of poverty	22
2.2 Anti-poverty and poverty governance.....	24
2.2.1 The meaning of anti-poverty.....	24
2.2.2 Theory of anti-poverty	25
2.3 Commercial mechanism and poverty governance	35
2.3.1 The theory of commercial mechanism to poverty government	35

2.3.2 The potential and research challenges for the use of business approaches to address extreme poverty	54
2.4 Summary.....	63
Chapter3 Research on the governance framework of extreme poverty	65
3.1 Characteristics and connotation of extreme poverty.....	65
3.2 The status of extreme poverty governance	68
3.2.1 Strategies for poverty governance	68
3.2.2 The system of poverty governance	75
3.3 The attribute of extreme poverty governance	83
3.3.1 The essence of poverty governance	83
3.3.2 The mechanism for the extreme poverty governance	90
3.4 summary	98
Chapter 4 The prototype design of the extreme poverty governance network	103
4.1 Basic theory and guidance.....	104
4.1.1 stakeholder theory	105
4.1.2 Partnership theory	107
4.1.3 Social network theory	109
4.1.4 social embeddedness theory.....	111
4.2 Analysis on the governance subjects of extreme poverty	113
4.2.1 Stakeholders in the governance of extreme poverty	114

4.2.2 The rights and interests of subjects in the extreme poverty governance	116
4.2.3 The subject relation of extreme poverty governance	122
4.3 The prototype construction of the extreme poverty governance network	129
4.3.1 The prototype construction of industrial network.....	130
4.3.2 The construction of social network prototype.....	136
4.4 Application design of extreme poverty governance network	141
4.4.1 Analysis principles of the extreme poverty governance network .	141
4.4.2 The analysis thought of extreme poverty governance	144
4.5 Proposed theoretical Model and Main Hypothesis	145
4.6 Summary.....	149
Chapter 5 The Xide County case of extreme poverty	152
5.1 Xide County’s current situation of extreme poverty management in	153
5.1.1 Social and economic development in Xide County	154
5.1.2 History of poverty Governance in Xide County	160
5.2 Original network of Xide County extreme poverty mangement	164
5.2.1 Main body and activities of the original network of extreme poverty management in Xide County	164
5.2.2 The structure of the original network of extreme poverty management in Xide County	169

5.3 Characteristics of the evolution of extreme poverty management networks in Xide County.....	183
5.3.1 Ways for poor households to participate in the network.....	183
5.3.2 Ways for companies to participate in the network	187
5.3.3 The way the government participates in the network	192
5.3.4 Three-dimensional cube model of poverty governance network..	198
5.4 Obstacles on the evolution of extreme poverty management networks in Xide County.....	201
5.4.1 Obstacles on the development of the authority dimension	202
5.4.2 Obstacles on the development of the value dimension.....	204
5.4.3 Obstacles on the development of the trust dimension	206
5.5 Summary.....	208
 Chapter 6 Tieqilishi Group’s Industrial Poverty Alleviation Strategy in Xide County.....	 210
6.1 Strategic positioning of network.....	210
6.1.1 Reduce the cost of poverty governance in whole society	210
6.1.2 Create the top business card in Liangshan.....	211
6.1.3 Reshaping the core competitive advantages of Tieqilishi Group..	211
6.1.4 Increase the motivation of poor households	212
6.2 Network’s core structure.....	212
6.2.1 Stakeholder module	215
6.2.2 Business Planning Module.....	219

6.2.3 Implementation module	224
6.2.4 Branding Module	228
6.2.5 Risk Prevention and Control Module	230
6.2.6 Information Communication Feedback Module.....	235
6.2.7 Knowledge Transfer Module	238
6.3 New network for extreme poverty governance in Xide County	241
6.3.1 The subjects and activities of the new network of extreme poverty governance in Xide County	241
6.3.2 Structure of the new network of extreme poverty governance in Xide County.....	251
6.4 Verification of core hypothesis	265
6.5 Summary.....	267
Chapter 7 Conclusion and Future Research.....	270
7.1 Conclusion	270
7.2 Future Research	279
References.....	281

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LEI WENYONG

Chengdu, March 6, 2019

Chapter1 Introduction

1.1 Research Background and Significance

1.1.1 Research Background

Poverty is a worldwide social and economic phenomenon. To alleviate and eliminate poverty is the basic requirement for the development and stability of human society. In 2013, the World Bank set a goal of eradicating extreme poverty and aimed to reduce the number of people living on less than \$1.25 a day to 3% of the global population by 2030¹. In 2015, the United Nations set "eradicating all forms of worldwide poverty by 2030" as the primary sustainable development goal in <2030 Agenda for Sustainable Development >.

In developing countries, poverty is more likely to come from the countryside (Rahman A, Siyu Zhong, 2005). In 2016, China's cabinet, the State Council, released a poverty alleviation plan for the 13th Five-Year Plan period (2016-2020) with the goal of "steadily realizing poverty alleviation under the current standard (the latest poverty line: per capita income less than 2,300 RBM/year) by 2020 and ensuring the rural poor people have enough food and clothing, adequate compulsory education, health services and housing. The per capita disposable income of farmers in poor areas is more than doubled compared with that in 2010, whose growth rate is higher than the national

¹ \$1.25 is the international poverty line measured at constant 2005 international dollar PPP (2005 dollar PPP price). In 2015, the World Bank adjusted this poverty line to \$1.9 based on the constant 2011 international dollar PPP.

average level. The key indicators for basic public services are close to the national average level. It makes sure that rural residents living in poverty are lifted out of poverty under China's current standards, and that all poverty-stricken counties will be out of poverty and the regional issue of poverty will be taken care of."

From the perspective of the international community and the situation of poverty governance in various countries, poverty governance mainly depends on three major approaches. Firstly, the overall social and economic development lifts the poor population with conditions and ability out of poverty and realizes personal development driven by the economic development demand. Research shows that the growth rate of economic aggregate is closely related to the poverty (Bird, 2004; Bing Hu et al., 2007; Jun Wang, Yong Hu, 2018). The nature and pattern of economic growth (that is, the degree to which different groups benefit from economic growth) as well as the degree of initial inequality are important factors affecting the effect of economic growth on poverty alleviation (Yifu Lin, 2004; Angang Hu et al., 2006). The development gaps among regions, urban and rural areas, and social strata are constantly widening, and such inequality increasingly influences the poverty alleviation effect of economic growth (Fosu, 2010; Zhong Li et al., 2014). Secondly, the poverty alleviation and development strategy helps the region or poor population out of poverty through poverty alleviation and development projects targeted on specific areas or specific poverty population. Studies have shown that the capacity-building for sustainable development in poor areas should be a long-term goal of national policies (World Bank,

2009). The government-led poverty alleviation and development strategy has made remarkable achievements in poverty alleviation. However, in the process of implementing the strategy and policies, the problem of targeting deviation reduces the effect of poverty alleviation and development (Weibing Zhang, Sangui Wang, 2013). Thirdly, a bottom-line social security system would be established and the poverty population is ensured to achieve basic living standards through assistance. It is reported that the social assistance system for low-income population has not only the effect of poverty alleviation, but also the effect of horizontal income redistribution among social members (Allegrezza, 2004; Holsch & Kraus, 2006). The subsistence allowance system in rural China has alleviated poverty to some extent, but there are obvious interval differences and levels in the operation of the subsistence allowance system. Due to the seriously low poverty standard and the lower subsistence allowance standard, the poverty alleviation effect is limited.

Due to the efforts of the international community and various countries themselves, the global poverty rate has dropped dramatically in the past two decades (Figure 1-1). The poverty rate is expected to be lower than 8.6% in 2018, which far from the World Bank's goal of reducing the poverty rate to 3% by 2030 (World Bank, 2015). In practice, poverty governance still faces great challenges, which are mainly reflected in the following aspects.

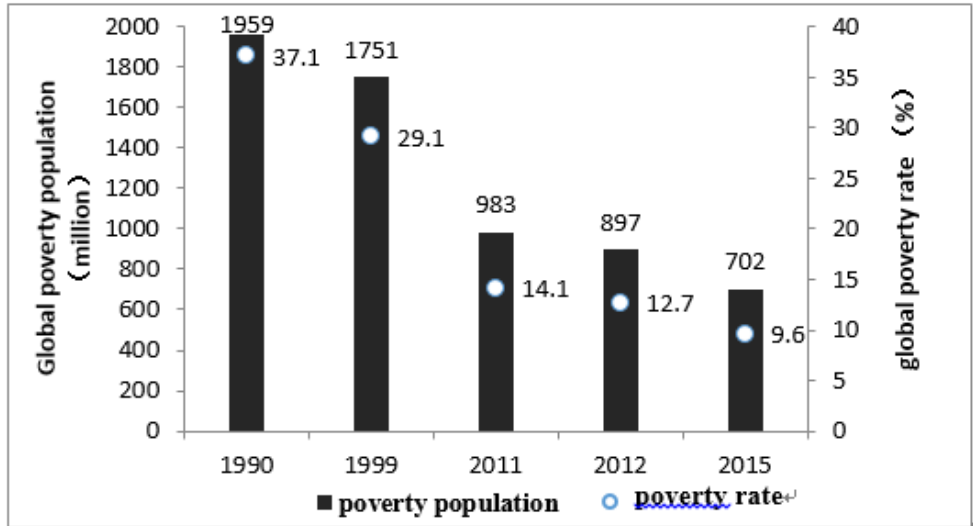


Figure1-1 Global poverty population and poverty rate ²

(1) The challenges from the macro level

Firstly, economic growth slows down, which raises the constraints on poverty governance. In its global monitoring report, the World Bank pointed out that every one percentage reduction in global poverty rate needs an annual GDP growth of 4% as an effective support (GMR, 2016)³. As the poverty rate continues to fall, especially if it is very close to the 3% target, the marginal effect of poverty governance brought by economic growth will decrease. In other words, the average annual GDP growth rate needs to exceed 4% to bring the poverty rate down by 1%.

Secondly, the climate change would increase the pressure on poverty governance. The changes in environmental climate affect the agriculture and regional economy through factors such as regional agricultural phenology, rainfall, drought and flood,

² The 2015 data were the world bank's projections at the time.

³ The GMR is a global monitoring report jointly released by the international monetary fund and the world bank (Global Monitoring Report).

which in turn pose challenges for the population that depends on agricultural development. And the government has to start poverty alleviation work through adjusting the government's poverty control related policies, environmental protection policies, ecological restoration measures and other related policies. According to the estimation of the World Bank, the climate change would increase about 10.1 million poor people globally by the middle of this century without an effective greenhouse gas emission reduction plan (GMR, 2016).

(2) The challenges from micro level

Firstly, the development-oriented poverty governance is not precise enough. The lack of precision in the implementation of the government-led development-oriented poverty governance strategy, has resulted in the insufficient ability of many important poverty governance and development projects to reach the poor and low-income population. Besides, the ultimate beneficiaries of the projects are usually the non-poverty people or the people with low poverty degree in the poor areas, due to the existing problems in the distribution mode of development-oriented poverty governance projects. On the contrary, the real poor people, especially the extremely poor people, can hardly benefit directly from the poverty governance development projects (Nguyen et al., 2006; Xiaoming Liu, 2017).

Secondly, the efficiency of poverty governance resources is low. China's poverty governance resources are mainly fiscal funds and policy-based finance, which leads to increased financial pressure. With the development of the economy, the financial input

also needs to increase. Meanwhile, it is difficult to combine the special financial input with the market organically. The overall flexibility of the government in allocating poverty governance resources is insufficient, and even the funds are scattered because of departments and events, resulting in multiple management and other problems affecting the efficiency of resources allocation. In 2009, less than 3% of the poor households with working capacity received funds for poverty governance (China rural poverty monitoring report, 2010).

(3) The challenges from the gap between the vision of poverty alleviation and the effectiveness of poverty alleviation work

The difference between the vision of poverty governance and the actual effect of poverty governance is mainly manifested in the diminishing marginal effectiveness of poverty governance policies. According to the practice of poverty governance in China, the year 2020 is less than three years away, while the number of poor people in China is still as high as 16.6 million in 2018⁴. This means that China needs to reduce the number of people living in poverty by more than 5.5 million every year to realize the 13th five-year plan for poverty alleviation on schedule without considering poverty-returning. As the poverty governance enters a crucial stage, the marginal effect of poverty alleviation policies shows a decreasing trend. The supporting policies need more investment to achieve the goal of poverty alleviation (Alonso et al., 2003; Chengwei Huang, 2016).

⁴The data source: National Bureau of Statistics. http://www.gov.cn/shuju/2019-02/15/content_5365982.htm?

In addition to the diminishing marginal effect of poverty alleviation policies, China has made little progress in solving the extreme poverty problem with the average daily living on less than \$ 1.25, showing the characteristics of continuous regional poverty. Based on this, the General Offices of the Communist Party of China and the State Council issued the <the implementation opinions on supporting poverty alleviation in poverty-stricken areas> in 2017. The deep-poverty-stricken areas include Tibet province, Tibetan regions across four provinces, four prefectures in southern Xinxiang province, Liangshan prefecture in Sichuan, Nujiang prefecture in Yunnan province and Linxia prefecture in Gansu province (called three regions and 3 prefectures), as well as poor counties with more than 18% of the poverty incidence and poor villages with more than 20% of the poverty incidence. *The guideline* pointed out that these areas had poor natural conditions, weak economic foundation and deep poverty, which were the tough parts of poverty alleviation. The key to overcome poverty is to make up for these shortcomings.

From the research background, many problems are difficult to solve in the practice of poverty governance, including insufficient funds for poverty governance, poverty targeting, poverty diversity and the applicability of path selection, insufficient ability of the lowest income population and the problems of extreme poverty. These problems can be summarized as the micro complexity of extreme poverty that restricts the implementation performance of the macro poverty governance strategy, including the poverty alleviation problems of extreme poverty population and the sustainable

problems of extreme poverty governance performance. Based on this, under the social and economic development new normal of the slow macro-economic growth speed, this study is to get through the path between microcosmic complex phenomenon of extreme poverty and macro strategies of extreme poverty governance, explore and summarize the systemic mechanism of extreme poverty from micro to macro and the management operational mechanism of extreme poverty governance from macro to micro in terms of the multi-subject participation based on social network analysis method.

1.1.2 Research significance

Studying the operational mechanism of extreme poverty governance involving multi-subjects, has both theoretical and practical significance for improving the performance of extreme poverty governance in China and the world.

(1) Theoretical significance

Firstly, this research provides theoretical basis and support for "targeted poverty alleviation". The lack of sorting out the sustainability mechanism of poverty has led to a series of problems starting from the inaccurate targeting of the poverty population, which are particularly prominent in the current stage of poverty alleviation. Therefore, the exploration of the systematic mechanism of extreme poverty (helping the real poor) and the operational mechanism of extreme poverty governance (real poverty alleviation) in essence provides a certain theoretical basis for targeted poverty alleviation.

Secondly, this research provides a supplement for the theoretical research on the governance of extreme poverty. Studies on the use of commercial means to govern

extreme poverty have produced several theories such as corporate social responsibility, BOP, inclusive innovation and social enterprise. To explore the systematic mechanism of extreme poverty and the operational mechanism of extreme poverty governance under the current conditions, it is more important to solve the governance problem of extreme poverty population. To some extent, this study also supplements BOP and other theories.

(2) Practical significance

Firstly, to explore the systematic mechanism of extreme poverty plays an important role in the sustainable development of extreme poverty governance practices. From the perspective of depth, the problem of extreme poverty is the most difficult to solve in the field of poverty alleviation at present. Systematic analysis of its internal mechanism provides a basis for accurately positioning the starting point of extreme poverty governance activities. From the perspective of the breadth, the extreme poverty problem contains more abundant poverty causing factors, and other poverty problems are only a subset of the extreme poverty problem. Therefore, solving extreme poverty also provides a reference for solving other poverty problems. For example, when the work of extreme poverty governance is faced with specific bottlenecks, there should be an evaluation criterion based on the systematic mechanism of extreme poverty, to decide which methods should be adhered to and which methods should be adjusted or abandoned. From the perspective of dimension, the solution of extreme poverty can drive the reform of social governance structure. The intervention of external forces

would impact the original social governance structure of extreme poverty and result in some changes in the internal composition, the state of subject and the external boundary to form a new social governance structure.

Secondly, to explore the multi-subject governance mechanism of extreme poverty provides a series of reliable experience from theory to practice for Tieqilishi group and other enterprises to participate in the multi-subject governance of extreme poverty. The theoretical viewpoints proposed in this study provide reference experience for enterprises to participate in the governance model of extreme poverty.

1.2 Research content and innovation points

1.2.1 Research content

The topic of this study is "research on the governance of extreme poverty based on social network analysis", which is divided into seven chapters.

Chapter one is introduction. This part mainly introduces the research background, research significance, research content, innovation points, research methods and technology roadmap of this paper to present the design ideas and logical framework of this study as a whole.

Chapter two is poverty and anti-poverty. This part sorts out the cognition of poverty in existing studies from the historical development of thinking evolution and the researches on anti-poverty and anti-poverty theories to explain the urgency and feasibility of studying poverty governance mechanism from a micro perspective. On

this basis, combining with the problem characteristics of extreme poverty, this part sorts out the poverty governance theory of micro commercial mechanism to analyze the extent to which these commercial means can help solve the problem of extreme poverty, so as to find out the research gap faced by commercial means in the governance of extreme poverty and export the scientific problems and innovation points of this study.

Chapter three is the research on the governance framework of extreme poverty. Based on the output results of the second chapter, a framework for the governance of extreme poverty is established to address the research gap in the governance of extreme poverty. Firstly, this part extracts the concept of extreme poverty from the characteristics of extreme poverty population. Accordingly, this part explores the essence of the problems faced by the extreme poverty governance under the current conditions by analyzing the development of the extreme poverty governance theory and governance system, and then tries to build an analytical framework for the study of extreme poverty governance.

Chapter four is the prototype design of the extreme poverty governance network. Based on the output results of the previous chapter and the governance framework of extreme poverty, this part analyzes the multiple subjects, relationships and subordinate networks of extreme poverty governance from the perspective of network, designs the governance network of extreme poverty, and puts forward the basic principles and analytical ideas of the application analysis of extreme poverty governance network.

Chapter five is the extreme poverty governance case of Xide County. This part

focuses on the analysis idea of extreme poverty governance network proposed in the previous chapter, and analyzes the current situation of extreme poverty governance based on specific real cases. Therefore, this part firstly analyzes the current situation of extreme poverty governance in Xide County of Liangshan prefecture from the social and economic development and historical evolution of poverty governance. Accordingly, the governance structure and obstacles of extreme poverty in Xide County are extracted and the function orientation of the commercial mechanism participating in the extreme poverty governance in Xide County is clarified for Tieqilishi group.

Chapter six is the strategy of double network embedding in Xide County. This part firstly analyzes the strategic positioning of Tieqilishi group in the governance of extreme poverty from the double embedding of social network and industrial network, the obstacles and mechanism design of Tieqilishi group in the governance of extreme poverty in Xide County. Based on this, this part presents the strategic measures taken by the group to govern the extreme poverty in Xide County, and evaluates the effects of the governance. Finally, the part puts forward the corresponding suggestions and countermeasures for Tieqilishi group.

Chapter seven, the last chapter, is conclusion and prospect. Based on the content of the above six chapters, this part sorts out the main viewpoints of the research, and puts forward the deficiency of the current research and the general direction of future research.

1.2.2 Innovation points

The innovation of this study mainly lies in the following three aspects

Firstly, as the scholars' concept cognition of poverty is more superficial and based on the interpretation of various disciplines, there is a lack of a unified systemic framework of inner explanation. Therefore, the first innovation point is to extract the essential attributes and governance mechanism of extreme poverty from the natural and social attributes of poverty in this study.

Secondly, there are some defects. For example, the governance subjects of extreme poverty are scattered. Indeed, the way to balance the interests and contradictions between the governance subjects is not considered and the research on the relationship between the subjects is not systematic at present. Therefore, the second innovation point is to put forward the network model of multi-subject governance of extreme poverty, and construct the multi-level and multi-dimensional subject network relationship from the perspective of the embedding of industrial network and social network.

Thirdly, currently, researches lack the inner explanation of the essence of extreme poverty governance, and conduct the behaviors analysis of extreme poverty governance from the surface. While this research presents an inner explanation of poverty governance. Therefore, the third innovation point is to build a systematic explanation of extreme poverty governance from the inner layer based on the theoretical logic of resource, asset and capital from the perspective of economics to provide theoretical basis and support for targeted poverty governance.

1.3 Research method and technology roadmap

1.3.1 Research method

According to the demand of this study, the following research methods are mainly used.

(1) Literature research method

The relevant domestic and foreign researches on the governance of extreme poverty are reviewed, compared, summarized and deduced based on the extensive collection and reading of electronic databases such as Science Direct, Springer, Wiley, Web of Knowledge, CNKI and other domestic and foreign professional journals, magazines, monographs, papers and reports to form the basic theory and research ideas of this study.

(2) Delphi method

The author visited experts and scholars who have studied poverty governance for years, especially extreme poverty governance, from Sichuan Academy of Social Sciences, International Food Policy Research Institute, School of economics in Peking University, Sichuan University and Sichuan Agricultural University. Through investigations and interviews, the author got to know the current situation and problems of extreme poverty governance.

(3) Case study method

Compared with other research methods, case study can provide a solid description and systematic understanding of the case, and grasp the dynamic interaction process

and the context of the situation, so as to obtain a more comprehensive and holistic view (Gummesson, 1991). The case study method is often effective for the various processes of research organization and strategy. Especially, when the method adopts a holistic and long-term process-oriented perspective, the research results are often unexpected but authentic (Eisenhardt, 2012). Xide County of Liangshan Yi autonomous prefecture is a state-designated poverty-stricken county, which has been in a state of extreme poverty for many years. Therefore, this study chooses the extreme poverty governance in this region as the research object, which is not only representative and typical, but also able to effectively analyze and extract the elements and mechanism of extreme poverty governance. This meets the relevant conditions for case study proposed by Eisenhardt (1989).

(4) Social network analysis method

Social network analysis method is mainly used to analyze the status of relationships among actors, to find the characteristics of relationships and the impact of these relationships on organizations (Wolfe, 1995; Jiade Luo, 2010) and to vividly depict the dynamic changes in the network (Frédéric Gilbert et al., 2011; Fenghua Pan, 2013). To analyze the changes in the state of Xide extreme poverty governance, this study adopts the social network analysis method to depict the structure of industrial network and social network before and after the national key ecological function areas of Xide confirmed by the State Council in 2016. This study presents the difference of poverty governance on embedded network and governance mechanism, and

accordingly puts forward the suggestions and countermeasures for the extreme poverty governance.

1.3.2 Technology roadmap

This study intends to adopt literature research method, deductive method, inductive deduction method, case study method and social network analysis method together with the stakeholder theory, governance theory and mechanism design theory to study the problems of extreme poverty governance. The specific technology roadmap of this study is shown in figure 1-2.

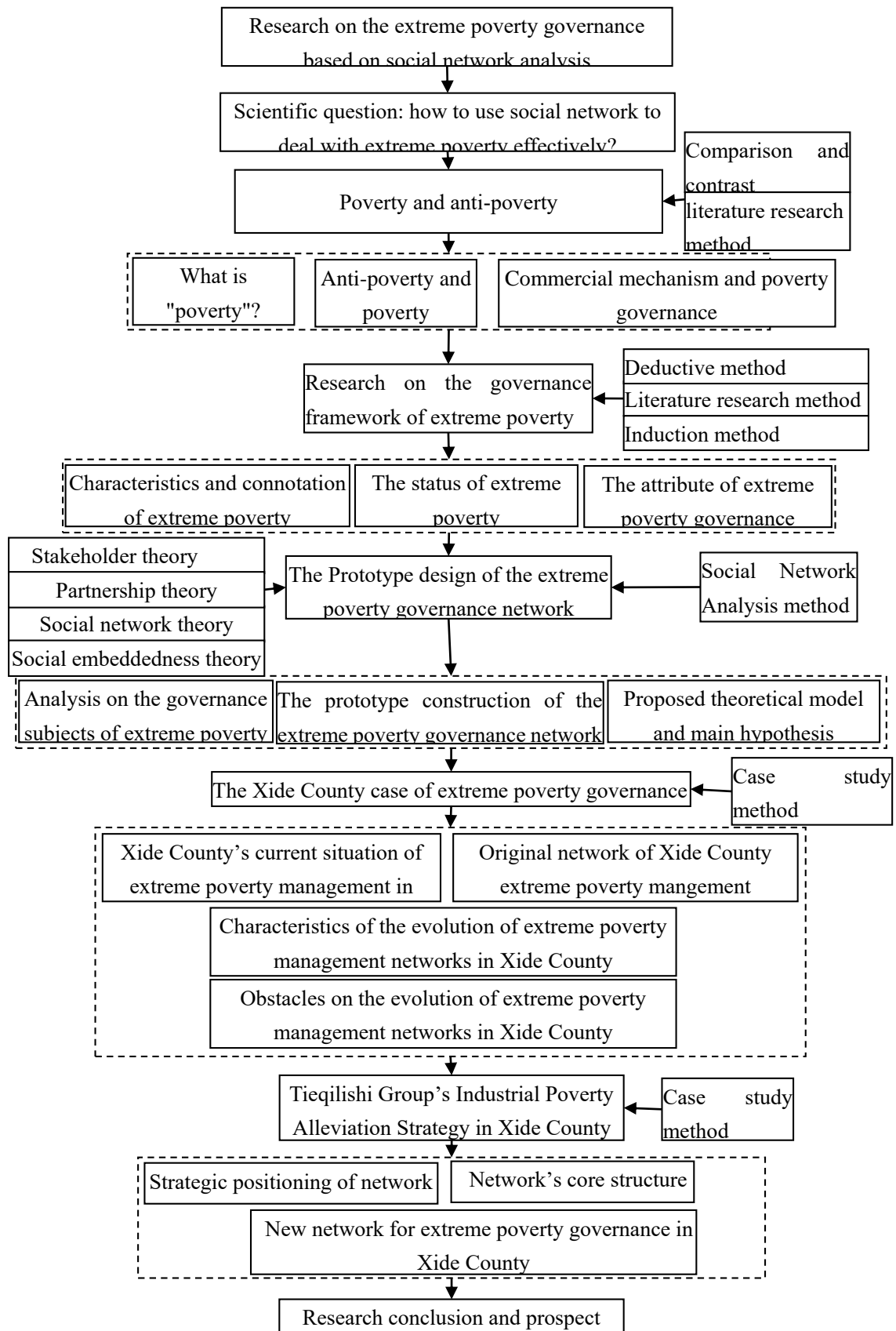


Figure1-2 Technology roadmap of this study

Chapter2 Poverty and anti-poverty

Poverty governance was a process from economic input to social value output (Porter & Kramer, 1999). On the one hand, several well-known scholars such as Muhammed Yunus, Michael Porter, Mark Kramer and C.K. Prahalad, advocated using various new business practices to achieve poverty governance; on the other hand, a few social entrepreneurs led the enterprise thinking concept of creating social value.

This chapter starts from the concept cognition of poverty and sorts out scholars' cognition of poverty. Secondly, it analyzes the theoretical system of anti-poverty and focuses on the theoretical perspective of current poverty research. Finally, from the perspective of historical development in thinking evolution, this chapter sorted out the existing theories of business practices to participate in poverty governance, explored the business approaches to solve poverty problems, and analyzed the research gaps of business practices to participate in the governance of extreme poverty associated with the problem characteristics of the extreme poverty.

2.1 What is "poverty"?

As for the concept of poverty, scholars explained it from the perspectives of economics, sociology, development science, politics and other disciplines, resulting in the concept cognition from three different attributes (income poverty, capabilities poverty and entitlement poverty).

2.1.1 Income poverty

Income poverty is the simplest concept of poverty, which is defined as the state that the family's income is not enough to pay the minimum living expenses necessary for the survival of its members. This concept reflects two interlocking connotation. One is insufficient income and the other is "basic needs" as the reference object of insufficient income. This means that the concept of income poverty requires firstly understanding basic needs and then further measuring the state of relative insufficiency of income.

"Basic needs" becomes the core of the poverty definition, leading to the definition of basic needs themselves. Food, nutrition, housing, clothing, sanitary facilities, household electricity, clean water, living fuel, living energy, interior ground materials, basic medical care, compulsory education and other basic necessities of life (e.g., Townsend et al., 1987; Blank, 2008, etc.) are all components of "basic needs". Among them, some are necessary to meet the food needs for adequate nutrition, while others are non-food needs such as clothing and housing (Khandker & Haughton, 2009). "Basic needs" reflects human society's demand for basic welfare equity. It is no wonder that the World Bank calls it "well-being" and defines poverty as the deprivation of well-being (World Bank, 2000).

For the poverty population, basic needs are the basic costs that they must bear to meet their survival needs. In a market economy, these costs are counted as currency form. Food demand, for example, can be measured in calories per person

per day and converted into currency at market prices, while non-food demand can be estimated and converted by combining Engel's coefficient with food demand (Ravallion, 2012). The currency measurement of basic needs forms the poverty line as "average daily living cost of \$3.1 purchasing power parity"⁵ (Lowder et al., 2017), below which people are considered to be poor.

2.1.2 Capabilities poverty

The concept cognition of capabilities poverty is defined as a phenomenon of deprivation of basic feasible capabilities, rather than a lack of income to meet basic needs (Sen, 1976). The feasible capabilities refer to the various possible functional activities that an individual is likely to achieve and it represents the essential life freedom owned and cherished by an individual reasonably. The concept of capabilities poverty starts from the factors of the poverty subject and emphasizes what a person can accomplish rather than just what he does (Sen, 1999).

With regard to the lack of capabilities to cause poverty, scholars mainly start from the poverty cases they come into contact with and make continuous induction, including the capabilities to prevent hunger, malnutrition and disease, accept basic education, improve housing conditions and living standards, enjoy social communications, respect and political freedom (Bruno et al., 2016), as well as the

⁵ Before 2011, the average daily cost of living was 1 purchasing power parity dollar. In 2011, it was adjusted to the average daily living cost 2 purchasing power parity dollar. In 2015, it was adjusted to the daily living cost 3.1 purchasing power parity dollar.

self-employability of the poverty population (Ara et al., 2016), assets control ability (Yunus, 2012) and the fragility at risk and so on.

The manifestation of feasible capabilities deprivation is multidimensional. On the one hand, it is based on people's judgment of the current social and economic environment conditions; on the other hand, it also considers that the heterogeneity of different poverty groups has different requirements for the capabilities of specific poverty alleviation. Therefore, the study on the lack of capabilities leading to poverty further introduces the cognition of poverty from the currency perspective to the non-monetary perspective of measuring poverty (Bourguignon & Chakravarty, 2003), which strengthens the exploration of poverty causes. Furthermore, when depicting the state of poverty, income is no longer taken as the standard, but life expectancy, emotion, health, thinking, leisure and other capabilities deficit indicators are also used as the content of poverty measurement (Nussbaum, 2003) to form the basic paradigm of multi-dimensional poverty measurement (Alkire & Foster, 2007).

2.1.3 Entitlement poverty

The concept of entitlement poverty is defined as the lack of the entitlements relationship owned by people and basic competencies attached to the entitlements relationship (Strobel, 1996). In the economic field, it is difficult for the poverty population to obtain more economic income due to the lack of capital, technology and other production factors. In the political field, they lack the ability and

opportunity to participate in political activities. In the social field, due to the uneven structure of rights, they suffer from a lot of bias and exclusion, which makes them always in poverty (Hilaski, 2011; Williams et al., 2016).

The concept cognition of entitlement poverty emphasizes that "inequality" of entitlement is the cause of poverty, which is not only reflected in the "deprived" state of capabilities poverty, but also in the "excluded" state of social members in the existing entitlement system. Therefore, to live a decent life, the poverty population needs to be empowered in production, exchange, mobility and other aspects. Empowering the poverty population is the fundamental way to solve the problem of poverty (Sen, 2011).

2.1.4 Conceptual relationship of poverty

Income poverty is the most direct manifestation of poverty. Without the perceptual understanding of income poverty, it is impossible to pay attention to poverty. The definition of income poverty often means that people define the "phenomenon" of poverty, thus effectively dividing social groups into "poverty" and "non-poverty" groups and focusing on the objects of poverty.

Capabilities poverty further expands the definition of poverty "phenomenon", and the lack of capabilities is also understood as poverty. In the measurement of multi-dimensional poverty, this leads to the inevitable emergence of some groups which are classified as "non-poverty" under the original definition of income poverty, but "poverty" under the definition of capabilities poverty. From the

perspective of development, even if these groups do not currently belong to the income poverty, they would be transferred to the income poverty in the future due to the lack of capabilities. Therefore, capabilities poverty in essence introduces the attention to poverty phenomenon into the field of self-realization ability of poor individuals while expanding the definition of "poverty phenomenon". That is, the inadequacy of the individual's capabilities to realize self-value leads to the fact that even if the opportunity is fair, it is difficult for the individual to seize and create the value needed to maintain his own survival and development.

Entitlement poverty explains the causes of poverty from a more macro perspective. Both the so-called "deprived" and "excluded" represent the relatively unfair status of the poverty population in the current entitlement system. It is this unfair status that causes the poverty population to have no access to opportunities, that is, the opportunities faced by the poverty population are unfair.

The cognitive relationship among income, capabilities and entitlement poverty is shown in Figure 2-1. The spatial dimension from micro to macro reflects the evolution process of poverty from quantitative to qualitative change. The time dimension from short to long term reflects the process of poverty analysis from appearance to essence. The cognitive path from income to capabilities poverty ("A-B") is the expansion of poverty phenomenon in time dimension from the micro perspective. The cognitive path from income poverty to excluded entitlement poverty ("A-D") expands the causes of poverty in the spatial dimension from a short-term perspective. The cognitive path from capabilities poverty to deprived

entitlement poverty ("B-C") expands the causes of poverty in spatial dimensions from a long-term perspective. The cognitive path from deprived entitlement poverty to excluded entitlement poverty ("D-C") expands the cause of poverty in time dimension from the macro perspective.

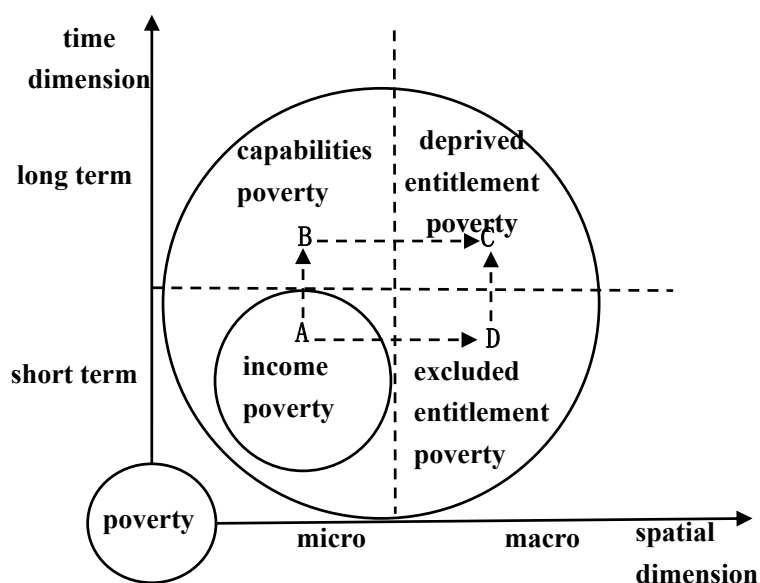


Figure 2-1 Conceptual cognitive relationship figure of poverty

2.2 Anti-poverty and poverty governance

From the perspective of research issues, poverty and anti-poverty are two aspects of the problem. The broad theory of anti-poverty includes discussions on poverty connotation, poverty measurement, and anti-poverty strategies.

2.2.1 The meaning of anti-poverty

From the existing anti-poverty process and effect, there are three expressions of anti-poverty (Goldal, 1991): First, poverty reduction -- From the existing anti-poverty process and effect, there are three expressions of anti-poverty (Goldal, 1991): First, poverty reduction (Poverty reduction) -- ensuring the basic living

standards of the poor to survive to reduce the number of poverty population; second, poverty alleviation--reducing the possibility of poverty by creating fair income distribution; the third poverty eradication--completely eliminates poverty from society.

These three expressions do not actually have a strict boundary. Poverty reduction emphasizes more on results, and the process can be either short-term or long-term. While poverty alleviation emphasizes more on the process, which is aimed at longer-term and with prevention purposes. Eliminating poverty is the ultimate goal of combating poverty. From this broader perspective, reducing poverty and alleviating poverty are both processes and means to achieve poverty eradication.

Mcgregor (2007) defines anti-poverty goals as three levels: the first level is the direct improvement of the material life of the poor; the second level is the status of the poor in social relations or the benefits of society or the improvement of ability; the third level is the improvement of the cognitive differences from the subjective and psychological aspects of material life and social relations. Thus when doing anti-poverty activities, activity hosts must consider the breadth of poverty, the depth of poverty, and the historical evolution of poverty.

2.2.2 Theory of anti-poverty

Poverty is a long-standing and widespread social phenomenon and anti-poverty is a complex systematic project. Severe practical problems require

theoretical guidance, and provide a space for testing, perfecting and deepening the theory, thus forming an evolving theoretical system of anti-poverty.

2.2.2.1 Anti-poverty theory from the perspective of balanced growth

R.Narkse (1953) put forward the "vicious circle of poverty" in his book "The Problem of Capital Formation in Underdeveloped Countries", arguing that poverty is a vicious cycle of low income due to the inability of capital to be effectively formed from both supply and demand in the market: In terms of supply, low income means low savings rate, which leads to insufficient capital formation, low labor productivity, low production capacity, low output, leading to low income. From the perspective of demand, low income means low purchasing power and low purchasing power means low investment attractiveness, resulting in insufficient capital formation, low labor productivity, low production capacity ,low output, leading to low income.

Nelson (1956) proposed a "low-level equilibrium trap", which says that per capita income is low and can only satisfy the need to maintain a minimum standard of living. In other words, high mortality and slow population growth reduce household savings. Increasing savings and investment by increasing national income will lead to population growth, which will bring per capita income back to a lower level. This low level of development is also a kind of equilibrium without external interference. It is the reason why poverty is difficult to get rid of.

Leibenstein (1957) proposed a "boundary minimum effort" and believed that

to break the “vicious circle of poverty” and jump out of the “low level equilibrium trap”, the investment rate must be sufficient to make the growth of national income exceed the population growth, so that the improvement on per capita income level is obvious and lift the national economy out of poverty with “critical minimum efforts”.

Scholars in the field of balanced growth emphasize the importance of economic growth for solving poverty problems. The low income level caused by insufficient capital is the root cause of poverty. Capital scarcity is the main obstacle to economic development. Solving the problem of capital source has become a fundamental way of eliminating poverty. At the same time, Nelson stressed that under the impetus of no external force, the "vicious circle of poverty" and "low-level equilibrium trap" will be an equilibrium phenomenon that cannot be broken. It cannot be solved by relying on the development of poverty-stricken areas. The significance of these theoretical studies is that providers of anti-poverty resources can only come from outside poverty-stricken areas, such as governments and NGOs, through which large-scale investments in poor areas can ensure that investment levels are higher than “boundary minimum efforts”, realizing the ultimate goal of poverty alleviation.

2.2.2.2 Anti-poverty theory from the perspective of structural coordination

Lewis (1954) proposed a "dual economic structure model", pointing out that there is a serious "dual economic structure" within developing countries. That is the

modern industrial and technologically backward traditional agricultural coexisting economic structure. He also says that the dual structure contradictions such as medium production methods, infrastructure and personnel spending power are the main causes of slow development and poverty. The main reason for the formation of the “dual economy” structure is the difference in labor productivity between the industrial and agricultural sectors. Therefore, it is necessary to accelerate agricultural development and improve agricultural efficiency (Ranis G & Fei, 1961), highlighting the market mechanism in promoting the disintegration of the dual economy(Jorgenson, 1967).

Myrdal (1957) put forward the theory of “circulating cumulative causality”, arguing that in a dynamic social process, social, economic, political, cultural and other factors are interrelated and mutually influential, and there is a cyclical causal relationship. Changes in one socio-economic factor will cause another change in socio-economic factors. This change in the latter factor, in turn, reinforces the change in the former factor and leads to a change in the socio-economic process along the original factor, thus forming a cumulative cyclical development trend. For example, the “low-income cycle cumulative causal exercise” is characterized by low per capita income, resulting in low living standards, malnutrition, impaired health, low level of education, and thus low labor quality. Low labor quality means that low productivity is difficult to increase, output is low and income is low, and low income strengthens poverty. He pointed out that poverty is not a hidden economic phenomenon. Insufficient capital formation and income inequality are

important factors leading to poverty.

Kuznets (1955) pointed out that the accumulation of capital and higher return on capital will maintain or even increase income inequality. The liquidity of wealth within the society is relatively poor. The growth of per capita income of low-income groups may not compensate for the decline in the proportion of income, thus the income inequality is more serious. It is difficult to reach the average level of the agricultural industry, which will cause more material and mental pain. The industrialization process and the slow flow of social wealth and the low savings rate will reduce the expectations and struggles of low-income people for future income growth. The actual income of households will not increase greatly in one generation or several generations. While the dynamics are indispensable for low-income groups to work hard in the early stages of economic development. Thus the increase in social income inequality is likely to cause conflicts between low-income groups and social structures and governments. The key point of the problem lies in how the government can reduce the cost of economic transformation as much as possible while satisfying the desire for more resources and higher human pursuits that people continue to produce with economic growth.

Schultz (1964) puts forward the "human capital theory", which believes that the decisive factors for improving the welfare of the poor are not space, energy and cultivated land, but the improvement of population quality and the advancement of knowledge. Human capital is a kind of capital embodied in labor. It is expressed by the quantity and quality of laborers. It is formed through investment and plays a

productive role. The form of human capital includes education, on-the-job training, and health improvement. He advocated that the government should pay attention to the investment of human capital in low-income people, especially the transfer of agricultural labor, preventing the idle and aging of human capital.

Todaro (1969) believed that the elimination of the dual economic structure of developing countries is not based on the continuous influx of rural population into cities, but on improving agricultural production capacity, improving rural living conditions, reducing the speed of rural population movement to cities, enabling coordinated development of cities and villages and fundamentally improving the lives of the poor. He advocated changing the structure of social income distribution through means such as government transfer payments to improve the living conditions of low-income groups.

Under the perspective of structural coordination, scholars emphasize the importance of economic coordination in solving poverty problems. Under the premise of recognizing the fundamental role of economic growth and capital development in solving poverty problems, they emphasize the structural obstacle of capital under certain economic conditions. It is believed that the formation of capital is affected by the rate of return, and it is impossible to spontaneously produce a fair distribution result. The dual economic structure caused by the difference in labor productivity and the lack of internal liquidity of wealth in different income groups in society are the manifestations of capital structural obstacles. The further formation of unfair income distribution is the reason for strengthening poverty. The

policy significance of these theoretical studies is that anti-poverty needs to solve the structural obstacles of capital, improve the labor productivity of traditional industrial sectors through government-led human capital investment and national income redistribution adjustment, and break through the “low-income cycle cumulative causality”, to achieve economic integration and development.

2.2.2.3 Anti-poverty theory from the perspective of social relations

Sen (2001) pointed out that to understand the prevalence of poverty, frequent hunger or famine, parties should not only focus on ownership patterns and exchange rights, but also on the factors behind them. This requires careful consideration of the mode of production, the structure of the economic hierarchy and the interrelationship between them. In a market economy of private ownership, typical rights relations mainly include: trade-based rights, production-based rights, self-labor. Rights、 inheritance and transfer rights. Unreasonable or even failure of the rights system leads to poverty and famine. He believes that so called five types of “instrumental Freedom”, including political freedom, economic conditions, social opportunities, transparency guarantees and protective guarantees, are keys to promoting human viability and can help people live more freely and improve their overall ability. He advocated that in order to completely fight against poverty, it is necessary to "understand poverty and deprivation according to the life that people can actually enjoy and the freedom they actually have. Then authorities can use these understandings as basics to formulate anti-poverty plans and continuously improve people's viability, thus promoting people's "all-round development."

Robison et al. (2002) pointed out that poor people as social groups do not exist independently. Their rights and even their ability not only involve economic relations, but also involve a wider range of emotional relationships, added value and institutional norms, thus introducing anti-poverty social capital paradigm. Quillian and Redd (2006) argued that using social capital to explain poverty mainly includes two logics: the first logic believes that due to the uneven distribution of social capital, the social capital of the poor is seriously insufficient compared with the strong groups (such as the rich group). There are even deficits, so the difference in social relations strengthens the favorable position of the strong groups, thus worsening the situation of the poor. The second logic argues that the nature of the internal network of poor people can explain the difference in poverty levels, as these relationships act as resources in the process of social stratification. Therefore, anti-poverty should regard social capital as a resource and continuously optimize the external network and internal network of the poor (Woolcock & Narayan, 2000).

From the perspective of social relations, scholars emphasize on analysis of the reasons for the social, political and legal aspects of poverty and famine from the economic and psychological perspective. Rights and social capital are the embodiment of comprehensive economic relations and social relations. The heterogeneity of the poor people is the root cause of their poverty. The policy significance of these theoretical studies is that anti-poverty activities must start from the reality of the poor, then invest in the organizational capabilities of the poor, protect their exchange rights, change social norms, and support leaders who can

lead the development of the poor.

2.2.2.4 Enlightenment of anti-poverty theory

The anti-poverty theory from the balanced vision to the structural vision to the social vision has a relatively obvious time-separation relationship, which is constantly supplemented and developed on the basis of continuous digging of the functional imperfections of the theory. The evolution of the anti-poverty theory system is not only a process from economic research to social research to comprehensive research, but also a process from macro to meso to micro-study, as shown in Figure 2-2.

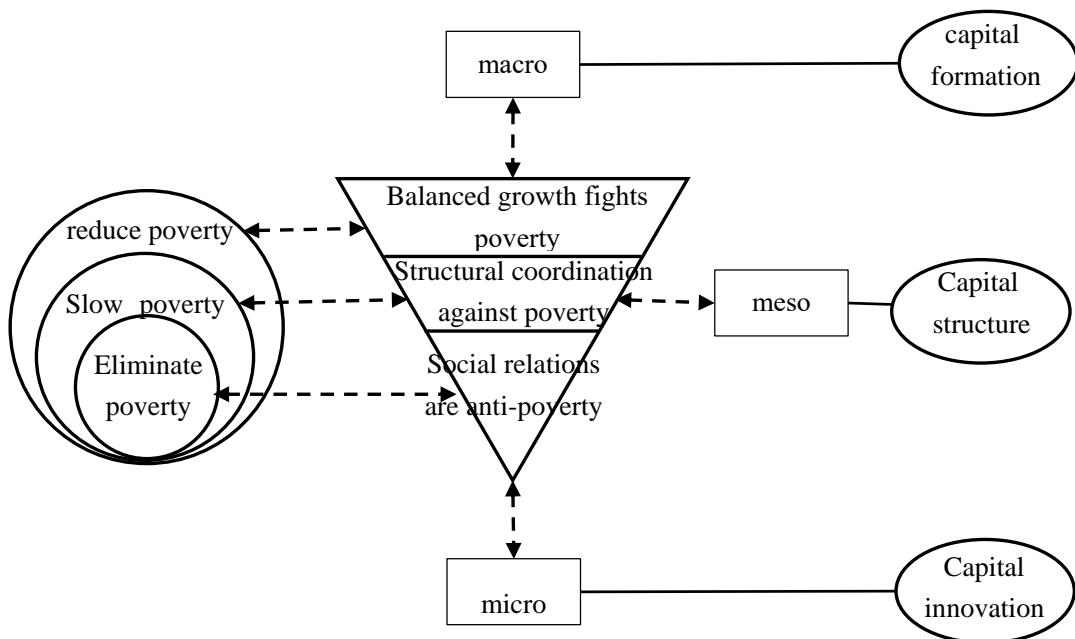


Figure 2-2 The theoretical evolution of anti-poverty

The theory of anti-poverty under the balanced view is the manifestation of mainstream economic thoughts in the West. It regards poverty as an "income problem" and discusses how to realize the orderly development of economic growth

and population growth from a macro level. Therefore, its anti-poverty thinking is to reduce poverty through the promotion of "economic efficiency."

The theory of anti-poverty under the structural perspective is a manifestation of Western development economics. It believes that poverty is a problem of income, but it should be interpreted as a "structural problem". From the medium level, it is discussed how to coordinate the economic growth between regions and industries. Therefore, its anti-poverty thinking reflects the poverty alleviation by weakening the imbalance of economic growth through "economic equity".

The anti-poverty theory from the perspective of social relations believes that poverty is not only an economic issue, but also a social issue. The economic base determines the superstructure, and the superstructure also counteracts the economic base. At the micro level, simply emphasizing economic development does not necessarily benefit the improvement of the environment in which the poor live. Therefore, its anti-poverty thinking pays more attention to the comprehensive development of economy and society, and further expands the structural focus to more detailed rights and social capital and explores the micro-mechanism to eliminate poverty.

The enlightenment of the development of theory to the study of poverty and anti-poverty is that research should grasp the environmental factors from a macroscopic perspective, grasp the institutional factors from the perspective of the mego perspective, and grasp the mechanism factors from the microscopic

perspective, thereby integrating the capital formation, capital structure and capital innovation of anti-poverty resources. From a comprehensive perspective, the main body of solving poverty problems is no longer confined to the government. Those who can provide “external effects” for the poor groups together constitute a pluralistic poverty management system, which makes the micro-level research of anti-poverty more comprehensive.

2.3 Commercial mechanism and poverty governance

In the study of microscopic mechanisms, the study of commercial mechanisms incorporates many theoretical ideas. On the one hand, well-known scholars such as Muhammed Yunus, Michael Porter, Mark Kramer and CK Prahalad advocate the use of new business methods to achieve poverty governance; on the other hand, many social entrepreneurs lead the corporate thinking concept of creating social value.

2.3.1 The theory of commercial mechanism to poverty government

The study on the use of business practices for poverty governance can be traced back to the discussion about the role of enterprises in society. In particular, the debate on the positioning of the corporate social role produced the cognitive system of corporate social responsibility (CSR). Under the cognitive system, some entrepreneurs and scholars realized that CSR should not be regarded as the external conditions of the enterprise, and enterprises should integrate CSR factors into their core strategies, such as targeting the BOP market, or intensifying supply chain and

distribution chain through strengthening community participation to achieve inclusive innovation. Instead, another group of entrepreneurs and scholars sublimated this view, arguing that the use of business practices was mainly to realize social goals, not for economic benefits and social goals should become the guiding principles for business activities and even the primary goal for the existence of poverty governance organizations.

2.3.1.1 CSR

British scholar Oliver Sheldon first used the term CSR in 1923. Only in the 1960s and 1970s did the term spread widely in the academic world with the rise of multinational corporations. Nonetheless, there is no accepted definition of CSR even to this day. It was better understood as a set of theories and practices (Blowfield & Frynas, 2005), which emphasized the following points: (1) the enterprises were responsible for the social and natural environment affected by them, which sometimes went beyond the basic individual responsibility required by law; (2) the enterprises were also responsible for the behavior of other partners who had business relations with them; (3) business relations determined that a enterprise need operate a broader social relationship for commercial purposes or the increase in social value.

The extensive discussion of CSR in the early days was mainly in response to the stakeholders' criticism of the multinationals to undermine labor relations and the environment in host countries (Daouda, 2015). Scholars started more from the different perspectives between economic interests and social interests and made use

of the CSR concept to correct the behavior cognition of enterprises, which paid too much attention to their own interests and ignored the community interests. Therefore, the proponents of CSR tended to emphasize the benefits of voluntariness and self-discipline, arguing that this was an effective way to motivate enterprises to adopt socially responsible behaviors. The enterprises were often forced by social pressure to respond passively to CSR in order to obtain the legality of host regions, improve the operation environment of enterprises, and gain profits and wealth.

With the unceasing running-in between the enterprises and community environment regulations in the host country, the development of enterprises in host country has been supported by regional laws and regulations (Flavianus et al., 2015). Affected by the regional competitions, some enterprises started to pay attention to the external competition environment consisting of the stakeholders. By assuming certain social responsibilities to meet the expectations and social needs of the stakeholders, enterprises could gain a higher reputation (Masere, 2014) and hence the adverse impact of business activities might be mitigated, and a stable external environment could be maintained to achieve economic goals. The concerns of CSR firstly started from the behavioral cognition regulation of the enterprise and the emphasis on the self-discipline, and then gradually expanded into multiple aspects including ethical procurement, certification, community development and stakeholder participation.

The attitude towards CSR changed from passive response to self-debugging, followed by criticism from all aspects. Firstly, non-government organization (NGO)

accused the enterprises of using CSR to whitewash their unsustainable business practices and evade regulation. They demonstrated that civil society groups that supported CSR subtly helped enterprises improve their internal and external images (Aid C, 2004). Besides, there was a big gap between the statement and practice of CSR due to the lack of specific assessment means to evaluate the impact of CSR (Utting, 2007). The fragmentation of CSR issues (Soonkyoo Choe, 2015) and the corresponding CSR activities were superficial behaviors rather than operations or strategies, whose purpose was just to summarize the stories behind the initiatives that lacked comprehensive consideration in the CSR report and showed the social sensitivity of enterprises (Porter and Kramer, 2006). Finally, CSR behaviors were mainly driven by the business activities of enterprises (Blowfield & Frynas, 2005), which aimed at easing the tension between enterprises and other social stakeholders rather than realizing their interdependence. As a result, enterprises can define CSR in their own way (Ahen F, 2018) to select CSR behaviors by replacing local needs with commercial business logic and promote corporate business interests rather than the priorities required by developing communities (Idemudia, 2010).

From the perspective of poverty governance, CSR only addressed some symptoms of poverty, while ignored potential development challenges. Utting (2003) stressed that if large enterprises were eager to make contributions to social and sustainable development in a meaningful way, CSR issues need address the structural and policy determinants that lead to underdevelopment, inequality and poverty, as well as to explore the relationship between enterprises and these

determinants.

Meanwhile, it was also recognized that too much expectation of CSR to address poverty may be unrealistic (Newell & Frynas, 2007). In particular, the business drive rather than social goal orientation of CSR tended to make enterprises ignore the problems related to power dynamics, politics and economy in the operation environment. In this process, marginalized groups were often excluded from CSR activities and unable to participate in the dialogue of stakeholders, and their needs were difficult to become a priority issue for CSR.

2.3.1.2 The market of BOP

In 2002, Prahalad and Hart first proposed the concept of the bottom of the pyramid (BOP) in the book of <The fortune at the bottom of the pyramid>. By income division, scholars painted a picture of a "wealth" of four billion people in the BOP, and the market opportunity worthy of trillions of dollars⁶ attracted the attention of business practices (Table 2-1).

Table 2-1 A description of the BOP

	Annual income (Dollar)			Population (million)		
	(1)	(2)	(3)	(1)	(2)	(3)
High income	>20000	>20000	>20000 (>21731)	75-100	100	Not calculated
Middle income	1500-20000	2000-20000	3000-20000	1500-1750	2000	1400
BOP	<1500	<2000	<3000	4000	4000	4000

⁶ Prahalad (2010) estimates that the purchasing power of the BOP is as high as \$13 trillion.

But the detailed assessment of the BOP market by the International Finance Corporation (IFC) and the World Resources Institute is \$5 trillion (Hammond et al. 2007).

			(<3260)			
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Note: (1) it was calculated according to the purchasing power parity in 2002 based on Prahalad & Hart (2002); (2) it was calculated according to the purchasing power parity in 2002 based on Prahalad & Hammond (2002); (3) the value outside the bracket was calculated according to the purchasing power parity in 2002, while the value inside the bracket was calculated according to the purchasing power parity in 2005 based on Hammond et al. (2007).

Based on enterprise practices, Prahalad and Hammond (2002) put forward that enterprises could meet the economic, ecological and social needs by seeking to meet the unmet needs of low-income people, create new innovative products or processes, and find a revolutionary business model on a global scale and name it BOP strategy. The introduction of BOP strategy marked a new milestone in the debate on the role of enterprises in achieving social goals. It placed the complementarities of social and corporate goals at the heart of business strategy, thus differentiating them from CSR behaviors in general (Singh, 2015).

Although supporters of the BOP market emphasized the potential of the low-income groups as producers and consumers, it could be seen from the cases in BOP strategic business practices of enterprises that the enterprises primarily regarded the poor as consumers. They indicated that the BOP low-income groups were largely dependent on informal or self-sufficient lifestyles and there was a great deal of unmet demand due to limited access to the markets (Hammond et al., 2007).

Karnani (2006) stated that the access to consumer goods and services did not necessarily benefit their own development for the poor. Like other consumers, the

poor do not necessarily make the most favorable purchase decisions for personal or family health and food safety (Banerjee & Duflo, 2007). With a certain income, the poor were bound to reduce their expenditure on education and other aspects when purchasing new products provided by enterprises. Therefore, the BOP strategy centered on consumerism cannot really alleviate the poverty problem, and in many cases, it may increase the burden of poor people (Karnani, 2007).

Although more people supported the four billion micro-consumers and micro-producers of BOP as an important market, scholars had also begun to reflect that it was impossible to simply regard the low-income groups of BOP as the general market development. Enterprises should contract with the poor to provide them with jobs and support in terms of technology, management, information and capital, and incorporated them into the production system by building new value chains (London & Hart, 2004). By implementing service innovation for the low-income group of BOP and building a multi-type scale operation system and diversified service system, enterprises can help the low-income group of BOP to gain resource and efficiency advantages (Budinich et al., 2007).

Instead of consumerism, the idea of cooperative development made the BOP market possible to become an engine of innovation, vitality and growth. Enterprises can choose to serve any part of this market. Enterprise's access to markets cannot provide solutions for all and the poorest may continue to rely on external help from governments and donors. Even for this group, however, the goal was to "cultivate the ability of people to escape poverty and exploitation through self-sustaining

market systems" (Prahalad, 2010).

The incomplete functions developed by the enterprises in BOP market made scholars realize that the heterogeneity of the BOP market (Table 2-2), which decided the passive state for enterprises when entering the BOP market (Reficco & Marquez, 2012). The traditional business model of enterprises based on the past knowledge and resources prevented them from deeply listening to and learning the local knowledge of the BOP market (Pitta et al., 2008). Enterprises should avoid considering problems from the perspective of their core business and need go deeply into low-income communities to learn and hence develop native capability (Hart & London, 2005) and new business models by integrating local resources and low-cost exploration experiments. The discussion of this issue linked the research on strategy and business model of the BOP theory more clearly with the sustainable development of enterprises (Arnold & Valentin, 2013).

Table 2-2. Heterogeneous characteristics of BOP market

Items	Characteristics description	References
Consumption characteristics	(1)The survival maintenance, uncertainty of obtaining products and price are the main factors influencing consumption	Prahalad,2005; Hammond et al.,2007; Banerjee&Duflo,2007; Subrahmanyam&Gomez-Arias,2008; Viswanathan et al.,2008; Chikweche&Fletcher,2010; Nakata&Weidener,2012
	(2)Low education level, the tendency to use simple products and payment schemes	
	(3)Consumption is mainly concentrated in areas such as food, energy, housing, transportation and medical care	
	(4)Consumption decisions depend largely on social networks and word of mouth	
	(5)Penalization of poverty, the same price access to poorer quality products and services	
	(6)The existence of irrational consumption and conspicuous consumption	
Production	(1)Mainly engaged in agricultural production, also involved in a lot of	Chesbrough et al.,2006; Banerjee&Duflo,2007;

Items	Characteristics description	References
characteristics	temporary work	Perez-Aleman & Sandilands, 2008; Viswanathan et al.,2008; London et al.,2010
	(2)Lack of occupation education, low labor productivity	
	(3)Lack of specialization, difficult to operate on a large scale	
	(4)Lack of resources, lack of access to information, technology, capital and other resources necessary for production and sales, relying on social relationship support	
	(5)Less contact with external markets, dealing mainly with local middlemen, low bargaining capability	
	(6)Lack of optimism about the future, low enthusiasm for work	
Environment characteristic	(1)Transport, energy, communications, sanitation and education infrastructure are weak	Vachani&Smith,2008; Mendoza&Thelen,2008; Viswanathan et al.,2008; Mair&Marti,2009;
	(2)Lack of market intermediary organizations and professional institutions, resulting in the lack of value chain	
	(3)Generally lack of sound market rules, imperfect property rights and other systems	
	(4)Local social norms, cultural customs and traditional customs constitute a dominated informal system	

The construction of native capability required the enterprise to consider seeking cooperation of all parties in the community and deal with the multi-aspect benefit relationships (Thakur, 2015). Through the establishment of multi-party cooperation, enterprises can actually solve the problems faced by the BOP market, such as the lack of sales channels, weak infrastructure, and lack of BOP group knowledge and skills, to make up for the lack of value chain (Reficco & Marquez, 2012; Kim & Lee, 2016) and truly establish a business model that took both social and economic goals into account.

2.3.1.3 Inclusive Innovation

In 2007, the Asian Development Bank for the first time put forward the concept

of inclusive growth and advocated the inclusive growth pattern which can guarantee the productive jobs growth, social inclusion based on the equality and buffer social safety net for the most vulnerable groups. This can make everyone equal participation in the market to make contributions and share achievements.

Under the guidance of this concept, the research on poverty governance had formed a research field with "innovation" as the main line -- inclusive innovation. BOP theory studied why the enterprises entered the market consisting of low-income groups, while the inclusive innovation had further studied how to break through in BOP market effectively from the business model, marketing, system management and organizational behavior and other microscopic perspectives (Table 2-3) and transformed poverty problems into innovation impetus and opportunity to achieve social and economic sustainable development under uncertain environment (Nakata, 2012).

Table 2-3 The perspective of inclusive innovation research

Research perspective	Business model	Marketing	Institutional governance	Organizational behavior
Key issues	How to build a new resource base capability in the BOP market to achieve strategic goals	How to develop products and services for the BOP market and effectively transfer them to the poor	How to form an effective market mechanism at the BOP through innovation	How to achieve the internal adjustment to the BOP market development activities
Analysis level	Enterprise strategy	Enterprise strategy	Cross-enterprise governance	Internal corporate governance
Research area	Resource capabilities	Marketing concept, marketing	Cooperative network, collaborative	Business structure, personnel

Research perspective	Business model	Marketing	Institutional governance	Organizational behavior
		strategy	governance	structure
Core idea	trial and error learning	Affordability, acceptability, availability, awareness)	social embeddedness	Separate and independent or compatible and inclusive

(1)The perspective of business model innovation

From the perspective of business model innovation, scholars had carried on the strategic thinking of BOP, focusing on how to build a new resource base capability in the BOP market to achieve strategic goals. Some scholars believed that the implementation of BOP strategy need build a non-linear dynamic capability, but cannot rely on gradual strategic adjustment. Instead, new resource mobilization methods should be adopted for BOP market value chain and business environment, respectively (Tashman & Marano, 2010). Notwithstanding, some scholars demonstrated that because it was difficult to identify the causal relationship between different resources and their use effects. Enterprises cannot determine what capabilities to construct and predict their potential to create value in new use, but the enterprises still can take advantage of previous experience and skills by copying and resetting strategies (Seelos & Mair, 2007). Therefore, scholars distinguished two types of business models (independence and interaction) in BOP market. Among them, independent business models entered new markets by leveraging the core competence of enterprises, while interactive business models required enterprises to integrate and coordinate internal and external resources and capabilities in order to create new business opportunities (Sanchez & Richart, 2010).

As the BOP market was highly uncertain, business model innovation and design must define the operation boundary, determine the resources and roles of stakeholders, identify appropriate business units, anticipate the occurrence of unexpected situations and plan the exit plan and so on (Thompson & MacMillan, 2010). In this process, enterprises should innovate on the basis of new knowledge acquired through continuous trial and learning, rather than relying on top-down rational analysis (Mcgrath, 2010).

(2) The perspective of marketing innovation

In terms of marketing concept innovation, scholars reviewed the applicability of the "4P" in traditional marketing strategies in the BOP market, and found that significant adjustments were needed in each dimension (Chikweche & Fletcher, 2010), and proposed the "4A" (affordability, acceptability, availability and awareness) framework for innovation of poor customers (Anderson & Markides, 2010), which became the guiding framework for inclusive innovative marketing. By focusing on "4A", managers can create an exciting innovation environment in the BOP market (Prahalad, 2012).

In terms of marketing tool innovation, some scholars put forward a detailed marketing process aimed at the poor groups on the basis of the summary about the operation practices of various organizations in the BOP market, and clarified how to solve the unique problems of BOP market through innovation in different links (Weidner et al., 2010). In response to the decentralization of the BOP market, the scholars also developed a market heat map tool to show the unmet demand of the

poor groups in different geographic regions and the supply structure of the local market (Acosta et al., 2011).

In terms of product or service innovation, existing literatures did not provide much theoretical and practical guidance for the development of new products in the BOP market (Viswanathal et al., 2008). Scholars mainly summarized the framework elements that should be paid attention to in the innovation of inclusive products or services through case studies. For example, Zhang et al. (2012) found that the adequate grasp of the demand characteristics for low-income consumers was a key factor for success through studying the product innovation of China's emulational mobile phone enterprises, while the market-oriented and internet-oriented innovation model was a unique feature of Chinese enterprises. Wooder and Baker (2012) took financial service innovation in Kenya as an example and proposed a service innovation framework, emphasizing the significance of the experience summary in the construction process for innovation.

(3)The perspective of institutional governance innovation

From the perspective of institutional governance innovation, scholars mainly discussed how to form an effective market mechanism for BOP through innovation, so as to help the poor create value through market behaviors and participate in the achievement sharing. It has been found that the formal market system with the property rights system as the core in the area where the BOP community was located had different degrees of absence or vacancy, forming an institutional void (Khanna & Palepu, 1997). This resulted in the development of the BOP market. For

enterprises, they need not think about how to enter a ready-made market, but how to build a new market from scratch (Seelos & Mair, 2007).

The production and life of the BOP people were influenced to a great extent by the informal system of local social customs, culture and even religion (Chambers, 1997). Around these informal institutions, many non-traditional business participants, such as non-profit organizations, local government departments, community organizations and the relatives of the poor themselves, all contributed their unique resources to make up for the institutional void (Rufin & rivera-santos, 2011), thus forming a special original transaction structure in the BOP. Therefore, it was an important way to promote the formal institutional derivation of the BOP market (Rivera-santos et al., 2012) by building a cooperative network involving multiple organizations, multiple departments and multiple individuals in and out of the BOP regions around the original transaction structure of the BOP region. The introduction of external members and the interaction between the internal and external members can promote continuous learning of enterprise and social other groups around the development of BOP market, combine organically the external mature formal institutions with native informal institutions through the integration of their respective economic and social capital, and form a mixed governance mechanism that combines formal contract and psychological contract to coordinate behaviors and resolve contradictions, reduce and lower transaction costs associated with BOP market (London & Rondinelli, 2003; Heuer, 2011; Ramachandra et al., 2012; Reficeo & Marquez, 2012).

As the non-traditional market participants in the BOP were highly heterogeneous with the general market in terms of their goals, values and behaviors, the biggest difficulty in forming a hybrid governance cooperative network of cross-department and multi-organization lied in how to effectively link different members. On the one hand, market heterogeneity created opportunities for enterprises to share knowledge and cooperate on innovation; on the other hand, it also brought challenges to enterprise relationship management (Brugman & Prahalad, 2007), making enterprises a key role in promoting inclusive system innovation and governance system (Rivera-santos et al., 2012). Enterprises need build the process, rules and framework of cross-departmental cooperative network through coordination, constantly adjust and improve in practice (Findlay-Brooks et al., 2010), provide knowledge guidance for the stability of cooperative network (Prahalad, 2005), and gradually transform the informal institutional elements in the BOP into productive supporting elements. In this process, enterprises may give up the control on decision-making to a certain extent and coordinate multiple behaviors through establishing incentive mechanism to promote joint governance (Reficco & Marquez, 2012).

(4)The perspective of organizational behavior innovation

The heterogeneity of BOP market required enterprises to deal with the external complex governance relationship and also brought challenges to the internal behavior of enterprises. Enterprises need not only take advantage of the existing capacity, but also develop new capabilities. The thinking transformation and

evaluation mechanism and others may become the internal restraining factors to hinder the start and smooth implementation of BOP market development activities (Waeyenberg & Hens, 2012), which made the enterprise take the corresponding business model, personnel structure and organization structure adjustment problems into account in the face of the BOP market development (Olsen et al., 2009).

The development of BOP market required enterprises to fundamentally reflect on their business strategies instead of conducting scattered activities based on limited business operation or public relations purposes (Porter & Kramer, 2011). Some scholars suggest distinguishing the development business of the BOP market from the traditional business of the enterprise in terms of business structure and adopting separate cultures, structures and processes (Hart & Milstein, 2003) in order to avoid restrictions or constraints on the innovation of the BOP market caused by the thinking mode and cognition in the mature market. Some scholars believed that BOP market development was a continuous interactive learning process for enterprises. At the initial stage of market development, business units can be independent, but after the success of inclusive innovation activities, mutual promotion between businesses should be considered to form knowledge sharing and common cognition (xing xiaoqiang et al., 2010).

BOP market development often meant the adjustment of key organizational behavior for the enterprises. Therefore, the continuous attention of the top management, especially the setting and promotion of the goals by the leaders, was a key to motivate the cooperative service of all levels of employees and the BOP

market (Kanter, 2007). When the new market development faced obstacles, those middle managers with high responsibility and initiative often overcame obstacles and promoted development activities through creative mobilization and the existing resource of organizations (Galema et al., 2012). This was known as “intrapreneurial bricolage” behavior, which required managers to own the ability and willingness to identify and use unconventional means. For grassroots personnel, project leaders should try their best to find excellent employees in the local area to form an immersion team for cooperation and learning, which can not only contribute new thoughts and contents to inclusive innovation, but also influence the values and culture of the enterprise (Xiaoqiang Xing, 2013).

2.3.1.4 Social Enterprise

The discussion about social issues such as enterprises' participation in poverty governance originated from traditional CSR on the one hand emphasized the complementarities between social goals and corporate goals, and on the other hand emphasized that profit was the basic premise of supporting enterprises to achieve social goals (Porter & Kramer, 2011). From this viewpoint, the social activities of enterprises had the function of assisting the commercial brands, which can help enterprises gain competitive advantages. Social enterprise practices evolved from non-profit organization explained the issue of CSR from the opposite perspective, stressing that social goals, especially solving certain problems in society, were the fundamental purpose of social enterprises' existence, and business activities were only the means to achieve these social goals (Yunus & Weber, 2007).

Social enterprise, a hybrid organization, combined the goals and logic of the profit sector and the non-profit sector through practice (Moss et al., 2011), which had the dual characteristics of traditional non-profit organization and traditional profit organization (Kim Alter, 2007)⁷. It emphasized the primacy of social goals and the centrality of transactions (Peattie and Morley, 2008), achieved social welfare goals by means of business strategy (Dee, 1998) and created both social and economic values (Abrahamson, 1996), which was the most radical innovation (Emerson & Twersky, 1996). The characteristics of social enterprises by comparison were summarized in Table 2-4 (Degrees, 2003).

Table 2-4 Characteristics of social enterprises

Items	Non-profit organizations	Social enterprises	Profit organizations
Property	Purely charitable	Mixed	Purely commercial
Motivation	Resort to goodwill	Mixed	Self-interest
Method	Mission driven	Mission and market driven	Market driven
Goal	Create social value	Create both social and economic value	Create economic value
Benefit way	Free of charge	Grants or full grants are mixed with free alternatives	Pay the market price
Capital resources	Donations and financial subsidies	A mixed capital formed by capital or contributions below market price and market price capital	The market to raise
Human resources	Volunteers	Volunteers and staff with underpaid or fully paid	The market determines the compensation of the employee
Supplier	Donated goods	Special discounts or donations of	Charge according

⁷ Kim Alter. Social Enterprise Typology[M/OL], 2007.

http://www.globalcube.net/clients/philippon/content/medias/download/SE_typology.pdf,

2018.10.09

Items	Non-profit organizations	Social enterprises	Profit organizations
		items are mixed with full-price supplies	to the market price

The emergence of social enterprises mainly originated from the mismatch between supply and demand of resources to cope with social problems (Nicholls, 2008). For the demand, all kinds of needs were growing, showing a diversified trend with the changes in people's lifestyle and behavior. For the supply, the constraint of public funds and the increasing burden on the public sector made it more difficult to rely solely on the government to maintain some welfare services and even support some marginalized social activities. This mismatch of supply and demand for resources forced social entrepreneurs to enter "commercial markets" and obtain the income for the finance of social activities.

Social enterprises can provide or create economic opportunities for the poor or vulnerable while maintaining the operation of financial bottom line to promote economic growth and create employment opportunities (Alter, 2003). As a result, social enterprises assumed the role of non-profit organizations as the third-party sector (Thomas, 2004), which was regarded as a compromise for the governance of social issues between the market and the government (Nicholls, 2010). Its positive effects on social and economic development can be shown in the following aspects (UNDP, 2008): (1) it can provide basic social, educational and health services to local communities, including those who cannot afford them; (2) the use of regional resources was more balanced by encouraging broad participation of local stakeholders; (3) it can promote local communities to adopt inclusive governance

in strategic decision-making; (4) new employment opportunities were created through the provision of products and services, particularly by integrating vulnerable groups such as single women or people with disabilities to provide them with income-generating opportunities; (5) it can enhance social cohesion and create social capital; (6) it can promote informal activities out of the underground economy.

2.3.2 The potential and research challenges for the use of business approaches to address extreme poverty

The use of business approaches to solve the problem of poverty showed great potential in practice and had typical development and evolution. However, we should also see that the research in this field was always behind the practice, and the relevant research perspectives had similarities and differences. There are relatively few systematic studies, especially when facing the problem of extreme poverty, theoretical research still faces many challenges.

2.3.2.1 The potential for the use of business approaches to address extreme poverty

Relevant theoretical studies, on different levels, reflected the potential of using business approaches to tackle extreme poverty, which was mainly shown in the following aspects.

(1) The trend of organizational form integration clarified the key issues of research

The discussion on CSR from the perspective of enterprise sustainable

development and the research on social enterprises from the perspective of non-profit organizations sustainable development, as a whole, showed the organizational forms were evolving from diversity to cross-integration based on social issues such as poverty governance (Figure 2-3).

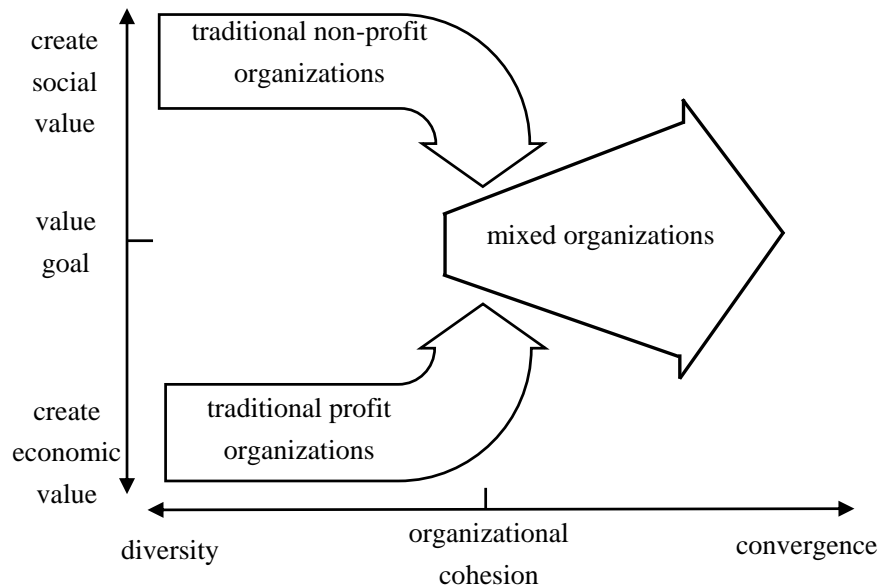


Figure 2-3 Schematic diagram for mixed organizational pattern of poverty governance

The reason for this evolution trend can be traced back to the contradiction between the supply and demand of resources brought by the current social and economic system to various organizations. In the economic system, this contradiction was reflected in the survival and development pressure caused by the fierce and uncertain market competition, which forced the enterprise to gradually consider the coordinated development of external society and natural environment while pursuing economic interests. In the social system, this contradiction was reflected in the fairness and efficiency problems behind the diversified social demands, which led to the rise of non-profits and other third-party organizations

and forced them to gradually use the means of commercial operation to solve the financing problem of social activities. Although the traditional profit organizations and the traditional non-profit organizations had completely different value orientation in the organizational orientation, the evolution trend of the mixed organization made the value orientation gradually compatible while pursuing the balance between the sustainable development of economy and society. Therefore, business model became the core area of research, and the related target market (BOP market) and innovation activities (inclusive innovation) became the core issues of research (Figure 2-4).

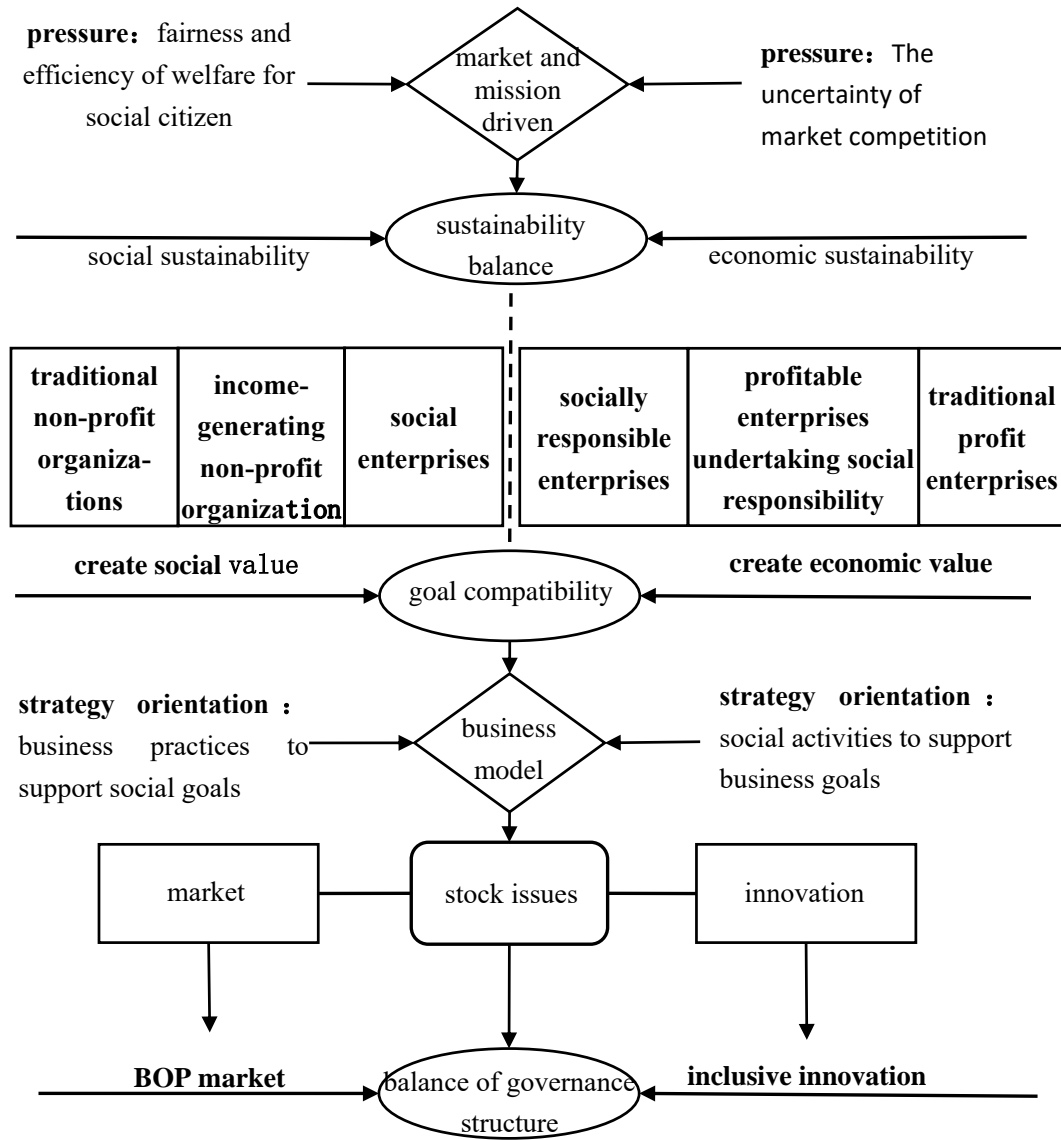


Figure 2-4 The evolution chart of poverty governance organization

(2)The diversity of research perspectives highlighted the complex framework of research

It provided reference for the research on extreme poverty governance from multiple aspects such as from the research perspectives including CSR, BOP market, inclusive innovation and social enterprises, from the depth and breadth of poverty governance, from the flexibility of governance structure and the participation possibility of external capital (Table 2-5). Multiple theoretical perspectives together

stimulated us to think about some of these issues: (1) to what extent can they mobilize the extreme poor to participate on their own initiative? (2) Do they have the flexibility to use business goals to reduce extreme poverty? (3) Can they set up effective operational mechanisms with sectors concerned with extreme poverty?

Table 2-5 The theoretical applicability of research on poverty governance by business

Items	CSR	BOP market/inclusive innovation	Social enterprise
Depth of poverty governance	Low	Middle	High
Breadth of poverty governance	Low	Middle	High
The flexibility of the governance structure	Low	Dynamic change	High
The difficulty in external capital mobilization	High	Low	Middle

To answer these questions, the key issues of the research on the extreme poverty governance were introduced to the key performance point of the governance structure balance, and the identification of various participants was gradually clarified (Figure 2-5), which provided reference for further systematic and in-depth research on the governance of extreme poverty. Meanwhile, the basic theories such as stakeholder theory, organizational identity theory and institutional theory entered into the comprehensive theoretical framework of research on extreme poverty governance.

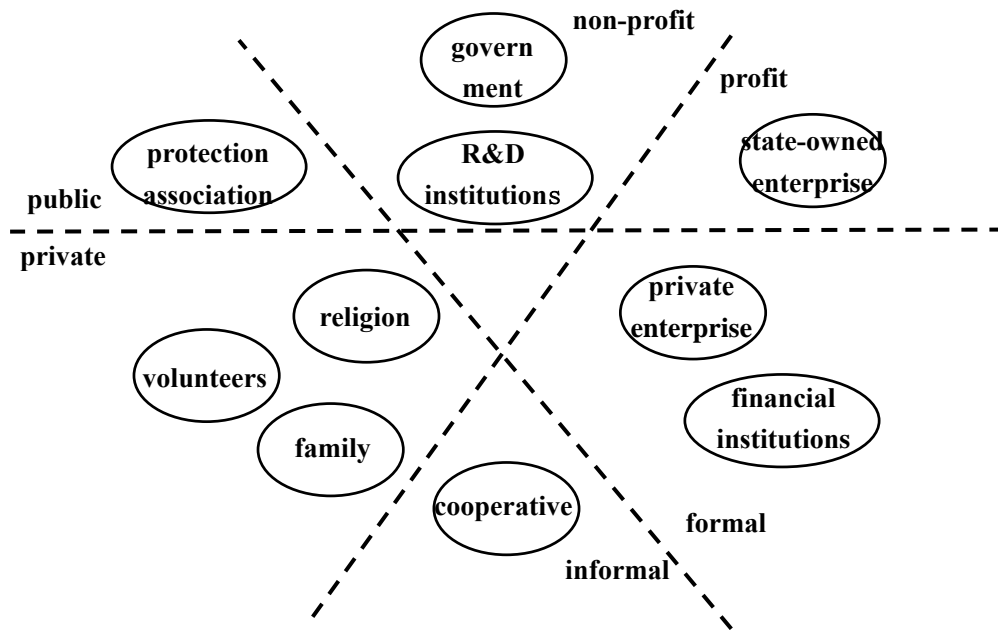


Figure 2-5 The identity orientation diagram of the participants in the governance of extreme poverty

2.3.2.2 The research challenges for the use of business approaches to address extreme poverty

Although the mutually reinforcement of business and social can be helpful to explain the potential of using business approach to solve the problem of extreme poverty, the contradiction between them also brought about continuous conflicts and challenges in governance (Haigh & Hoffman,2012; Battilana et al., 2012). In research, these challenges were mainly reflected in performance evaluation, organizational behavior and dynamic mechanism.

(1)Performance evaluation challenges

It was extremely challenging to integrate social mission and business operation together, which was mainly caused by the fundamental difference between business

demand and social demand. The root cause of such difference was the contradiction between market system and social system (Smith & Lewis, 2011) (Table 2-6).

Table 2-6 Differences between market system and social system

Items	Market system	Social system
Goal	Profit-push	Welfare-push
Orientation	Efficiency and economic rationality	Fairness and moral sensibility
Success characteristics	Specific and quantifiable	Vague and difficult to quantify
Behavior logic	Short-term competition	Long-term cooperation
Mechanism logic	Zero-sum thinking	Positive-sum thinking

In theory, we can understand that poverty governance, especially reducing extreme poverty, was to create social value. But one of the main challenges for specific studies to assess the effectiveness of business approaches in reducing extreme poverty was the lack of a standardized and generally accepted measure of the social value created. Although various suggestions had been put forward in the previous studies, there was still a lack of unified framework on the whole. The major challenge was to assess not only the final output results, but also the authenticity and sustainability of reducing extreme poverty.

(2)Organizational behavior challenge

Although the organizational evolution of the extreme poverty governance presented a trend of integration and was increasingly dependent on the extensive cooperative network (Grimes, 2010; Hanleybrown et al., 2012), the study still faced challenges from both macro and micro organizational behaviors.

On the macro level, the governance of extreme poverty did not only require

the participation of business activities, but also need the support of complex multi-party participants. However, the studies about the forms of the support and the actual benefits of the support were relatively few. The behavior of the participants who care about and participated in the governance of extreme poverty has not only group characteristics, but also certain heterogeneity which is subject to the environment of each party. Therefore, academic research need explore the various measures options for participating in extreme poverty governance and assess the potential impact of their application in different contexts.

On the micro level, scholars discussed the organizational behavior problems such as the choice of profit structure and non-profit structure, the organizational structure separation and organizational structure integration. These studies were based on the business orientation of the organization and to some extent considered the significance of scale compensation. Such a design, to a certain extent, supported the poverty governance work, but it also was faced with challenges from the decentralization and heterogeneity of the extremely poor population. Therefore, the expanded study about the framework of initiatives aimed at the extreme poor should not only start from service or product orientation, but also from the situation of the extreme poor themselves.

(3)Dynamic mechanism challenge

In the poverty governance network, the emerging organizations linked with traditional profit organizations and traditional non-profit organizations form a broad stakeholder relationship. External stakeholders always placed other participants in

existing organizational categories, leading to the need for the research to address challenges from the construction of dynamic mechanisms such as organizational identification and cross-organizational department learning.

As for the organizational identification, the previous researches focused on helping organizations to answer the questions such as "who we are" and "what we are doing" from an existing categories, but ignored the dynamic change of organizational identification and the question of "what kind of organization is more suitable" for participating in extreme poverty governance. Some studies introduced this issue into the discussion of entrepreneurs' individuals and formed the concept of social entrepreneurship or social entrepreneurs, but there was no systematic research on the impact of business specialization degree or social specialization degree in entrepreneurs' personal experience on the identity positioning of the organizations built by themselves.

The positioning of the organizations had certain design factors, but the dynamic organizations seeking for update, adjustment and development can inevitably result in the attention to efficiency. There were both strategic considerations and uncertainties in how to construct an organization. The members of the organization need seek a platform mechanism of continuous innovation and mutual learning to maintain the dynamic order of the organization. However, the studies about how to construct such dynamic learning mechanism in the governance of extreme poverty are relatively few.

2.4 Summary

Poverty is a comprehensive socio-economic phenomenon. Its cognition includes income poverty, ability poverty and equity poverty and embodies the multiple attributes of poverty in the time dimension and spatial dimension, indicating that poverty is a long-term multi-level problem.

Anti-poverty is a series of ideas and behaviors that solve poverty problems based on the perception of poverty. The evolution of anti-poverty theory from the perspective of equilibrium to the visual field of vision to the perspective of social relations, shows that the study of poverty and anti-poverty should grasp the environmental factors from a macroscopic perspective, grasp the institutional factors from the perspective of the medium, and grasp the mechanism factors from the microscopic perspective to form a comprehensive vision on research. From a comprehensive perspective, the main body of solving poverty problems is no longer confined to the government. Those who can provide “external effects” for the poor groups together constitute a pluralistic poverty management system, which makes the micro-level research of anti-poverty more comprehensive.

From the perspective of CSR, BOP market, inclusive innovation and social enterprise, scholars have analyzed the problem of using business approaches to govern poverty, showing the potential of these business methods to deal with extreme poverty problems. Different business methods do not only show the trend of integration of organizational forms, but also can be understood as a continuum. The specific challenges of extreme poverty governance can extend their scope and

effectiveness by attempting the collaboration between different business methods and a hybrid model that combines different elements.

It is very critical for the success of extreme poverty governance to meet social needs and maintain business operations, where there is a delicate balance to be struck. It would pose significant risks to the sustainability of poverty governance if we just emphasize one side and hurt the other side. However, under the current conditions, it is unrealistic to expect certain subject to play a comprehensive role in the governance of extreme poverty, so as to solve the problem covering all the extremely poor people and solving all the problems of extreme poverty. It requires innovative collaboration between public sector, development organizations and most importantly, the extreme poor to acquire how the business approaches can effectively achieve the targets of extreme poverty governance.

The current research faces challenges from three aspects, including performance evaluation, organizational behavior and dynamic mechanism. The key scientific problems in the next step are clarified by sorting out these challenges: (1) what is the most representative performance evaluation point for the governance of extreme poverty? How can it achieve the essence of the in-depth and sustainable solution to poverty? (2) What is the evolutionary feature of the dynamic organizational structure for the extreme poverty governance? (3) What kind of institutional arrangement can achieve the balance of governance structure? To answer these questions, there is a need to start with the situations of the extreme poor themselves.

Chapter3 Research on the governance framework of extreme poverty

To understand the performance evaluation of extreme poverty governance, on the one hand, we should start from the characteristics of the extreme poverty population, on the other hand, we should also combine the supply and demand contradiction between social demand and commercial demand faced by governance organizations, and theoretically explore the essence of extreme poverty and the core problems faced by extreme poverty governance. This chapter starts from the concept cognition of extreme poverty, theoretically explores the essence of the problems faced by the extreme poverty governance under current conditions, and accordingly tries to build an analytical framework for the research on the governance of extreme poverty.

3.1 Characteristics and connotation of extreme poverty

Like the cognition of poverty, the most basic understanding of extreme poverty starts from income poverty, which is generally described as the state of the lowest income region below the poverty line. The poverty line reflected in the monetary measurement of income and consumption has certain statistical characteristics when it is defined and divided (Table 3-1).

Table 3-1 Establishment and adjustment of the poverty line by World Bank

Time	Valuation standard	Median lowest per capita consumption in all surveyed countries	Average lowest per capita consumption in the poorest countries	Poverty line	Extreme poverty line
1991	Purchasing power parity dollar in 1985	-	\$31 per month	\$1 per day	-

2008	Purchasing power parity dollar in 2005	\$60.81 per month	\$37.98 per month	\$2 per day	\$1.25 per day
2015 ⁸	Purchasing power parity dollar in 2011	-	-	\$3.1 Per day	\$1.9 per day

Although extreme poverty is generally understood as the state of life living on less than the "average living cost of \$1.9 per day at purchasing power parity", the focus on extreme poverty cannot be limited to measurements of income and consumption and the feedback on poverty line. It is a complex and diversified phenomenon, which needs a specific description of extreme poverty living condition concretely. For example, United States Agency for International Development (USAID) defines extreme poverty as "the inability to meet basic consumption needs on a sustainable basis". People living in extreme poverty often suffer from interrelated chronic deprivation, including hunger, malnutrition, frail health, limited education and marginalization or exclusion. In essence, such a definition has integrated the cognition of income poverty, capabilities poverty and entitlement poverty.

The extreme poverty population show different characteristics from general poverty (Figure 3-1). The long-term nature of the time dimension and the specific community of the social dimension are mainly manifested as the long-term intergenerational transmission of extreme poverty, which is the embodiment of "A-B-C" path of poverty cognition in extreme poverty. The specific regionalism of spatial dimension and the specific community of social dimension are mainly manifested as the closure of extreme poverty, which is the embodiment of "A-D-C" path of poverty

8 it was converted based on 2008 statistics and 2011 PPP dollars

cognition in extreme poverty.

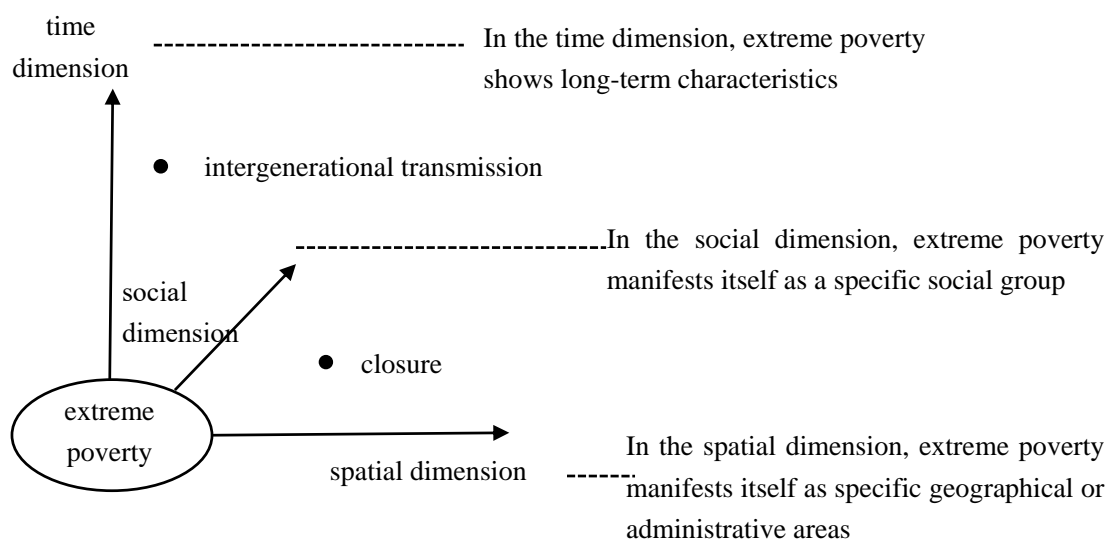


Figure 3-1 A three-dimensional characteristics figure of extreme poverty

Extreme poverty more profoundly describes two paths of poverty cognition, in which "A-B-C" path can be considered as the deprivation of survival ability, and "A-D-C" path can be considered as the deprivation of development opportunity. Both make extreme poverty rigid and difficult to break through in the current economic and social environment conditions.

Taken together, the concept of extreme poverty can be expressed as a condition in which basic consumption needs cannot be met on a sustainable basis due to the deprivation of survival ability and development opportunities. This conceptual expression reflects not only the "poverty" of the extreme poverty population, but also their "difficulties" and "confusion" (Table 3-2). Among them, the "poverty" due to "difficulties" is the natural attribute of extreme poverty, while "confusion" due to "poverty" is the social attribute of extreme poverty.

Table 3-2 The concept cognitive framework of extreme poverty

Cognitive perspective	Paraphrase	Concise expression
Income poverty	Income deprivation	Poverty
Capabilities poverty	The deprivation of survival ability	Difficulties
Entitlement poverty	The deprivation of development opportunities	Confusion

3.2 The status of extreme poverty governance

Throughout the practices of poverty governance in the world, the thinking of poverty governance can be roughly divided into two types: growth drive and structural coordination.

3.2.1 Strategies for poverty governance

3.2.1.1 Growth drive strategy

Economic activities are the activities that human beings exploit and utilize natural resources to meet material and cultural needs and economic growth reflects the increase in the achievement in human economic activities. The main logic of poverty governance through economic growth is shown in Figure 3-2: economic growth expands labor demand, thereby improving employment level and increasing employment income.

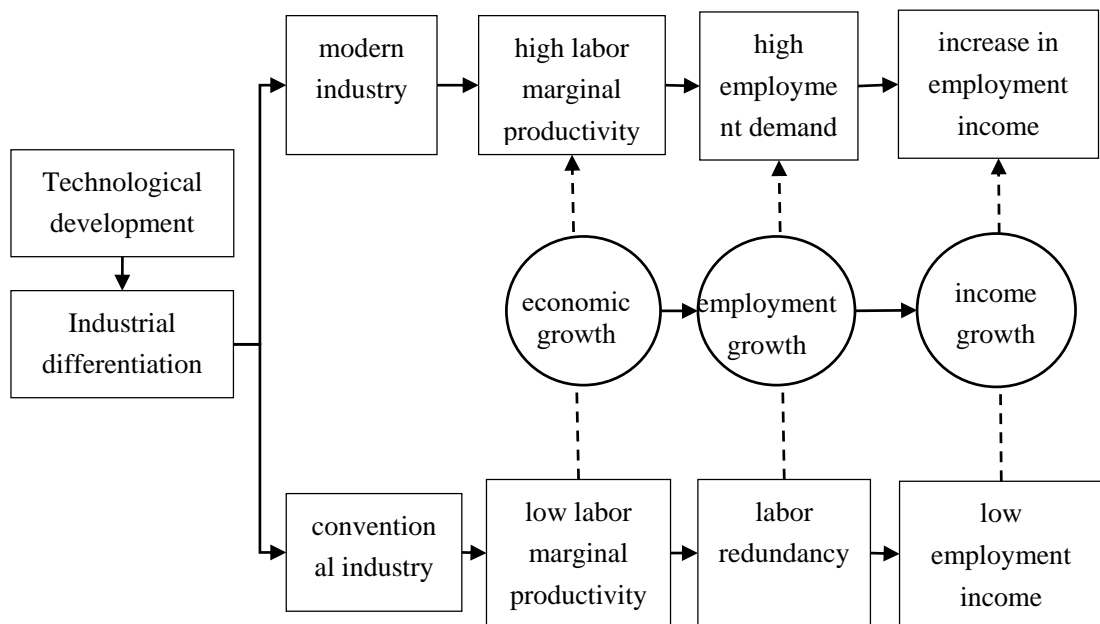


Figure 3-2. Economic growth expands labor demand, thereby improving employment level and increasing employment income

This strategic orientation supposes that the low income level of laborers is caused by the low marginal productivity of labor in conventional industries and the small modern industries, and economic growth is the process of expanding modern industrial sectors. In this process, the low income of the laborers engaged in conventional industries may be forced to gradually transfer from the surplus conventional industries to modern industries. Higher marginal productivity of labor may bring more national economic output, thus resulting in higher employment income for the transferred laborers.

In the strategy design of "economic growth driven" poverty governance, poverty is not only the consequence of the previous lack of economic growth, but also the condition for the future economic growth. Poverty governance must be based on economic growth. In the early stages of economic growth, the benefits of growth may

be enjoyed by some people and as the growth continues, the benefits of growth trickle down to most people, which are explained by a trickle-down effect.

Unfortunately, although some countries such as Mexico and Brazil in Latin America and Thailand in Asia achieved rapid economic growth in the 20th century, the "trickle-down effect" did not take place, and poverty rose to more than human endurance and disquieting levels. Poverty has caused serious social and political problems and become one of the economic roots of crime, violence, war and ethnic conflicts.

3.2.1.2 Structural coordination strategy

The harsh fact is that economic growth is only a necessary condition for poverty alleviation, not a sufficient condition. There are still some structural problems between the growth of economic aggregate and the increase in final income: (1) Ownership structure. Especially the property ownership structure at the beginning of economic growth determines the interference of property income to labor income, and eventually affects the distribution pattern of national income, resulting in the "Matthew effect"; (2) Spatial layout structure. If there is an extreme imbalance in the spatial distribution of economic growth, it is inevitable that some people may share the costs of development (such as the decline in real income caused by inflation), but not enjoy the fruits of development; (3) Adaptive structure for work. In the process of transferring from conventional industry to modern industry, hard conditions such as the age and physical condition of laborers and soft conditions such as learning ability determine that the

adaptability of different laborers to transfer is necessarily different. As a result, the low income of some laborers is just frictional, but there may still be a part of laborers who cannot be transferred and fall into a permanent state of low income. Even if the "trickle-down effect" has been achieved, it cannot effectively benefit this part of the poverty population.

The focus on structural problems has led to the emergence of "structural coordination" strategy. There are only two ways to adjust the initial property ownership. One is to force the adjustment through violence, such as war plunder. The other is to adjust through property trade including business and donation. For the poverty population, however, the second path does not work, and the first path means outright individual crime or communal violence, creating social unrest. Under the strong internal and external political pressure, in order to obtain the "legitimacy" of political rule, the state uses the government's coercive power to appease the public economically and adopts a series of economic and social policies that help to reduce inequality. These policies have typical differences in orientation. One part focuses on allocating means of production, while the other part focuses on allocating means of livelihood for the poverty population, thus forming two models of "special development support" and "social security support" (Figure 3-3).

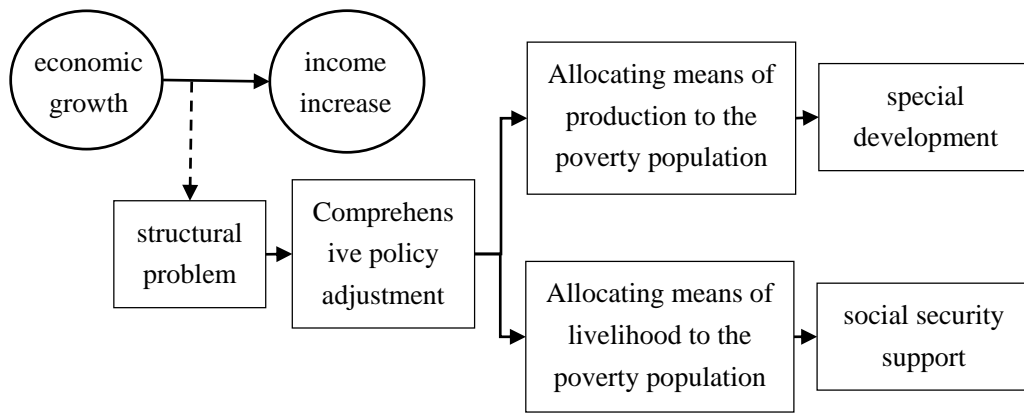


Figure 3-3 Poverty governance logic map of special development support and social security

The model of "special development support" mainly aims at the spatial layout or the adaptive structure of work in the strategy of economic growth, makes use of the government policy means to adjust the thinking comprehensively and focuses on the poverty alleviation and development in specific poverty-stricken areas or groups. The primary goal of this strategy is to improve the production and living conditions of the poverty population, especially to provide the factors of production that are lacking in the poor areas or the poverty population, and to improve the living standards and alleviate poverty through economic development relying on their own efforts. The mechanism direction behind the policy is not realized by the government to provide extensive income transfer payments directly or through comprehensive redistribution of property. Instead, limited social reforms would be carried out to create economic opportunities and cultivate people's ability to take advantage of economic opportunities. Meanwhile, economic opportunities would not be directly distributed, which can only be achieved through individual efforts. The specific model of "special development support" includes comprehensive rural development, growth pole development,

employment creation plan and financial innovation (Table 3-3).

Table 3-3 The main modes of "special development support"

Mode	Characteristics	Nature	Typical case
comprehensive rural development	(1)The government encourages rural areas and farmers to diversify their operations, adopt new production techniques, raise labor productivity and increase output and income through such measures as preferential taxation, preferential credit and price support; (2)The government invests in the construction of agricultural infrastructure, such as the roads, water conservancy projects, the transformation of farmland and the improvement in the ecological environment so as to improve rural production and living conditions	transfer payment public investment	comprehensive rural development program in India
growth pole development	Through policy support, the factors of production would be concentrated to the development poles of backward areas (such as central cities), and the economic development of the development poles and their radiation effects can drive the economic growth of surrounding areas, thus alleviating poverty	Structure direction	regional development plan in Brazil
Job Creation	To set up projects for the placement of unskilled labor	public investment	Jawahal employment plan in India
	To help poor areas or poor people to set up enterprises	public investment	administrative poverty alleviation enterprises in China
	To organize the export of labor services from poverty-stricken areas to other places for employment	Structure direction	Southwest labor export poverty alleviation project in China
financial innovation	To break through the traditional barriers to financial risks and direct credit funds to the "poorest people" to improve the efficiency of poverty alleviation funds	Structure direction	Microfinance in Bangladesh

It takes a long time for the poverty population to shake off poverty independently through economic development. Therefore, in the practice of poverty alleviation in all countries, the basic necessities of life are generally guaranteed to solve the problem of "far water does not understand near thirst". Up to now, this kind of "social security support" model basically includes social insurance, welfare subsidy and public education (Table 3-4).

Table 3-4 The main modes of "social security support"

Mode	Characteristics	Nature
social insurance	Only those who pay relevant social insurance can enjoy it, including endowment, unemployment, medical treatment, disability insurance.	transfer payment
welfare subsidy	No matter whether attend social insurance, the citizen that accord with a regulation condition can enjoy, including (1) the universal public welfare subsidies, such as free medical care and school lunch and so on in some Western European countries.(2) Only some poor people (including the unemployed without social insurance) and poor families receive relief subsidies, such as food stamp programs, medical aid for low-income families, housing assistance, etc.	
public education	Including general compulsory education, vocational and technical education and amateur education	

The nature of the social security support model belongs to the category of transfer payment. From the perspective of ownership adjustment, it makes use of national coercive force to make up for the impact of unfair property ownership structure on social members with the equity of citizenship. From the perspective of system operation, it is a part of the income generated by the labors to ensure the survival of unemployed workers and their families.

3.2.1.3 Comprehensive analysis of poverty governance strategies

In the practice of poverty governance in various countries, the strategic main line is clear. Economic growth is a necessary condition for poverty governance, special development support is the fundamental approach and social security support is an auxiliary means to alleviate conflicts.

In terms of concrete operation and implementation, poverty governance is carried out in one way or in a variety of ways or modes, forming a multi-level governance method system. The way or mode chosen depends on the poverty occurrence mechanism in a country or region, while the poverty occurrence mechanism depends on the type of poverty-causing factors and the interaction mode between them (Figure 3-4).

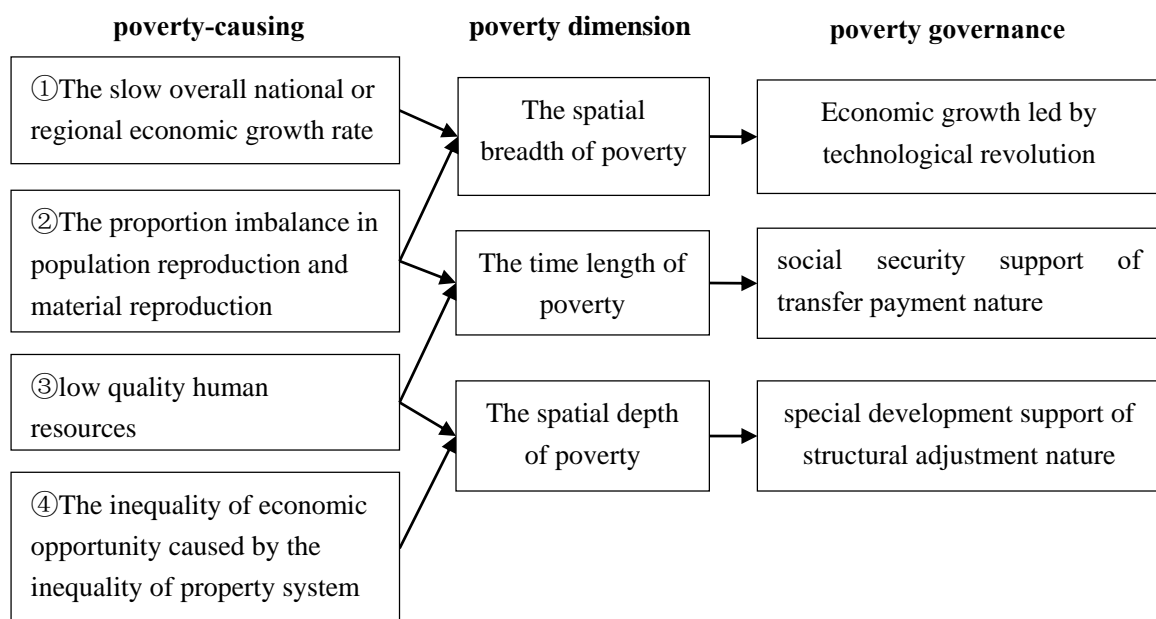


Figure 3-4 The strategic choice path chart of poverty governance

3.2.2 The system of poverty governance

In the evolution process of strategic thinking of poverty governance from the drive of economic growth to the stable development of structural coordination, the role and

status of the government are gradually highlighted. In terms of economic growth, the government needs to guide industrial selection and cultivate market through policies. In terms of social security, the government needs to design a system to realize the coverage of social security to the majority of the poverty population. In terms of regional structural adjustment, the government needs to combine innovative poverty alleviation mode with marketization to promote the effective improvement in the capabilities of the poverty population.

However, a complete poverty governance system should not only emphasize the subject of poverty governance, but also give full consideration to the change in object characteristics of poverty governance. Because these changes determine whether poverty governance resources can effectively target the poverty population and whether the core mechanism of governance can effectively realize the sustainability of poverty governance.

For example, the national poverty governance system has gone through four stages of evolution in China.

(1) A poverty governance system in the stage of institutional poverty alleviation

New China was founded after a long period of war and chaos and the country's economic conditions were very backward. The state adopted a highly centralized planned economic system and a dual economic scissors mechanism of rural giving subsidy to cities to promote the establishment of a modern industrial system. Due to the efficiency of the planned economic system and the failure of industrial development to

favor heavy industry, the national living standard is only basic food and clothing. In terms of nutrition, before the reform and opening up, nearly half of the Chinese people lived in poverty and rural poverty was also widespread.

By the end of 1970s, the country shifted its focus to the direction of economic construction and carried out the reform of economic system in rural areas: (1) The household contract management system gradually replaced the people's commune collective management system, enabling farmers to master the autonomy of agricultural production, which to some extent improved the enthusiasm of labor, enhanced the grain yield per unit of cultivated land and promoted the development of rural economy; (2) the government liberalized the price of agricultural products in rural areas, vigorously developed township enterprises and implemented the measures for rural labor to engage in non-agricultural work, which gradually transformed the structure of agricultural industry into industries with higher added value. Reform of rural economic system raised farmer income, reduced the scale of rural poverty population effectively. Between 1978 and 1985, the number of rural poor population in China fell from 250 million to 125 million⁹. Furthermore, the proportion of the actual poverty population in the total rural population also dropped from 30.7% to 14.8%.

(2) A poverty governance system in the stage of large-scale development

⁹ Since 1978, China has adopted three income poverty standards based on the actual situation of national economic and social development, namely the 1978 standard, the 2008 standard and the 2010 standard. The decline in poverty population from 1978 to 1985 was based on the 1978 standard. For details, please refer to the China Statistical Yearbook (2015) compiled by the National Bureau of Statistics of China.

The continuous rise of township enterprises, as a typical carrier of rural economic system reform, made a certain contribution to the increase in farmers' income. However, in the mid-1980s, the structural problems in the development of township enterprises also led to the unbalanced development of agricultural entities. This was mainly reflected in: (1) Due to the de-agriculture-industrialization tendency of township enterprises, the proportion of agricultural income in the overall income structure of farmers decreased, while the proportion of wage income and private activity income began to increase; (2) The primary industrialization of township enterprises was highly dependent on resources and the gap of economic development caused by the resource superiority of regional development became larger. The more remote the areas were, the more backward their infrastructures were. The market and social development were relatively lagging behind. In addition, with the launch of the socialist market economic system reform in 1992, the focus of the country's reform and development shifted from rural to urban areas, and the economic gap between urban and rural areas was gradually widening.

In order to improve the target accuracy of poverty alleviation resources, the government created the system in poverty governance and constructed development-oriented poverty alleviation governance structure. First of all, the government actively established specialized poverty alleviation institutions, defined poverty standards, arranged special funds and formulated reasonable preferential policies. Secondly, the government actively transformed the target way of poverty alleviation and development, took counties as targets, established a target mechanism, and allocated two-thirds of the

funds for poverty alleviation to poverty-stricken counties. Finally, functional departments of governments at all levels made full use of their professional advantages to participate in the work of poverty alleviation and development. Due to the continuous reform and innovation of China's poverty governance system, the target effect of poverty resources was ideal and the overall number of rural poverty population was greatly reduced. By the end of 2000, the total number of people living in poverty dropped to 30 million, and the actual incidence of poverty dropped to about 3%¹⁰.

(3) A poverty governance system in the stage of new development-orientated poverty alleviation

Since the beginning of the 21st century, China's poverty population has gradually shown the characteristics of large dispersion and small concentration. Large dispersion mainly refers to the overall geographical distribution of the poverty population, while small concentration mainly refers to the distribution of the poverty population concentrating in lower village-level communities.

Aid-the-Poor Development Office of the State carried out poverty alleviation plans and implemented the work of poverty alleviation through the whole village based on the analysis of practical experience in different regions. Therefore, China's poverty governance system took the village-level as the target focus. In this process, poverty governance formed a "one entity and two wings" poverty alleviation and development strategy with the whole village as the subject and the support of labor transfer training

¹⁰ Count by China's 1978 poverty standard.

and industrialized poverty alleviation. In the actual process of promoting the whole village, the government did not only pay attention to the overall development of the village, but also pay attention to the transformation of decision-making governance mode, and actively created participatory decision-making mode. The two wings of the work were to take the village as a unit, constantly strengthened the support and target of poor households and poor individuals, and formed the "company + product" industrial poverty alleviation mechanism. After the verification of the relevant departments and ensuring the masses were voluntary, poverty alleviation could carry out vocational education and skills training on poverty-stricken targets and then realize the transfer of labor force. Through practice, it could be found that the sink of poverty alleviation focus and resources and the innovation and reform of poverty governance mechanism achieved the ideal effect. In 2010, the number of poverty population dropped to about 30 million, and the proportion of people living in poverty dropped to about 2.8%¹¹。

(4) A poverty governance system in the stage of targeted poverty alleviation

Entering the second decade of the 21th century, China's anti-poverty project has become more difficult: (1) Through the implementation of anti-poverty activities in the first three stages, most of the poverty population who were easy to get rid of poverty were successfully lifted out of poverty, and the remaining poverty population were concentrated in several regions with more fragile ecology, poorer access to resources

¹¹ Count by China's 1978 poverty standard. The data can be found in the China Statistics Press, "China Rural Poverty Test Report. 2011".

and services as well as severe shortage of poverty alleviation endowment; (2) The rural labor force in poor areas was gradually transferred to cities and towns, resulting in more extensive agricultural production and hollowing out, and the relative poverty in rural areas became increasingly serious; (3) The poverty population in rural areas was at increased risk, and the situation of returning to poverty often occurred, which made it difficult for the poverty population to get rid of poverty steadily and get rich; (4) With the deepening of poverty status for the poverty population, the ability of resources to reach the poor and low-income groups was insufficient.

In order to cope with the new situation of anti-poverty work, the state promulgated the outline of China's rural poverty alleviation and development (2011-2020) in 2011, which determined that the western "concentrated contiguous poverty-stricken areas" as the main battlefield in this decade¹². In 2013, the 18th national congress of the communist party of China incorporated poverty alleviation and development into the strategic layout of building a moderately prosperous society in an all-round way, and gradually put forward the working mechanism of targeted poverty alleviation. The state formulated a unified method for identifying the objects of poverty alleviation. On the

¹²Liupanshan area、Qinba mountain area、Wulingshan region、Wumeng mountainous area、Rocky Desertification Areas in Yunnan, Guangxi and Guizhou、Western Yunnan Border Mountain Area、Mountain area at the southern foot of Daxinganling、Yanshan - Taihang mountain area、Lvliang District、Dabie Mountain area、Luoxiao mountain area、Tibet、Tibetan provinces in four provinces (Gansu, Qinghai, Yunnan, Sichuan)、Four prefectures in southern Xinjiang, a total of 14 areas, 689 counties.

basis of the existing work, each province (autonomous region, municipality directly under the central government) set up a file card for each poverty-stricken village and household and established a national poverty alleviation information network system by county in accordance with the principles of scale control, hierarchical responsibility, accurate identification and dynamic management. In addition, it was necessary to sink poverty alleviation resources to the individual level so as to fundamentally eliminate the absolute poverty population and actively realize the overall well-off life in poverty-stricken areas.

It can be seen from the evolution of China's poverty governance system that poverty governance takes social issues as the entry point and economic behaviors as the means, and its core is the most significant features of dealing with the poverty population in different stages. Poverty governance means in different stages have formed screens layer after layer, which continuously divide the poverty population with common characteristics in the form of "filtering" (Figure 3-5).

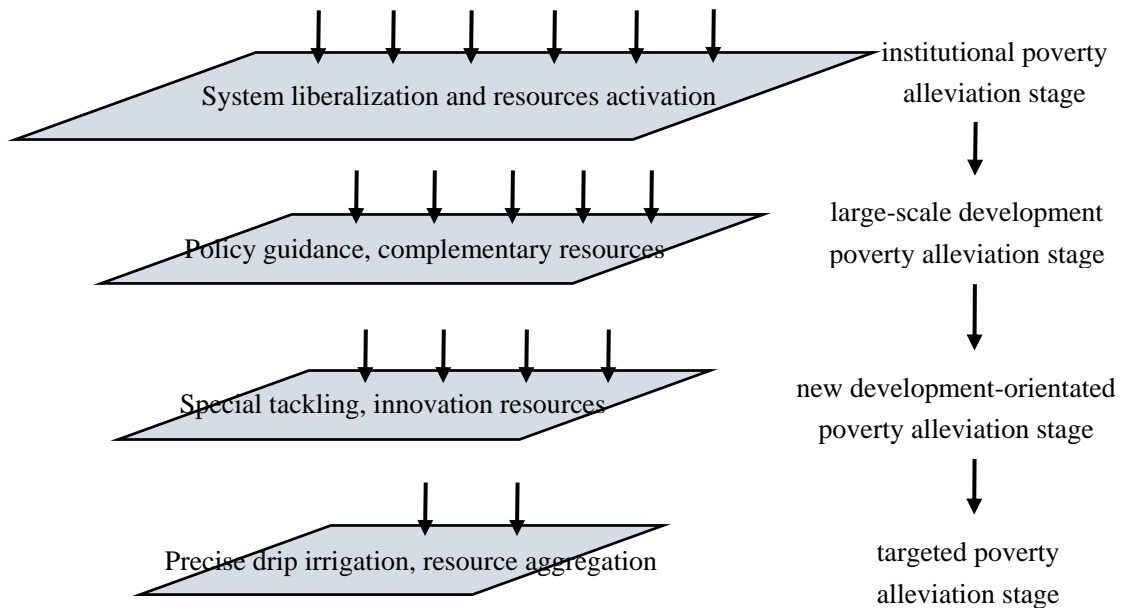


Figure 3-5 Evolution chart of poverty governance mechanism in China

3.3 The attribute of extreme poverty governance

The evolution of poverty governance strategy and system has its endogenous mechanism. Digging into the essence of poverty governance is more conducive to sort out the mechanism problems faced by the current extreme poverty governance.

3.3.1 The essence of poverty governance

The strategy and system evolution of poverty governance are reflected in the fact that it is a kind of entrepreneurial activity to create various possible conditions for the poverty population in a certain social and economic environment. The means of governance in every stage always can activate "entrepreneurship" enthusiasm of partial poverty population, but also leave part of the poverty population difficult to be activated. Finally, in a longer time dimension, there are three types of poverty groups: those who successfully start their own businesses, those who fail to start their own businesses and those who cannot start their own businesses.

The combination of the natural and social attributes of poverty is manifested in the social production system of "entrepreneurial" resources for the poverty population. This determines the poverty governance around the issue of poverty is also necessarily one of the components of the social production system of "entrepreneurship" resources for the poverty population, and is the product of human poverty governance activities under the conditions of socialized production.

The emergence of poverty governance is rooted in the socialized production of "entrepreneurial" resources for the poverty population. Therefore, its natural attribute is to promote the formation of socialized production of "entrepreneurial" resources for the poverty population and the improvement in social productivity. Besides, poverty governance is also restricted by human social conditions, so it reflects and serves a certain production relationship. The reflection of this certain production relationship is the social attribute of poverty governance, which is not only restricted by the social productivity of "entrepreneurship" resources for the poverty population, but also has a strong reaction to the development of the social productivity of "entrepreneurship" resources (Figure 3-6).

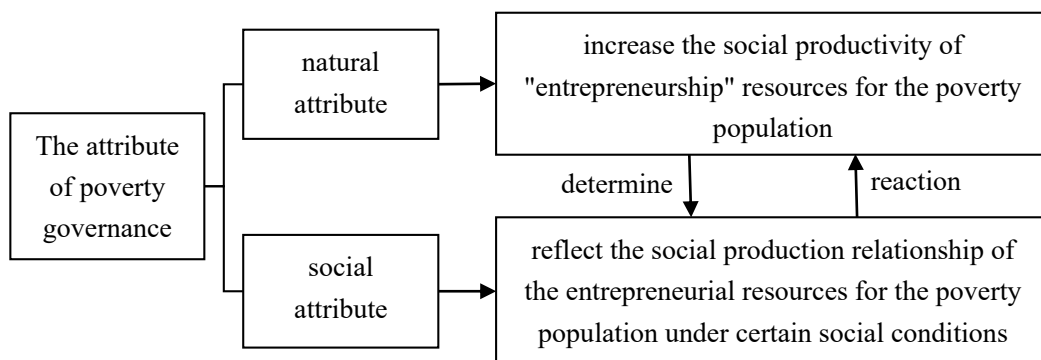


Figure 3-6 The figure of attribute of poverty governance

The strategic choice and system evolution of poverty governance are the manifestation of the social attribute of poverty governance.

Firstly, the change in "entrepreneurship" resources of the poverty population affects the performance of poverty governance attributes.

Unlike general resources, "entrepreneurial" resources of the poverty population are inherently characterized by systemic change. At a time when the number of poverty population accounts for a large proportion of the national population, solving the problem of food and clothing is a top priority for poverty governance, and the endowment of natural resources has become a priority for poverty governance. When the utilization efficiency of natural resources declines, the effect of poverty governance should be further expanded, and the flow of human resources has become a priority. Due to the change in resources, poverty governance emphasizes the marginal productivity of newly added resources and the relationship of multi-resource property rights formed in turn.

Secondly, social resources associated with poverty governance affect the characteristics of poverty governance attributes.

In the process of resources change in poverty governance, a series of social resources, such as intelligence, information and relationship have emerged. In the early days, the number of these resources was limited and people could learn from each other. However, with the deepening of poverty governance activities and the emergence of social division with available resources for the poverty population, these resources have

become highly specialized. Specialized division of labor forms an independent market, so that the allocation of social resources has become an independent constraint on the characteristics of poverty governance attributes.

Poverty governance, as the embodiment of the production relationship of the "entrepreneurship" resources for the poverty population, is essentially to coordinate the benefit distribution of the value added part of poverty governance activities among multiple participants due to the input of different resources and collaborative labor. From a static point of view, this benefit distribution is rooted in the ownership of different resources and the production mode of different resources participating in poverty governance activities. From a dynamic point of view, the result of benefit distribution affects the input of "entrepreneurial" resources reproduction activities for the poverty population. Therefore, poverty governance adjusts the production relationship of "entrepreneurial" resources for the poverty population by coordinating the distribution of benefits, so as to make it adapt to the requirements of the development of available resources productivity for the poverty population.

The "entrepreneurship" resources production relationship of the poverty population is the mutual relationship formed in the process of poverty governance production, including resources ownership relationship, interpersonal relationship in poverty governance activities and distribution relationship of poverty governance achievements. In the early poverty governance activities, the "entrepreneurship" resources production relationship of the poverty population was relatively simple, which was reflected in the fact that the resources owners invested and operated by

themselves, completely monopolized all links of poverty governance and development, and enjoyed the achievements of poverty governance activities. The form of means of production ownership system was single in this phase (e.g., completely private ownership or complete public ownership). The interpersonal relationship in the poverty governance activities was more characterized as extreme (e.g., the pure market transaction relationship under completely private ownership or the pure trust transfer relationship under completely public ownership). The distribution relationship of the poverty governance achievements had the extremely strong autocratic characteristic (market monopoly or government monopoly).

With the deepening of poverty governance, current poverty governance activities are faced with a more demanding external environment. The rigid demand for poverty governance and the systematic risk caused by the restriction of "entrepreneurial" resource endowment for the poverty population require huge capital investment in poverty governance. Moreover, other resources in the "entrepreneurship" resources production of the poverty population, such as location resources, knowledge resources and other resource conditions to reduce system risk, have also become important endowments for poverty governance. On the one hand, the owners of resources are unable to undertake the huge and high-risk capital investment in poverty governance alone; on the other hand, the introduction of other resources is essential. Both sides jointly determine that in the current poverty governance activities, the resources owners have to transfer their partial rights of resources ownership (such as the right to use, the right to dispose of, the right to gain, etc.), while other resources investors can combine

their own resources investment with some of the rights and powers of the original resources ownership to form a common system of benefit sharing.

The diversification of production factors of the "entrepreneurial" resources for the poverty population result in the change in ownership of means of production from single structure to multiple structure. The interpersonal relationship in poverty governance activities also begins to change from the extreme relationship to the embedded relationship, which may not only pay attention to the maximization of benefits for participants in the production activities of "entrepreneurship" resources for the poverty population (the hypothesis of "rational man" in economics), but also emphasize the social connection between participants, especially the correlation role of trust and information in poverty governance activities. The distributive relationship of the poverty governance achievements has the characteristics of cooperative game. On the one hand, the process of game reduces the autocracy of government monopoly. On the other hand, it also restricts the disorder of market monopoly, coordinates the efficiency and fairness of poverty governance activities, and ensures the sustainable and stable development of poverty governance.

For the study of poverty governance, it is crucial to understand the changes in the three dimensions of production relationship. It shows that the structural characteristics of the production relationship have a direct impact on the behavior of the governance subject. The extreme relationship and embedded relationship form different governance subjects and governance behaviors. The extreme relationship embodies complete trust in government (or markets) and the governance subject is the "visible hand" of the

government (or the "invisible hand" of the market). The governance behavior is mainly autocratic (or laissez-faire) and the governance model emphasizes the analysis of the individual attribute characteristics of participants. The embedded relationship breaks the extreme authority of government (or market) in information and trust. Different governance mechanisms are formed according to different states of embedded social relationship, so that the governance subjects are diversified to meet the changing requirements of social relationship such as information and trust. The different degree of embedding determines the convenience or restriction judgment of governance behavior to anti-poverty activities, thus making governance behavior check and balance each other. The governance model places more emphasis on the relationship between participants and the analysis of intensity changes.

With the evolution of poverty governance strategy and system, a poverty governance subject structure that adjusts the "entrepreneurship" resources production relationship of the poverty population has been formed (Figure 3-7).

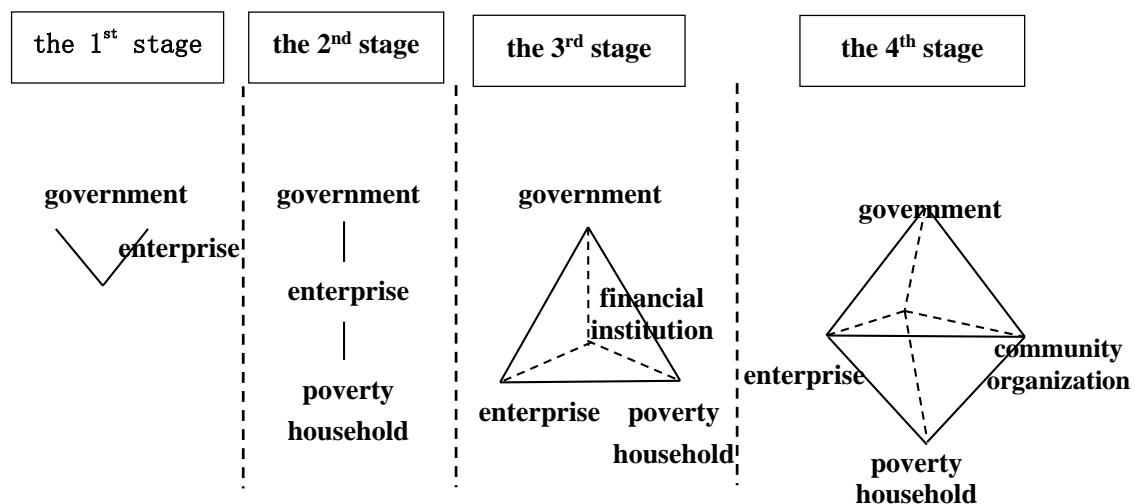


Figure 3-7 The structural evolution of poverty governance subjects

3.3.2 The mechanism for the extreme poverty governance

Extreme poverty still exists precisely because the marginal production capacity of "entrepreneurial" resources of the poverty population is insufficient to adapt to the new situation. Under the current conditions, this is a problem of governance mechanism in which productive relationship reacts on productive forces.

3.3.2.1 The mechanism extension of extreme poverty governance

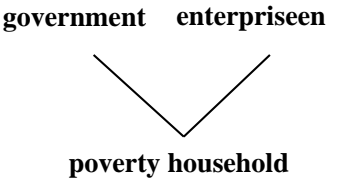
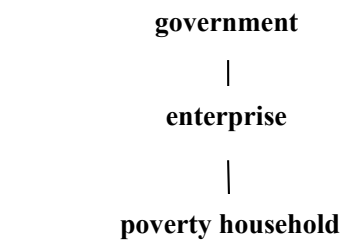
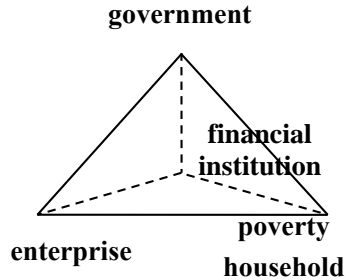
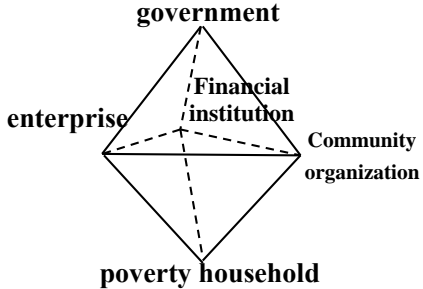
It can be seen from the structural evolution of poverty governance subjects that the public sector, private sector and personal sector are the constant participants in poverty governance activities. However, with the development of poverty alleviation activities, the composition and relationship among the three types of participants are constantly evolving, forming a more complex poverty alleviation mechanism. Therefore, we can start from sorting out the changes in the main structural relationship and explore the extension of the extreme poverty governance mechanism. In order to facilitate the analysis, we abbreviate the structural relationships among different forms of public sector, private sector and personal households as the "PPPP" (Public-Private-Personal Partnership) model of poverty governance. In other words, the public sector, the private sector and the personal households establish cooperative relationship through certain ways so as to improve the income level of the personal households and finally realize the poverty governance model of poverty alleviation.

The evolution and characteristics of "PPPP" poverty governance model are shown in Table 3-5. There is an evolutionary relationship among decentralized "PPPP" mode,

linear "PPPP" mode, three-dimensional "PPPP" mode and network "PPPP" mode. It is the government that has dominated this evolving relationship. With the corresponding transformation of government functions (from regulation to governance), the "PPPP" model of poverty governance faces a more open market. The more market-oriented the division of labor functions involved by enterprises, the smoother the cooperative relationship between the government and enterprises based on anti-poverty matters.

From the perspective of enterprises, the evolution of "PPPP" poverty governance model means that enterprises participate in the process of market development sporadically. In this process, enterprises begin to truly understand the objects (government and poverty households) they are facing, and gradually substitute commercial sensitivity into poverty governance activities, thus improving the efficiency and effect of poverty governance. Moreover, enterprises need to face the barriers of social embedding so as to try their own or never experienced embedded market development.

Table 3-5 The evolution and characteristics of PPPP poverty governance model

Items	decentralized "PPPP"	linear "PPPP"	three-dimensional "PPPP"	network "PPPP"
Evolution state				
Major anti-poverty measures	Allocation to households (relief), endowment	Special project of government (all kinds of PPP projects)	Poverty alleviation by technology and education	poverty alleviation by business
poverty alleviation attribute	blood-transfusion poverty alleviation	blood-transfusion poverty alleviation	blood-making poverty alleviation	blood-making poverty alleviation
Resources allocation means	plan	plan	Plan first, market second	market first, plan second
Management style attribute	non-managed, loose, accidental	Managed, concentrated, accidental	Managed, loose, accidental	Governed, concentrated, normal
Synergized state	Weak binding and cohesion	General binding and cohesion	Strong binding and cohesion	The strongest binding and cohesion
Social embedding pattern	no embeddedness	relational embeddedness	relational embeddedness, structural embeddedness	relational embeddedness, structural embeddedness
Embedded link strength	none	weak	strong	the strongest
Poverty alleviation effect	Short term, poor sustainability	medium term, poor sustainability	Long term, general sustainability	Long term, strong sustainability

The attention paid by the government and enterprises to the poverty group has also gone through four stages: individual income poverty, group income poverty, group capabilities poverty and group entitlement poverty. It pays more attention to the characteristics of group poverty, and also differentiates the functional differences in the government's concern for entitlement poverty and enterprise's concern for capabilities poverty. It is because of the attention to the group characteristics that the poverty households have gradually developed the form of community organization, which is the representative of the group. This shows that in different stages, the public sector, private sector and personal households themselves are also changing in terms of group extension.

How to form an effective network PPPP model is the most important thing for the extreme poverty governance. In the network "PPPP" model, there is no direct node between the government and personal households. But the effect of poverty alleviation may be amplified and transmitted to the personal households by constructing the social system through the community organization. In the network "PPPP", every triangle is a market. For example, the government-enterprise-financial institution is the policy-based financial market. The government-community organization-financial institution is the evaluated intermediary market. The government-enterprise-community organization is the project market. The personal household-community organizations-enterprise is the labor market. The personal household-financial institutions-enterprise is the guarantee market. The personal household-financial institution-community organization is the capital

management intermediary market. The enterprise-financial institution-community organization constitute filtering amplification layer (6 markets + 1 filtering amplification layer). Therefore, the extension of extreme poverty governance mechanism manifests as how to construct diversified market.

3.3.2.2 The mechanism connotation of extreme poverty governance

The subject of poverty governance is the group integration of the stakeholders of the entrepreneurial resources for the poverty population. Their entitlement can only be realized in the long run through the orderly development of the entrepreneurial resources of the poverty population. Therefore, the regulation of poverty governance activities and the improvement in the production capacity of the "entrepreneurship" resources of the poverty population has its endogenous requirements to realize their sustainable development. To construct the poverty governance model that the stakeholders participate in is to make the stakeholders take the initiative to participate in poverty governance activities due to the rational requirements of equity individuals, so as to form a relatively stable relationship system and realize the group rational requirements of poverty governance.

On the surface, the relationship between the poverty governance subjects is dependent on the various links of the "entrepreneurship" resources development activities of the poverty population, that is, the relationship between the poverty governance subjects also manifest as the relationship between upstream and downstream supply chains and value chains of poverty governance activities. But

in essence, the realization of supply chain relationship or value chain relationship is affected by many factors. In different links of poverty governance activities, the emphasis on the relationship of governance subjects is also different. This is why different governance models are formed in different stages of poverty governance to adapt to their unique governance relationship emphasis.

The mechanism connotation behind market extension is the substantive explanation of coordinating the relationship between the poverty governance subjects (Figure 3-8).

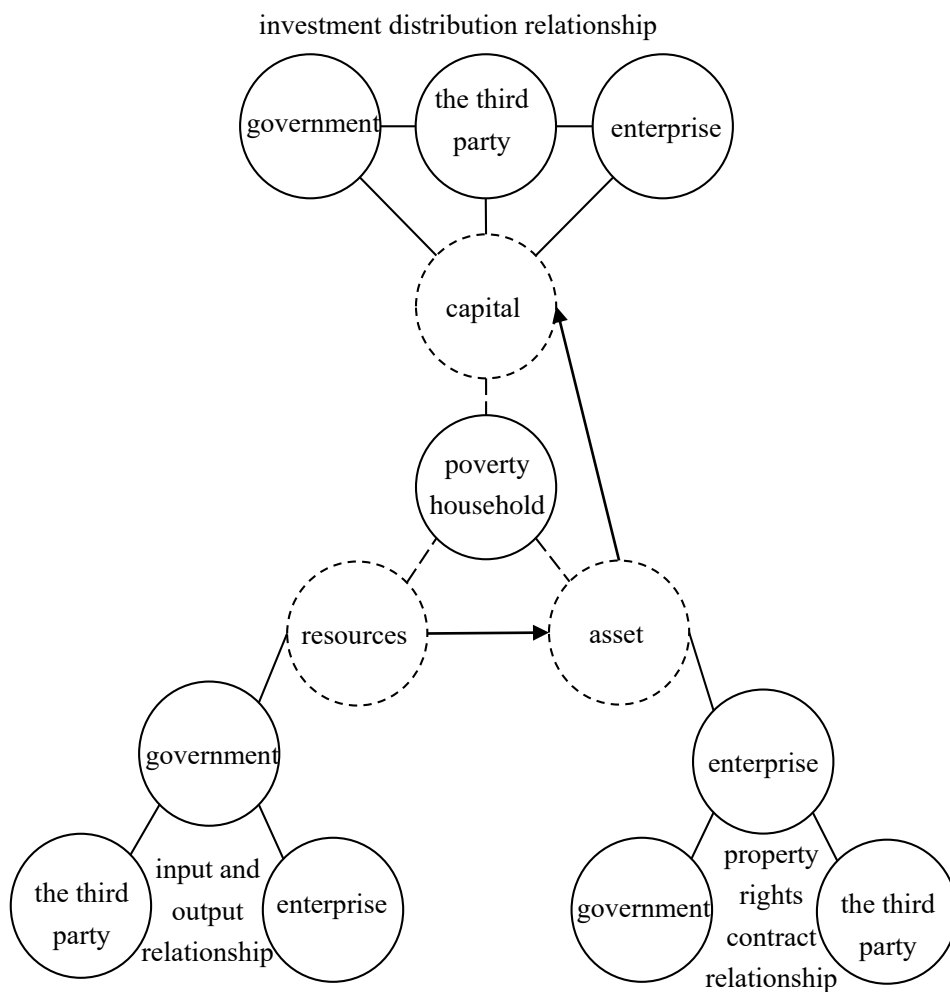


Figure 3-8 The relationship chart between poverty governance subjects

The input-output relationship, property right contract relationship and investment distribution relationship of the poverty governance subjects surrounding the formation of resources, assets and capital are a progressive evolutionary process. The formation of property right contract relationship does not mean the negation of input-output relationship, but the result of the development and evolution of input-output relationship. Similarly, the investment allocation relationship is the result of the property right contract relationship evolution. In the end, only the relationship of poverty governance subjects under the concept of capital can meet the requirements of stakeholders involved in poverty governance model, which means that the stakeholders involved in poverty governance model, is in essence to form the income distribution pattern of government-enterprise-the third party capital investment. Through the governance activities centering on material capital, human capital, social capital and other capital carriers, a game system of poverty governance with multiple participants can be formed.

In this process, the form in which the poverty group participates in the poverty governance system becomes the key mechanism of poverty governance performance. If the governance system is the basis for supporting and coordinating the production relationship of "entrepreneurship" resources for the poverty population, the two basic issues for poverty governance and development are who to start "entrepreneurship" and what "entrepreneurship" to start. This involves two interrelated subjects: one is the personal households as the target subject and the other is the related subjects as the carrier of the production mechanism. Thus, there

are two kinds of networks related to poverty governance and development, namely, personal network and production network. Personal network mainly refers to the network dominated by the personal social relationship of poverty households, which reveals the interpersonal social connections and thus it is also known as social networks. Production network mainly refers to the value chain network formed by each independent subject through the different links investment of resources, assets and capital as well as the production and operation activities. This kind of network is often based on the collaborative business relationship, so it can be called industrial network. On the one hand, the development of poverty governance should pay attention to the embedding of social network, and obtain more network resources support through the "interpersonal relationship" of personal households; on the other hand, attention should be paid to the embedding of industrial network so that relevant subjects can obtain the external economy generated by participating in the industrial division of labor, and accelerate the accumulation of knowledge and ability of all stakeholders, including the personal households. The dual embedding of social network and industrial network is the inherent requirement of poverty governance and development. Poverty governance is to find ways to break through the internal and external industrial network and social network barriers in poor areas and realize the reconstruction of industrial network and social network in poor areas, as shown in figure 3-9.

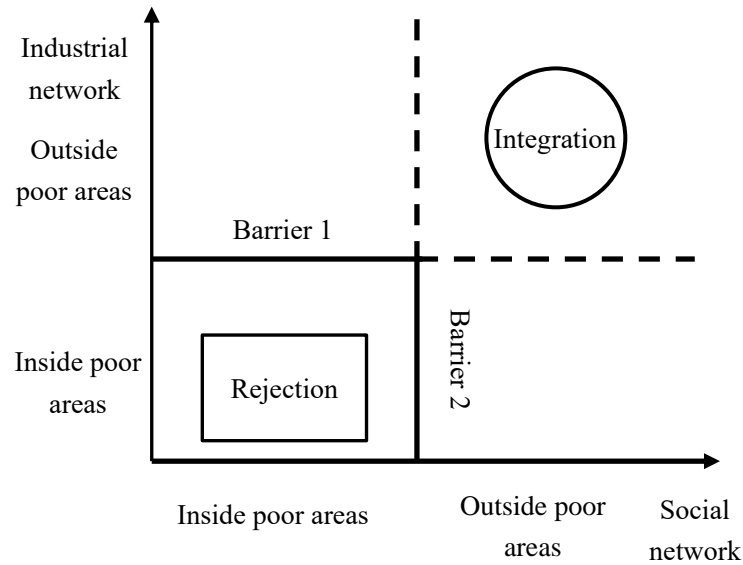


Figure 3-9 The barriers of extremely poor industrial and social network

3.4 summary

Extreme poverty is a condition in which basic consumption needs cannot be met on a sustainable basis due to the deprivation of survival capabilities and development opportunities. This concept does not only reflect the natural and social attributes of extreme poverty, but also reflect the long-term and macroscopic characteristics of extreme poverty in time dimension and spatial dimension, indicating that extreme poverty is a deep-seated rigid status under certain economic and social environment conditions.

In a broad sense, poverty governance is the general term for the institutionalized or non-institutionalized coordination of human identification, measurement and solving poverty problems. In a narrow sense, it mainly refers to the institutionalized coordination system for poverty problems of specific organizations (such as the government), including a series of subsystems such as

planning, organization, guidance, decision-making, implementation and control. From a macro perspective, poverty governance includes two major strategies of growth drive and structural coordination, and a comprehensive system covering economic growth, special development and social security has been established from the aspect to the block and then to the point. The implementation of the strategy is usually based on the social and economic conditions at that time and poverty governance systems have been established in different stages. From the social phenomenon of poverty, the poverty governance means in different stages have formed screens layer after layer, which continuously divide the poverty population with common characteristics in the form of "filtering", and the extreme poverty population is continuously settled in such a filtering process.

Poverty governance is to create all kinds of possible conditions to realize the "entrepreneurship" of the poverty population in a certain social and economic environment. Poverty governance activities are rooted in the socialized production of "entrepreneurship" resources of the poverty population, so their natural attribute is to promote the formation of "entrepreneurship" resources socialized production of the poverty population and the improvement in social productivity. Besides, poverty governance also needs to be restricted by human social conditions, so it reflects and serves certain production relationship. The reflection of this certain production relationship is the social attribute of poverty governance, which is not only restricted by the social productivity of "entrepreneurship" resources for the poverty population, but also has a strong reaction to the development of the social

productivity of "entrepreneurship" resources.

The strategic choice and system evolution of poverty governance are the manifestation of the social attribute of poverty governance, which prove that with the change in human social and economic conditions, the social production relationship of "entrepreneurship" resources of the poverty population is increasingly complicated. This is mainly reflected in the following aspects: (1) the "entrepreneurship" resources of poverty population have developed from single to diversified; (2) the development subjects of "entrepreneurship" resources of the poverty population has developed from single to diversified; (3) the distribution form of "entrepreneurship" resources output results of poverty population has developed from single to diversified. As a result of these changes in production relationship, the effect of poverty governance is not only limited by the cumulative effect of the original "entrepreneurial" resources, but also by the marginal production capacity of the new "entrepreneurial" resources. The reason why extreme poverty still exists is precisely because the marginal production capacity of the "entrepreneurial" resources available to the poverty population under the new situation is insufficient. Under the current conditions, this is a problem of governance mechanism in which productive relationship react on productive forces.

The public sector, private sector and personal are the constant participants in poverty governance activities, and their subject structural relationships constitute the "PPPP" model of poverty governance. It is the government that plays the leading role in the evolution of the "PPPP" model of poverty governance. It is the

government that has dominated this evolving relationship. With the corresponding transformation of government functions (from regulation to governance), the "PPPP" model of poverty governance faces a more open market, which makes the extension of extreme poverty governance mechanism manifest as how to construct a diversified market. The input-output relationship, property right contract relationship and investment distribution relationship of the poverty governance subjects centering on the formation of resources, assets and capital have become the mechanism connotation behind the market extension and the substantive explanation of coordinating the relationship between the poverty governance subjects.

The form in which the poverty group participates in the poverty governance system becomes the key mechanism of the poverty governance performance. If the governance system is the basis for supporting and coordinating the production relationship of "entrepreneurship" resources of the poverty population, the two basic issues for poverty governance and development are who to start "entrepreneurship" and what "entrepreneurship" to start. The answer to these two questions points the denotation and connotation of the extreme poverty governance mechanism to the social network and industrial network of the poverty population, respectively.

The dual embedding of social network and industrial network is the inherent requirement of poverty governance and development. The current poverty governance research, therefore, must focus on the participation characteristics of

the poverty groups, firstly put forward social network and industrial network status of extreme poverty governance, and refine the influence factors of dual embedded social network and industrial network for the poverty population, which can find some methods and means to break through the rigid network or embedded difficulties of the poverty population.

Chapter 4 The prototype design of the extreme poverty governance network

Under the current social and economic conditions, it is necessary to clarify the status of the industrial network and social network for the poverty population to further coordinate the production relations of the "entrepreneurial" resources of the poverty population in order to alleviate or even solve the problem of extreme poverty. The components of a network include actors, activities and resources (Mitchell, 1969; Hakansson & Snehota, 1995). Among them, actors are stakeholders who complete activities and control resources. They form networks of interrelationships through activities and the use of resources for development. The activity is the behavior that the actor transforms one kind of resource into another kind of resource with different ways, which is the form that the actors exchange resources. Resources are the medium through which actors complete their activities. The purpose of actors' activities is to transform resources.

This chapter firstly sorts out the subjects involved in the governance of extreme poverty, and differentiates their rights and interests demands and participation identities in the governance of extreme poverty. Secondly, according to the relationship of stakeholders in the poverty governance system, the industrial network and social network prototypes of the poverty population are established around the endogenous connections of resources, assets and capital. Finally, the basic principles of poverty governance network evaluation are designed based on the industrial network and social network of the poverty population.

4.1 Basic theory and guidance

Poverty is a broad and complex problem embedded in a variety of interconnected systems (Vansandt, 2012). The realization of its goal is inseparable from the common participation of all social strata (Sarker & Rahman, 2007; Xiaohai Deng, Liang Zeng, 2015). Extreme poverty is more complex than traditional poverty, so more social institutions are urgently needed to solve the complexity (Sud et al., 2009). Based on this, the traditional top-down government-led poverty governance model is difficult to solve the problem of extreme poverty.

Reviewing extreme poverty from the perspective of the Internet, there are two levels of dislocation in poverty. The first level is the disconnection between the social network and the industrial network in the extremely poor areas, which leads to the lack of ability to generate income among the extreme poverty group and is manifested as the poverty of the extreme poverty group. The second level is the disconnection between the external network of the poverty-stricken areas and the local internal social network, which leads to the lack of ways for the extreme poverty group to connect with the external network and is manifested as the plight of the extreme poverty group.

With increasing attention to the issue of extreme poverty, the relationship of the extreme poverty governance subjects has evolved into a network PPPP model. In this model, the enterprise need specifically solve the key issues of stakeholder identification, partner selection and relationship design as well as the form of embedded relationship network. On this basis, it need explore the mechanism to solve the disconnection problem between the two levels of the network, so as to improve the performance of extreme poverty governance. Accordingly, this paper builds the application framework of basic theories as shown in figure 4-1.

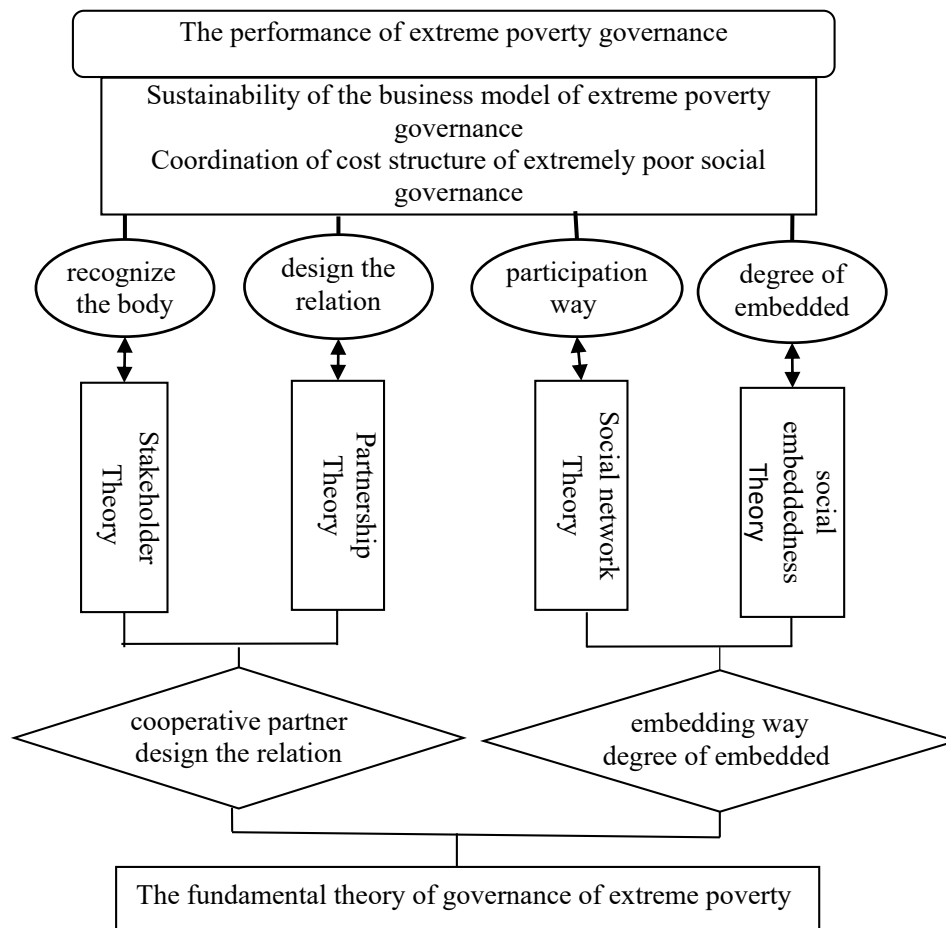


Figure 4-1 Study the logic frame diagram of basic theory

4.1.1 stakeholder theory

The term of stakeholder originates from the concept of management and was firstly proposed by the Stanford Research Institute (SRI) in 1963. It is believed that stakeholders refer to the relevant groups that support the existence of enterprises. In 1965, Ansoff introduced this concept into microeconomic and management studies, pointing out that organizations must take into account the conflicting claims of many stakeholders to set ideal goals (Ansoff, 1965). Later, stakeholders were introduced by scholars from many disciplines, and their connotations were constantly expanded. It undergoes three stages from "Stakeholders influence organizational governance" (e.g. Rhenman, 1964), "stakeholders participate in organizational governance" (e.g. Ansoff,

1965); Freeman, 1984; Clark, 1998) to "stakeholder co-governance" (e.g. Clarkson, 1994; Freeman et al., 2010). The research subjects also extend from the original enterprises to the government, social organizations, communities, politics, economy and social environment and many other aspects (Post & Sachs, 2002; Juan Xun, 2008). The empowerment and status of stakeholders would be accompanied by a certain degree of improvement in each stage (Shenyu Wang, 2008). On the one hand, this development process of stakeholders reflects the nature of stakeholders' continuous focus on their research objects; on the other hand, it also indicates that this theory focuses more on studying the behavior and relationship characteristics of multi-subject participation and cooperation of stakeholders (Hongliang Zhang, 2015).

In 1987, the World Commission on Environment and Development put forward the sustainable development initiative and clearly pointed out that multi-stakeholder was indispensable in the process of sustainable development. Therefore, introducing stakeholders into extreme poverty governance can improve the sustainability of extreme poverty governance to some extent. In the governance of extreme poverty, it is necessary to firstly identify the stakeholders involved in the governance of extreme poverty, define the roles of these stakeholders, clarify the interest appeals of different stakeholders in poverty governance, and provide the basis for the framework establishment of the extreme poverty governance. For the identification of stakeholders, different scholars proposed different identification and classification methods from different perspectives. For example, stakeholders scoring method was summarized (Mitchell & Wood, 1997) from the early broad stakeholder identification method (Freeman, 1984) to the following identifications based on the trading relations (Charkham, 1992), types of risk (Clarkson, 1994), the close connection with enterprise (Clarkson, 1995) and social relationship (Wheeler, 1992) as well as the multiple

evaluation methods. By contrast, Mitchell & Wood (1997) divided stakeholders into eight types with regard to the three properties of Legitimacy, Power and Urgency, which was more dynamic, measurable and practical (Honghui Chen, Shenghua Jia, 2005). Furthermore, different management methods were proposed for different types of stakeholders, which was more helpful to sort out the change process of stakeholders in poverty governance. Therefore, this study intends to use the stakeholder scoring method to identify and locate stakeholders in the governance of extreme poverty.

The introduction of stakeholder theory into the extreme poverty governance, helps identify the subjects required for participation in extreme poverty governance, which is helpful to construct extreme poverty governance network involved in stakeholders so as to reduce the cost of extreme poverty governance for a single subject (Hacker, 2008) and improve the effectiveness of the extreme poverty governance (Sarker & Rahman, 2007). At the same time, stakeholder participation can reduce the information asymmetry in the extreme poverty governance network (Vansandt, 2012; Fanxing Ye, 2017) and other problems to improve the decision-making basis for all subjects of the extreme poverty governance. Finally, the construction of extreme poverty governance network with stakeholder participation can enable the government to devolve power from a consistent overall controller to a rule-maker and maintainer (Delios, 2010; Youhua Chen, 2013). In the process of participation, all stakeholders can play a role in supervising and balancing government organizations.

4.1.2 Partnership theory

The concept of partnership comes from the western social partnership, which is a labor relationship of win-win cooperation, mutual trust and interdependence (Martinea-Lucio and Stuart, 2002). It was originally used to coordinate the relationship between employers and employees and its core lay in the joint efforts of two or more parties to

achieve a goal that one party or individual cannot achieve alone (Xiuyun Dang, 2007).

The establishment of partnership is influenced by many factors. Several researches indicated that the characteristics of partners had a direct impact on the information and sharing level in the process of cooperation. Moreover, with partnership as the intermediary, cultural similarity and resource complementarities in partnership characteristics had significant positive effects on trust and commitment in partnership (Fei Ye, Xuejun Xun, 2009).

Clark and Mills (1979) proposed two norms of partner relationship: communal relationship and exchange relationship. In the form of communal relationship, people give others to express their care or to deal with their needs. When one party gains the interests from the other party, the other party does not need to immediately return the benefits, but provides the required benefits as the other party needs. The exchange relationship interest is to seek the reward motive and then gives the partnership interest. It means that both parties have the obligation to return the benefits to the same extent when obtaining the benefits offered by each other, especially among strangers and the past typical industry purposes.

This code of conduct is applied to the extreme poverty governance. In order to successfully embed in the extremely poor areas and carry out production activities in the local areas, it is difficult for the enterprises to promote it by their own strength. Therefore, it is necessary to seek support and cooperation from other subjects of extreme poverty governance. In order to obtain the support from other subjects of extreme poverty governance, the enterprises need to establish a great relationship with them, which is the establishment of partnership. This kind of partnership, on the one hand, enables the enterprises to exchange different interests with other subjects of extreme poverty governance so as to share resources. On the other hand, it can also

reduce the transaction cost and learning experience curve, improve cost benefit and the survival ability of extreme poverty governance organizations through partnership, as well as disperse risks (Gemunden & Heydebreck, 1995; Mohr et al., 2010).

4.1.3 Social network theory

In the 1940s, the famous British anthropologist R. Brown defined social network as a concept that focused on the behavior of members within a bounded group. The systematic social network theory was put forward by Barnes (1954), who believed that social network relationship included both formal relationship and informal relationship. Mitchell White (1969) expanded the concept of social network theory to "a unique connection between specific individuals". Then, based on their research perspectives, scholars defined the concept of social network which had convergence. They thought that the social network was a social relation model among social members. It linked the single individual together to form a certain social group and this relationship included tangible organization and the invisible institutions and system (Shuguang Wang, Huiqiong Wang, 2017). Social network governance of extreme poverty is to build a network for extreme poverty group to obtain social security and social capital through various tangible organizations and intangible systems, so as to provide a solid foundation for their sustainable poverty alleviation (Shuguang Wang, Huiqiong Wang, 2017).

Current research on social networks can be divided into two analytical perspectives. One perspective is mainly derived from sociology and organizational theory, which regards social network as an analytical tool that exists within and between subjects and within the organizational environment. The other perspective is interdisciplinary in nature, and it considers social network as an organizational logic

and a dominant relationship between different economic actors (Baouxuan Feng, 2008). In this study, social network theory is mainly used as a tool to analyze the relationship between the governance subjects of extreme poverty, find the relationship characteristics and the impact of these relationships on organizations (Wolfe, 1995; Luo Jiade, 2010), as well as visually depict the dynamic changes in the network (Frédéric Gilbert et al., 2011; Fenghua Pan, 2013).

Social network analysis method provides a rich and powerful paradigm for the analysis of the function and structure of extreme poverty governance network, which can be used to measure network size, network density, network cohesion, the centrality of an organization and its relationships with other organizations (Quatman & Chelladurai, 2008). Network size also has an impact on the governance performance of the network, but the optimal size of the network needs to be considered. Before reaching the optimal scale, the diversity of network connection contributes to the improvement of governance performance. However, when the network size exceeds the optimal size, more network connections may lead to information redundancy, which would have a negative impact on governance performance (Wei Hang, Wanyu Yang, 2015). Granovetter (1973) divided the types of connections into strong and weak ones according to the known time length of the subject, the frequency of interaction, intimacy and reciprocal services. A strong relationship refers to the close feelings or frequent interactions among subjects. A weak relationship refers to the weak feelings or less interaction frequency among subjects. The link strength of the relationship affects the trust among subjects, which has a direct impact on the acquisition of mutually beneficial resources among subjects. Therefore, the close association among subjects has an impact on governance performance. Network centrality is an indicator to judge the structure position of the subject in the network. The ability and opportunity to obtain

external information and knowledge vary with the network position, which accordingly brings different governance performance (Guoqiang Sun et al., 2014). Therefore, when an enterprise embeds an extreme poverty governance network, it is necessary to conduct a visual analysis of the extreme poverty governance network to clarify the complexity of the network, the embedding status of the enterprise and the link degree of the network, so as to make its impact on governance performance clear.

4.1.4 social embeddedness theory

Polanyi (1944) proposed the concept of embeddedness for the first time and the embeddedness referred to a system organically combined in an object system, the endogenesis of one thing and the objective phenomenon with other things (Liping Zhang, 2013). Human economic behavior is embedded in social relations, and the root or motivation of economic behavior is subject to the influence of various non-economic factors, not just the completely rational factors of self-reliance (Zhongwei Huang, Yulu Wang, 2007). The core concept of social embedding theory is social embeddedness. New social economists represented by Granovetter(1985) believed that no enterprise existed and developed in an atomized state and the economic behavior of an enterprise was embedded in a specific social network and influenced by other economic subjects that had social relations with it. In the further research, Granovetter (1992) divided the embeddedness into the relational embeddedness and the structural embeddedness. Relational embeddedness refers to the characteristics of specific bilateral relations in the network, which emphasizes the interaction between subjects, including the content, form and direction of connection. Structural embeddedness refers to the overall characteristics of network composition, which mainly focuses on the position of network subjects in the overall network structure.

Social embeddedness has a certain impact on enterprise performance. On the one hand, from the perspective of relationship embedding, the impact of enterprise embeddedness relationship on enterprise performance presents an inverted U-shaped relationship. To a certain extent, social embeddedness relationship can improve the performance of enterprises, but excessive embeddedness may be detrimental to the open innovation of enterprises, thus reducing the performance of enterprises (Uzzi, 1996, 1997). Rowley et al. (2000) regarded industrial environment as a moderating variable between the enterprise relationship embeddedness and performance. Besides, they thought that when the industrial environment was relatively stable, the strategic orientation of enterprises was to make full use of existing capabilities or resources. At this point, strong embeddedness relationship was conducive to the innovation performance of enterprises. However, when the industrial environment was relatively unstable, the innovation strategy of enterprises emphasized how to explore new resources and develop new opportunities. In this case, the weak embeddedness relationship can promote the improvement in enterprise performance instead. Vander Aa and Elfring (2002) further pointed out that in the industrial cluster, the strong embeddedness relationship and the weak embeddedness relationship between enterprises had different influence paths on the creation and diffusion of knowledge from different natures. Strong embeddedness relation is helpful to the diffusion and sharing of tacit knowledge, while weak embeddedness relation is more helpful to the communication of explicit knowledge. On the other hand, from the perspective of structural embeddedness, there are two typical conclusions. Firstly, the structure hole theory represented by Burt (1997) holds that the only node of information flow between social networks becomes the structure hole and therefore the behavior subject in the structure hole position can obtain the competitive position based on the competitive

advantage. For enterprises, embedding into the network with loose structure and low density is more beneficial to obtain redundant information. Coleman (1988) thought that the network embedded by enterprises may be an important source of social capital. Therefore, there are more connections among network members and denser relationship connections with the higher the network density, which can promote the trust and cooperation between partners and the formation of social capital of enterprises. The social capital is the source of competitive advantages of enterprises.

On the one hand, social embeddedness can reduce transaction costs, obtain scarce resources, decrease environmental uncertainty and promote organizational learning and other benefits through the mechanism of trust, high-quality information sharing and joint problem solving when introducing the social embedding theory into the governance of extreme poverty (Waeyenberg and Hens, 2012). On the other hand, the depth of social embeddedness can affect the degree to which enterprises mobilize network relationships and structures, thus promoting the evolution of the extreme poverty governance network and improving the overall operational efficiency (Xiaoqiang Xing, 2015). In addition, social embeddedness is an important component of the BOP business model and an important influencing factor for the development of the BOP market (Kongtuan Lin, Qiao Xiao, 2018).

4.2 Analysis on the governance subjects of extreme poverty

Poverty governance activities and their structural changes require answering a series of questions, such as who is the subject of governance, what kind of relationship there is between the subjects, and how to realize governance behavior (institutional change) that adapts to the embedded relationship.

4.2.1 Stakeholders in the governance of extreme poverty

In the PPPP model of poverty governance, the stakeholders related to extreme poverty governance include public sector, private sector and poor households. The current poverty governance is the network PPPP model. In this model, the stakeholders of poverty governance are further depicted as the government, enterprises, community organizations, financial institutions and poor households. In order to further explore the stakeholders related to specific poverty governance micro behavior, the researchers interviewed many domestic and foreign experts in the field of poverty governance with the delphi method based on the subjects cognition of the network PPPP model and subdivided the specific stakeholders covered by each stakeholder category and the corresponding types of stakeholders (Table 4-1). The classification of stakeholders used the three-dimension scoring model established by Mitchell & Wood (1997) in Figure 4-2. Power represents the ability of participants to realize their rights and interests, legitimacy represents the standardization degree of the rights and interests of participants, and urgency represents the efficiency of the attention or response to the rights and interests of participants. The combination of the three dimensions (power, legitimacy and urgency) divides the participants into eight types, including non-stakeholders. Among them, non-stakeholders are zero-dimensional participants; anonymous, autonomous and demanding are single-dimensional participants; dominant, risk and dependent are bidimensional participants; authoritative is three-dimensional participants.

Table 4-1 Stakeholders and classification of extreme poverty governance

community name	Stakeholders	present types	Expected types
government	the State Council	authoritative	authoritative
	Component Department of the State Council	authoritative	authoritative

community name	Stakeholders	present types	Expected types
	Industrial sector of local government	authoritative	authoritative
	poverty alleviation departments of local government	dependent	authoritative
	Delegated investing department of local government	dominant	authoritative
	Local public resource management departments	authoritative	authoritative
	supervision departments of local government	non-stakeholder	authoritative
	education department of local government	dominant	authoritative
	party and government departments of local government	authoritative	authoritative
	government officials	authoritative	dominant
community organizations	community organization	demanding	authoritative
	Resources masters	anonymous	dominant
	Technical masters	anonymous	dominant
	Relationship masters	anonymous	dominant
	Other non-poverty labor force	demanding	dependent
	Poor households	dominant	authoritative
enterprises	Corporate strategy department	autonomous	dominant
	Corporate brand department	autonomous	dominant
	Corporate executive department	non-stakeholder	autonomous
	grass-roots staff	non-stakeholder	autonomous
financial institutions	bank	autonomous	autonomous
	insurance company	autonomous	autonomous
	Investment and Guarantee Corporation	autonomous	autonomous
the third-party organization	Industry Association	autonomous	autonomous
	Functional cooperative	autonomous	dependent
	Non-Profit Organization	anonymous	dominant
	Academic institution	anonymous	authoritative
	Media	non-stakeholder	anonymous
	Consumer	non-stakeholder	autonomous
	The Third-party Evaluation Agencies	non-stakeholder	autonomous

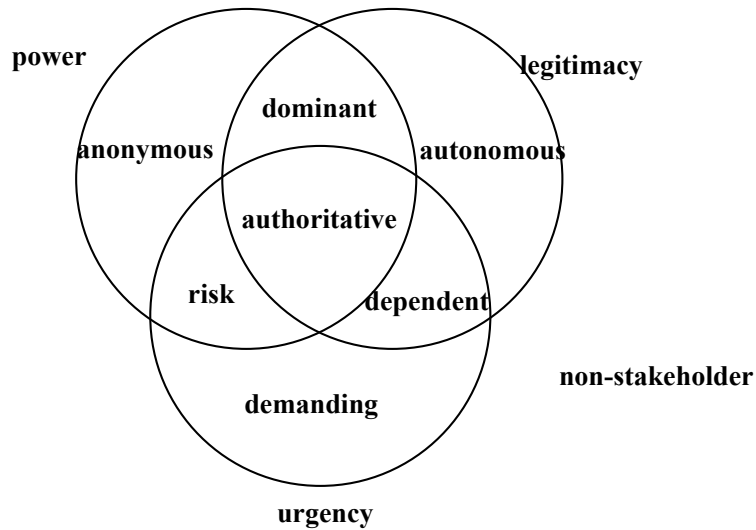


Figure 4-2 The classification figure of stakeholders (Mitchell & Wood)

4.2.2 The rights and interests of subjects in the extreme poverty governance

The analysis of three-dimensional stakeholders helps us divide the subjects who participate in the governance of extreme poverty. However, from the perspective of methodology, it only analyzes the attributes of stakeholders in the governance and does not involve the research on the relationship between stakeholders. The evolution of poverty governance reminds us that the stakeholder relationships can change as environmental conditions change. It needs an answer that how the stakeholders can avoid the power and interest conflict caused by excessive concentration when the dimensional characteristics of actual participation and expected participation are the same and what determines the evolutionary path of the expected participation when the actual participation is inconsistent with the expected participation. The answer to these questions is not only dependent on the identification of stakeholders, but also the analysis of the relationship between them based on the understanding of the rights and interests of stakeholders.

In the governance of extreme poverty, the stakeholders often invest the resources

which are most conducive to the realization of their rights and interests on the premise of meeting the requirements of certain social and environmental conditions, and seek the cooperation of related resources of other subjects in the governance system to realize their rights and interests. Rights and interests consist of rights and interests, which are the comprehensive embodiment of the rights and interests of the participants. The stakeholders' participation in the governance of extreme poverty would inevitably result in the rights and interests of one participant being affected by the rights and interests of other participants. This kind of influence includes two aspects. One is that the participants as economic men interfere with the realization of the rights and interests of other participants in the self-interest of advocating his own rights and interests. The other is that the participants as social men cooperate with other participants in order to realize the altruism of their own rights and interests.

(1) Government rights and interests

From the historical development of poverty governance, the government has always been the core of poverty governance, and the same is true in extreme poverty governance. In addition, at the level of local governments (county and city governments and below), there is a wealth of government departments involved in the governance of extreme poverty, which creates a complexity of rights and interests (Table 4-2).

Table 4-2 The rights and interests analysis table of government

stakeholder	rights and interests appeal	Invest resource	Cooperation resources	social needs	role definition
the State Council	To lift people out of poverty in all respects and build a moderately prosperous society	policy resource	Knowledge resource	information	Social men
Component Department of the State Council	To promote the full implementation of policies	physical capital	human capital	information	Economic men
Industrial sector of local government	To promote Local industry development and drive economic growth	policy resource	physical capital and human capital	information	Social men

stakeholder	rights and interests appeal	Invest resource	Cooperation resources	social needs	role definition
poverty alleviation departments of local government	To implement poverty alleviation policies adopted by governments at all levels	policy resource	physical capital and human capital	information	Social men
Delegated investing department of local government	To act on behalf of local governments in the rational use of funds	physical capital	human capital	information	Economic men
Local public resource management departments	Regional resource value appreciation and protection	Location resources	Knowledge resource	information	Economic men
supervision departments of local government	To achieve environmental protection and other monitoring goals and maintain the credibility of the government	Knowledge resource	Social capital	credit	Social men
education department of local government	To develop regional education and raise the level of public knowledge	Policy resource	Knowledge resource and human capital	information	Social men
party and government departments of local government	To serve the leadership research and take the initiative to connect and help cadres	Human capital	Policy resource	information	Social men
government officials	To realize the achievement of his post	power resources	Human capital	information	Social men

In the governance of extreme poverty, the government plays multiple roles such as strategy maker, executive supervisor and environmental controller. Firstly, as the maker of poverty governance strategy, the government needs to provide policy support and public resources for poverty governance. Secondly, as the implementation supervisor of poverty governance, the government hopes to realize the local economic development and regional resource value appreciation through its intervention in the process of extreme poverty governance. Finally, as the environmental controller of poverty governance, the government needs to coordinate the conflicts between poverty governance activities and other activities, maintain the credibility of the government, and improve the performance of government officials.

(2)Community rights and interests

As a group organization composed of local residents in extremely poor areas, community organizations often represent the interests' appeals of residents in the areas of extreme poverty governance (Table 4-3).

Table 4-3 The rights and interests analysis table of community

stakeholder	rights and interests appeal	Invest resource	Cooperation resources	social needs	role definition
Community organization	To manage the community and realize the basic stability and development of the community	power resources	Physical capital and human capital	credit	Social men
Resource master	investment benefits from physical capital	physical capital	human capital	information	Economic men
Technical master	investment benefits from human capital	human capital	Physical capital	information	Economic men
Relationship master	To obtain critical information or capital support through existing relationships	Social capital	Physical capital	credit	Social men/economic men
Non-poverty labor force	To seek employment and further development opportunities	Human resources	Physical capital	information	Economic men
Poor households	Income growth and sustainable poverty alleviation	Human resources	Physical capital and policy resource	credit	Social men/economic men

Community is a collection of natural environment and social environment directly related to the actual residence of poverty-stricken households, which has strong regional characteristics and functional attributes. In the extreme poverty governance, the community plays the dual role of settlement and port. As a residential area, the community as a group of residents relies on political power to implement management in order to achieve internal harmonious development. As a port, the community is the root of every resident and the basic carrier of their association with the outside world. Therefore, the environmental characteristics and resident characteristics of the community often represent the social capital status of the extremely poor households.

(3)Enterprise rights and interests

Enterprises in the governance of extreme poverty include both local enterprises in

the extremely poor areas and non-local enterprises entering the extremely poor areas to conduct business. The demands for rights and interests involved in the governance of extreme poverty are shown in table 4-4.

Table 4-4 the rights and interests analysis table of enterprise

stakeholder	rights and interests appeal	Invest resource	Cooperation resources	social needs	role definition
Corporate strategy department	To concentrate on the business model of creating value and form the core competitiveness	Physical capital	Human capital	information	Economic men
Corporate brand department	To establish a good corporate image and obtain support from local governments and communities	Physical capital	Social capital	credit	Social men
Corporate executive department	To implement corporate strategy, create departmental performance and achieve poverty alleviation targets set by the government	Physical capital	Human capital and social capital	information	Economic men
grass-roots staff	Career development and personal performance	Human capital	Physical capital and social capital	credit	Social men/economic men

According to the function of each department in the enterprise, the rights and interests of the enterprise can be analyzed from four parts: the strategic department, the brand department, the executive department and the grass-roots staff. In general, an enterprise plays the role of a typical economic man, that is, all its activities aim to maximize the interests of the enterprise. However, the research on corporate social responsibility has liberated enterprises from the role of economic man and endowed them with the characteristics of social man. That is to say, corporate goals do not only include economic goals, but also social goals and environmental goals.

(4) Rights and interests of financial institutions

In the governance of extreme poverty, financial institutions are a special kind of stakeholders, which mainly include banks, insurance companies and investment and guarantee corporate. Their rights and interests in the governance of extreme poverty are

shown in table 4-5.

Table 4-5 the rights and interests analysis table of financial institutions

stakeholder	rights and interests appeal	Invest resource	Cooperati on resources	social needs	role definition
bank	To provide loans and earn interest	Physical capital	Policy resource	credit	Economic men
Insurance company	To provide insurance guarantee for products, reasonably disperse risks and achieve poverty alleviation targets set by the government	Knowledge resource	Physical capital	credit	Economic men
Investment and Guarantee Corporation	To obtain economic benefits	monetary capital	Social capital	credit	Economic men

Financial institutions are commercial physical capital amplifiers based on credit. In the governance of extreme poverty, financial institutions play the role of fund provider and risk sharer. Strictly speaking, they are not direct participants in poverty governance. The profit-seeking nature of physical capital determines that their functions need to be more aligned with the for-profit private sector to cope with risks from the industrial market.

(5)Rights and interests of the third-party organizations

In the governance of extreme poverty, the composition of the third-party organizations is very rich, including industrial associations, functional cooperatives, non-profit organizations, research institutions, media, consumers and third-party evaluation agencies. These different third-party organizations have different rights and interests, which also correspond to different role positioning (Table 4-6).

Table 4-6 The rights and interests analysis table of the third-party organizations

stakeholder	rights and interests appeal	Invest resource	Cooperat ion resources	social needs	role definitio n
Industry Association	To formulate industry standards and regulate industry market behaviors	Policy resource	Human resource	inform ation	Social men

stakeholder	rights and interests appeal	Invest resource	Cooperation resources	social needs	role definition
Functional cooperative	To rely on community resources to provide intermediary services	Knowledge resource	Physical capital	information	Social men
Non-Profit Organization	To achieve non-profit goals such as cultural preservation	Knowledge resource	Human resource	information	Social men
Academic institution	To provide technical or advisory services through scientific research	Knowledge resource	Policy resource	information	Social men
Media	To focus on hot issues and spread public information	Human resource	Policy resource	information	Social men
Consumer	Product consumption acquires utility	Physical capital	Social capital	information	Social men and economic men
The Third-party Evaluation Agencies	To accept and evaluate the results of poverty governance	Human capital	Social capital	information	Social men

In the governance of extreme poverty, the third-party organizations often act as catalysts and supervisors. As a catalyst for the extreme poverty governance, the third-party organizations can use their knowledge, legitimacy and understanding of local needs to solve various development problems in cooperation with the private sector, social entrepreneurs and low-income communities (Selsky, 2005). In addition, the nature of third-party organizations enables them to monitor the actions of the private sector and the government, and advocate the implementation of existing rules or change the status quo (Mckague et al., 2015).

4.2.3 The subject relation of extreme poverty governance

In the governance of extreme poverty, the resources provided by stakeholders are not static and invariable, but constantly flow among various subjects in the network. The flow of resources has a targeting law, which is mainly reflected in: (1) the resource flow has profit-seeking characteristic, that is, the resource flow has obvious value-added tendency and pursues the expansion of economic and non-economic benefits; (2)

The resource flow has proximity, that is, the flow of resources would be affected by information transmission and transfer costs, and flow to a relatively near region; (3) the aggregation of resource flows, that is, resources would flow to the region with the greatest demand for them. This need takes into account the structural matching of resources, because the resources need to be matched in quantity and quality in a certain way in order to be effective.

Due to the targeting law of resource flow, the flow process of resource is also the process of resource structure rationalization. In the extreme poverty governance network, the resources provided by stakeholders would flow to other stakeholders who need such resources. Through the interaction of resources, these resources can form a new resource, or higher value assets and capital (Figure 4-3).

Resource allocation refers to the flow of resources into the hands of subjects who can effectively use them by means of planning or market. Asset (converting resources into assets) refers to the effective combination of resources into a productive process of factors. In this process, the input-output management of resources is carried out in accordance with economic laws and a management system is established based on property right constraints to ensure that the rights and interests of resource owners are not damaged, the preservation and appreciation of resources are increased, the tradability of resource property rights is increased and finally resources are transformed into resource assets that can be traded in the market. Capitalization (converting resources or assets into capital) is the process in which the resources (that is, assets) after property rights are converted into circulating financial capital through the form of negotiable instruments or securitization.

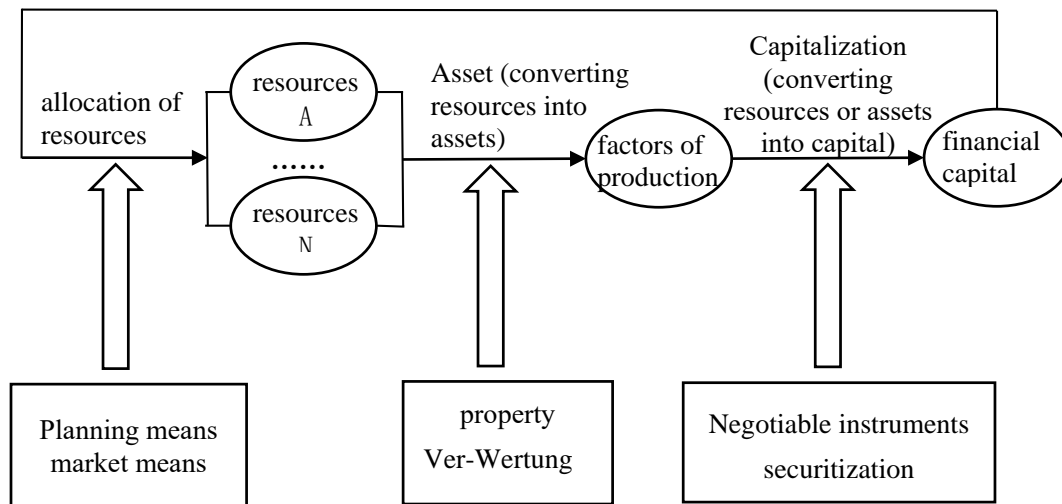


Figure 4-3 Resource flow charts for extreme poverty governance

The flow of resources is a cyclic process composed of resource allocation, asset and capitalization, whose purpose is to realize the value and efficiency of resource flow in the process of resource production and reproduction. In the governance of extreme poverty, different stakeholders invest different initial resources to form a cooperative game relationship consisting of resource allocation, asset and capitalization (Table 4-7).

Table 4-7 The “3 endowment” relationship table of subjects in the extreme poverty governance

Passive party	the State Council	Component Department of the State Council	Industrial sector of local government	poverty alleviation departments of local government	Delegated investing department of local government	Local public resource management departments	supervision departments of local government	education department of local government	party and government departments of local government	government officials	community organization	Resources masters	Technical masters	Relationship masters	Other non-poverty labor force	Poor households	Corporate strategy department	Corporate brand department	Corporate executive department	grass-roots staff	Investment and Guarantee Corporation	bank	insurance company	Industry Association	Functional cooperative	Non-Profit Organization	Academic institution	Media	Consumer	The Third-party Evaluation Agencies	
Active party	the State Council	information	allocation of resources of resources							allocation of resources of resources																					
Component Department of the State Council		information	allocation of resources of resources	allocation of resources of resources		allocation of resources of resources	allocation of resources of resources	allocation of resources of resources	allocation of resources of resources	allocation of resources of resources																					
Industrial sector of local government			Information credit		allocation of resources of resources					allocation of resources of resources	allocation of resources of resources						allocation of resources of resources						allocation of resources of resources	allocation of resources of resources		allocation of resources of resources	allocation of resources of resources				
poverty alleviation departments of local government				information						allocation of resources of resources	allocation of resources of resources					allocation of resources of resources											allocation of resources of resources	allocation of resources of resources			
Delegated investing department of local government					information					allocation of resources of resources						allocation of resources of resources	asset					Capitalization									
Local public resource management departments			allocation of resources of resources	allocation of resources of resources		information				allocation of resources of resources	allocation of resources of resources																allocation of resources of resources	allocation of resources of resources		allocation of resources of resources	
supervision departments of local government							information			allocation of resources of resources	allocation of resources of resources						allocation of resources of resources													allocation of resources of resources	
education department of local government								information							allocation of resources of resources	allocation of resources of resources	allocation of resources of resources		allocation of resources of resources	allocation of resources of resources							allocation of resources of resources				
party and government departments of local government									information	allocation of resources of resources																					

Passive party	the State Council	Component Department of the State Council	Industrial sector of local government	poverty alleviation departments of local government	Delegated investing department of local government	Local public resource management departments	supervision departments of local government	education department of local government	party and government departments of local government	government officials	community organization	Resources masters	Technical masters	Relationship masters	Other non-poverty labor force	Poor households	Corporate strategy department	Corporate brand department	Corporate executive department	grass-roots staff	Investment and Guarantee Corporation	bank	insurance company	Industry Association	Functional cooperative	Non-Profit Organization	Academic institution	Media	Consumer	The Third-party Evaluation Agencies
government officials										information	allocation of resources of resources			allocation of resources of resources		allocation of resources of resources	allocation of resources of resources													
community organization											information	allocation of resources of resources	allocation of resources of resources	allocation of resources of resources	allocation of resources of resources	allocation of resources of resources		asset				Capitalization					allocation of resources of resources	allocation of resources of resources		
Resources masters												credit	asset	asset	allocation of resources of resources	allocation of resources of resources		asset				Capitalization			asset					
Technical masters												asset	credit		allocation of resources of resources	allocation of resources of resources			asset			Capitalization			asset					
Relationship masters														credit	allocation of resources of resources	allocation of resources of resources		asset		asset										
Other non-poverty labor force															information	allocation of resources of resources			asset	asset					allocation of resources of resources					
Poor households				allocation of resources of resources											information				allocation of resources of resources	allocation of resources of resources						allocation of resources of resources	allocation of resources of resources			allocation of resources of resources
Corporate strategy department																	information	allocation of resources of resources	allocation of resources of resources	allocation of resources of resources	allocation of resources of resources	asset	asset	asset						
Corporate brand department																		credit	allocation of resources of resources	allocation of resources of resources				allocation of resources of resources	allocation of resources of resources	allocation of resources of resources	allocation of resources of resources	allocation of resources of resources	allocation of resources of resources	

Passive party	the State Council	Component Department of the State Council	Industrial sector of local government	poverty alleviation departments of local government	Delegated investing department of local government	Local public resource management departments	supervision departments of local government	education department of local government	party and government departments of local government	government officials	community organization	Resources masters	Technical masters	Relationship masters	Other non-poverty labor force	Poor households	Corporate strategy department	Corporate brand department	Corporate executive department	grass-roots staff	Investment and Guarantee Corporation	bank	insurance company	Industry Association	Functional cooperative	Non-Profit Organization	Academic institution	Media	Consumer	The Third-party Evaluation Agencies	
Corporate executive department																			credit	allolocation of resources of resources	asset	资本化	资本化								
grass-roots staff												allolocation of resources of resources	allolocation of resources of resources	allolocation of resources of resources	allolocation of resources of resources	allolocation of resources of resources				credit											
bank																					credit	asset	asset		asset						
insurance company																allolocation of resources of resources			asset			credit			asset						
Investment and Guarantee Corporation																			allolocation of resources of resources				credit							allolocation of resources of resources	
Industry Association		allolocation of resources of resources	allolocation of resources of resources														allolocation of resources of resources						informat ion			allolocation of resources of resources				allolocation of resources of resources	
Functional cooperative											asset	allolocation of resources of resources	allolocation of resources of resources	allolocation of resources of resources	allolocation of resources of resources									informat ion		allolocation of resources of resources					
Non-Profit Organization																		allolocation of resources of resources						allolocation of resources of resources	credit		allolocation of resources of resources	allolocation of resources of resources			
Academic institution		allolocation of resources of resources	allolocation of resources of resources	allolocation of resources of resources		allolocation of resources of resources	allolocation of resources of resources	allolocation of resources of resources			allolocation of resources of resources							allolocation of resources of resources	allolocation of resources of resources					allolocation of resources of resources		informat ion; credit					
Media		allolocation of resources of resources	allolocation of resources of resources														allolocation of resources of resources									informat ion	allolocation of resources of resources	allolocation of resources of resources			















Passive party	the State Council	Component Department of the State Council	Industrial sector of local government	poverty alleviation departments of local government	Delegated investing department of local government	Local public resource management departments	supervision departments of local government	education department of local government	party and government departments of local government	government officials	community organization	Resources masters	Technical masters	Relationship masters	Other non-poverty labor force	Poor households	Corporate strategy department	Corporate brand department	Corporate executive department	grass-roots staff	Investment and Guarantee Corporation	bank	insurance company	Industry Association	Functional cooperative	Non-Profit Organization	Academic institution	Media	Consumer	The Third-party Evaluation Agencies	
Active party																		alloallocation of resources of resources									alloallocation of resources of resources		information		
Consumer																															
The Third-party Evaluation Agencies			alloallocation of resources of resources			alloallocation of resources of resources	alloallocation of resources of resources										alloallocation of resources of resources														Imformation; credit

4.3 The prototype construction of the extreme poverty governance network

The current extreme poverty governance must face the existing conditions of industry network and social network. Based on the subject analysis of the extreme poverty governance, this section further deduces the roles of each subject into the industrial network and social network of extreme poverty governance, so as to build the industrial network and social network prototype of extreme poverty governance.

In order to improve the convenience of prototype design and the clarity of view, the research plans to use different legends to represent the identity of stakeholders (Table 4-8).

Table 4-8 Legend of each stakeholder

community	stakeholder	Legend
government 	the State Council	
	Component Department of the State Council	
	Industrial sector of local government	
	poverty alleviation departments of local government	
	Delegated investing department of local government	
	Local public resource management departments	
	supervision departments of local government	
	education department of local government	
	party and government departments of local government	
	government officials	
Community organizations 	community organization	
	Resources masters	

community	stakeholder	Legend
	Technical masters	◇ ₃
	Relationship masters	◇ ₄
	Other non-poverty labor force	◇ ₅
	Poor households	◇ _C
entprise ▲	Corporate strategy department	△ _B
	Corporate brand department	△ ₁
	Corporate executive department	△ ₂
	grass-roots staff	△ ₃
Financial institutions ■	bank	□ ₁
	insurance company	□ ₂
	Investment and Guarantee Corporation	□ ₃
The third-party organizations ●	Industry Association	○ ₁
	Functional cooperative	○ ₂
	Non-Profit Organization	○ ₃
	Academic institution	○ ₄
	Media	○ ₅
	Consumer	○ ₆
	The Third-party Evaluation Agencies	○ ₇

Because there are many subjects and subsystem involved in the network, the study adopts the show form from point to line to the system in the prototype design, that is, the internal network structure of major stakeholder groups in the network is shown firstly, then the local network structure with strong theoretical correlation, and finally the overall systematic network prototype for demonstration purposes.

4.3.1 The prototype construction of industrial network

Industrial network is one of the core carriers to realize the "entrepreneurial"

resource production of the extreme poverty population and expand the capital reproduction. The structure and function of the governance subject of extreme poverty in the industrial network reflects the generation and distribution of wealth and rights in the governance system, and determines the economic structure of the value added of entrepreneurial resources for the extreme poverty population.

4.3.1.1 Industrial point network prototype

The industrial point network in the extreme poverty governance system mainly involves government network and enterprise network.

(1) government network

As extreme poverty is a public social problem, the government has always played a leading role in the governance system. In the extreme poverty governance network, the government network is not only the provider of public material resources, but also the provider of poverty alleviation policy resources and the supervisor of poverty alleviation performance. However, the function of the government is not only limited to poverty governance, but also considers the problems of national strategy, environmental coordination and industrial order. Therefore, government network often reflects the functional structure of vertical multi-level government and horizontal multiple departments (Figure 4-4).

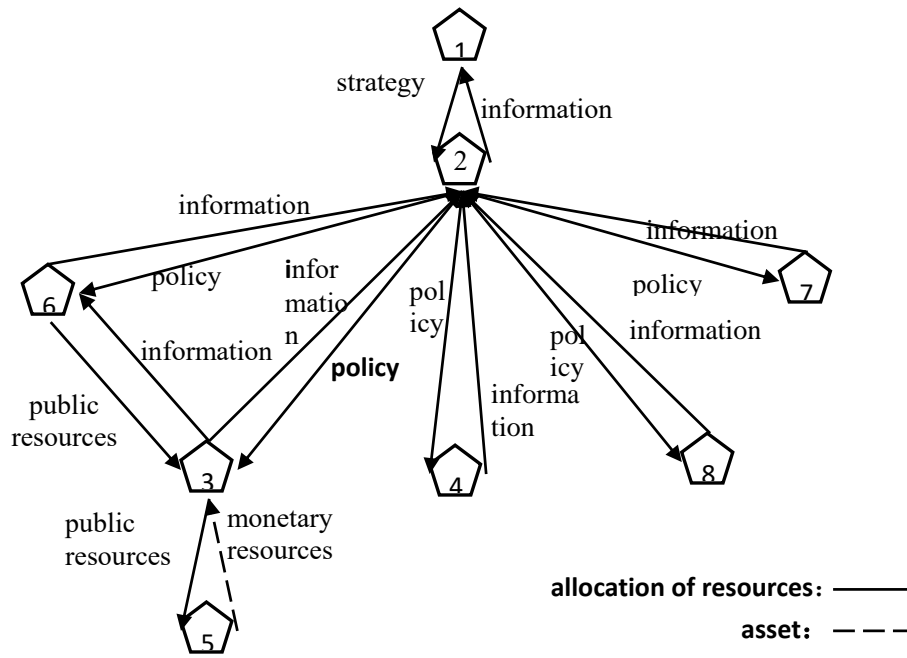


Figure 4-4 Government network structure

(2) Enterprise network

Enterprises are the cells of the market, and their behavior and structure are mainly affected by corporate strategy and adjusted by corporate governance structure. It is certain that the internal network structure of the enterprise is not a constant layer. Its prototype is only designed according to the functional structure of the enterprise department without a specific corporate governance pattern (Figure 4-5).

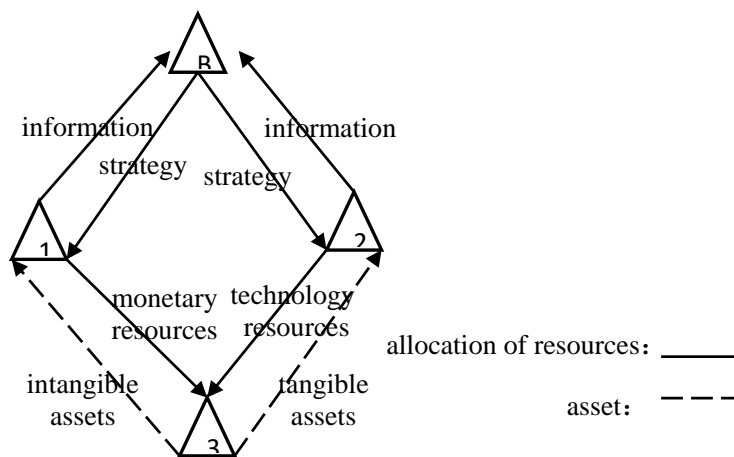


Figure 4-5 Enterprise network structure

4.3.1.2 industrial line network prototype

The industrial line network in the extreme poverty governance system mainly involves the network of "government-enterprise-financial institution" and the network of "government-enterprise-third-party organization".

(1) the network of "government-enterprise-financial institution"

In the industrial network, "government-enterprise-financial institution" has formed a policy-oriented financial market centering on enterprises and gathering policy resources and monetary capital (Figure 4-6).

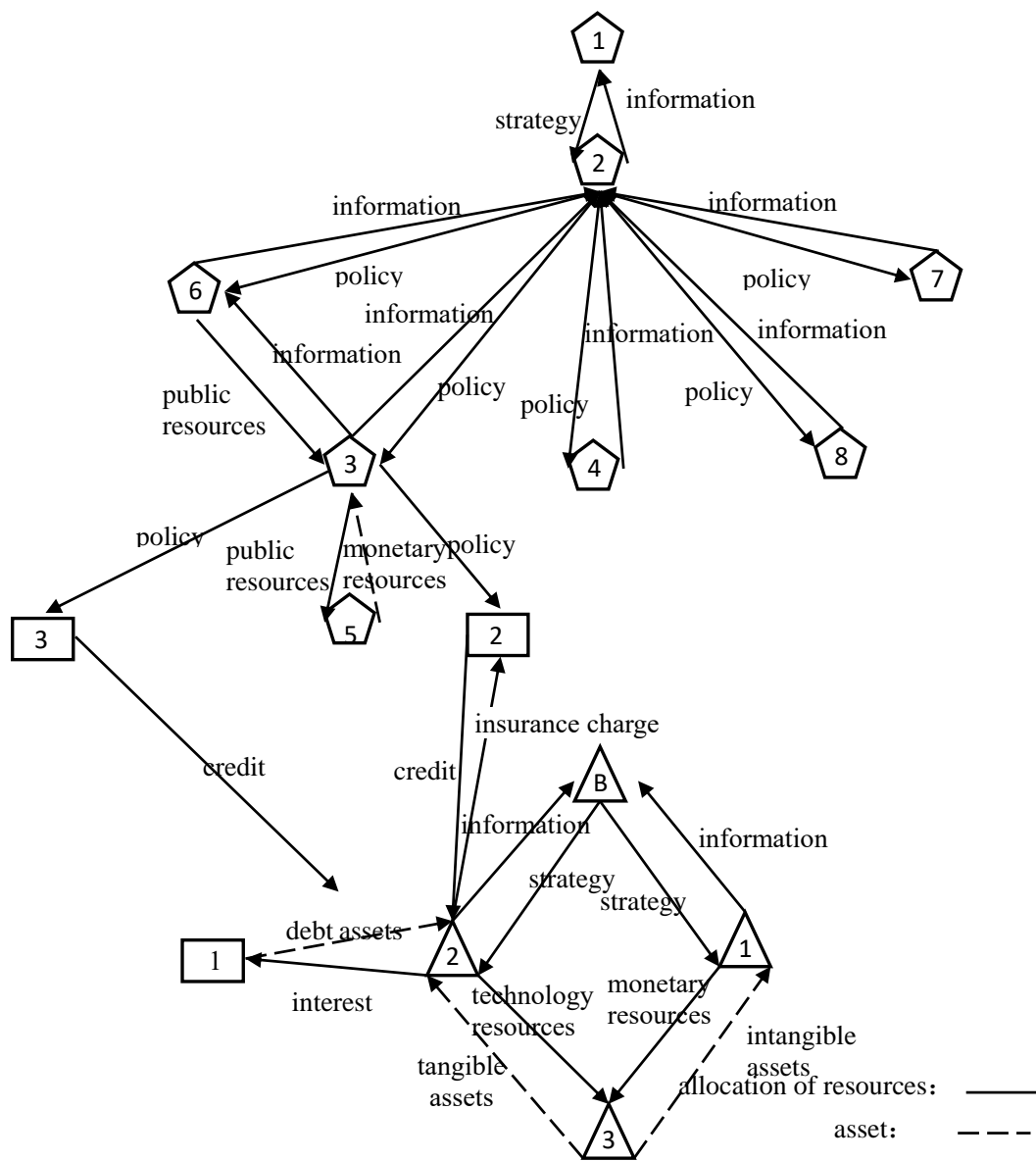


Figure 4-6 The network structure of "government-enterprise-financial institution"

(2) the network of "government-enterprise-third party organization".

In the industrial network, "government-enterprise-third party organization" has formed a project development market centering on enterprises and gathering policy resources and knowledge resources (Figure 4-7).

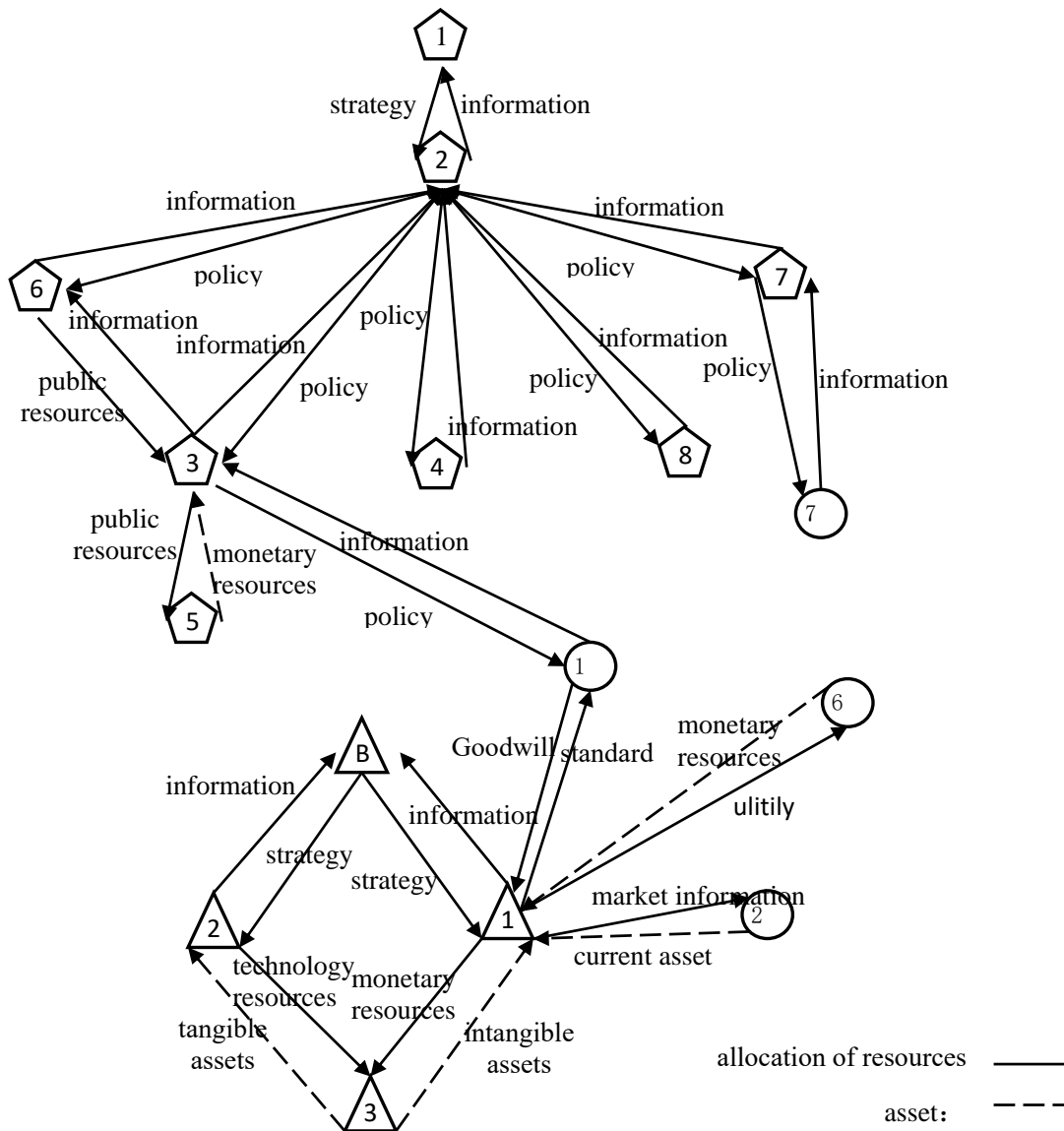


Figure 4-7 Government-enterprise-third party organization network structure

4.3.1.3 Industrial system network prototype

Based on the correlation between point and line networks, the study comprehensively draws the system network prototype of the industrial network for the governance of extreme poverty (Figure 4-8).

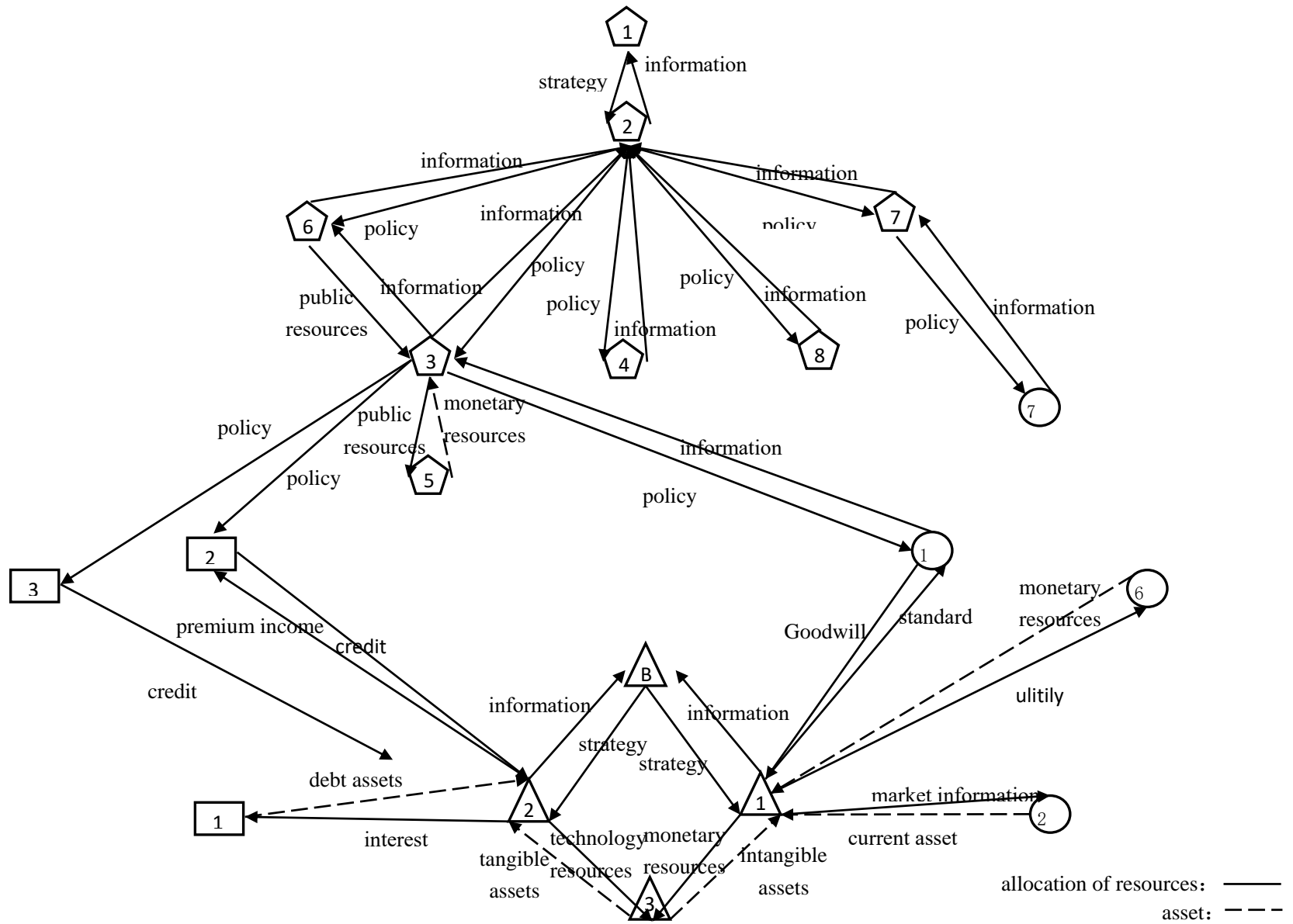


Figure 4-8 The industrial network prototype of extreme poverty governance

4.3.2 The construction of social network prototype

Social network is also one of the core carriers to realize the "entrepreneurial" resource production of the extreme poverty population and expand the capital reproduction. The structure and function of the governance subject of extreme poverty in the social network reflects the generation and distribution of knowledge and values in the governance system and determines the social structure of the value added of entrepreneurial resources for the extreme poverty population.

4.3.2.1 Social point network prototype

The social network of extreme poverty governance system is mainly community network. Community is not only the simplest form of society, but also a natural state. Members of the community have a strong sense of identity to the community and they value affection and tradition and understand each other. The traditional entity community is a population set organized by region, where the population is more or less rooted in the land it occupies, and the various elements of the population live in the interdependent relationship. The relationship between subjects in a social network is mainly manifested as social capital, including trust, interpersonal relationship and standard (Figure 4-9).

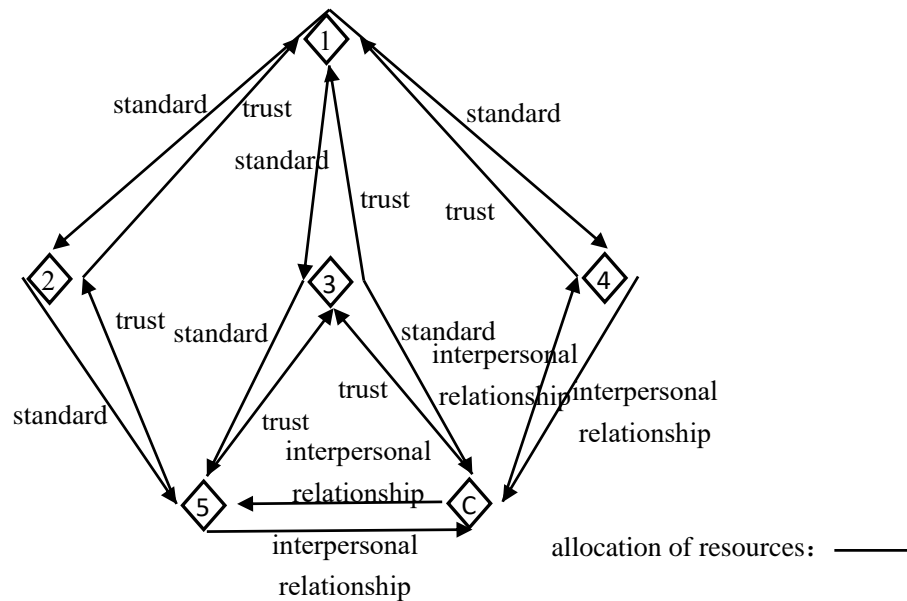


Figure 4-9 Community network structure

It should be pointed out that: (1) the design of community network is based on the social functional units in the community, and does not refer to specific objects. Although in some communities, there is no single individual corresponding to a single community function, and the multiple functions may be integrated into one person, this does not affect the social functional structure of the community network; (2) with the development of modern social life, its local differences gradually reduce as a local community. With the popularization of social mass communication (such as radio and TV), the implementation of national compulsory education and the increase in the mobility of local residents, the differences in standards, values and behavior patterns among communities have been significantly reduced. Many local functions of the community have been replaced by the universal unifying functions of the "big society". However, in extremely poor areas, the heterogeneity of its community network function should be the focus of the poverty governors.

4.3.2.2 Social line network prototype

The social line network in the extreme poverty governance system mainly involves the network of "government-community-enterprise" and "government-community-third-party organization".

(1)the network of "government-community-enterprise"

In the social network, "government-community-enterprise" has formed a community-centered learning platform that gathers policy resources and social capital. In this platform, the three parties continuously learn from each other through continuous learning and exchange of the standards from other parties to form a new cognitive system (Figure 4-10).

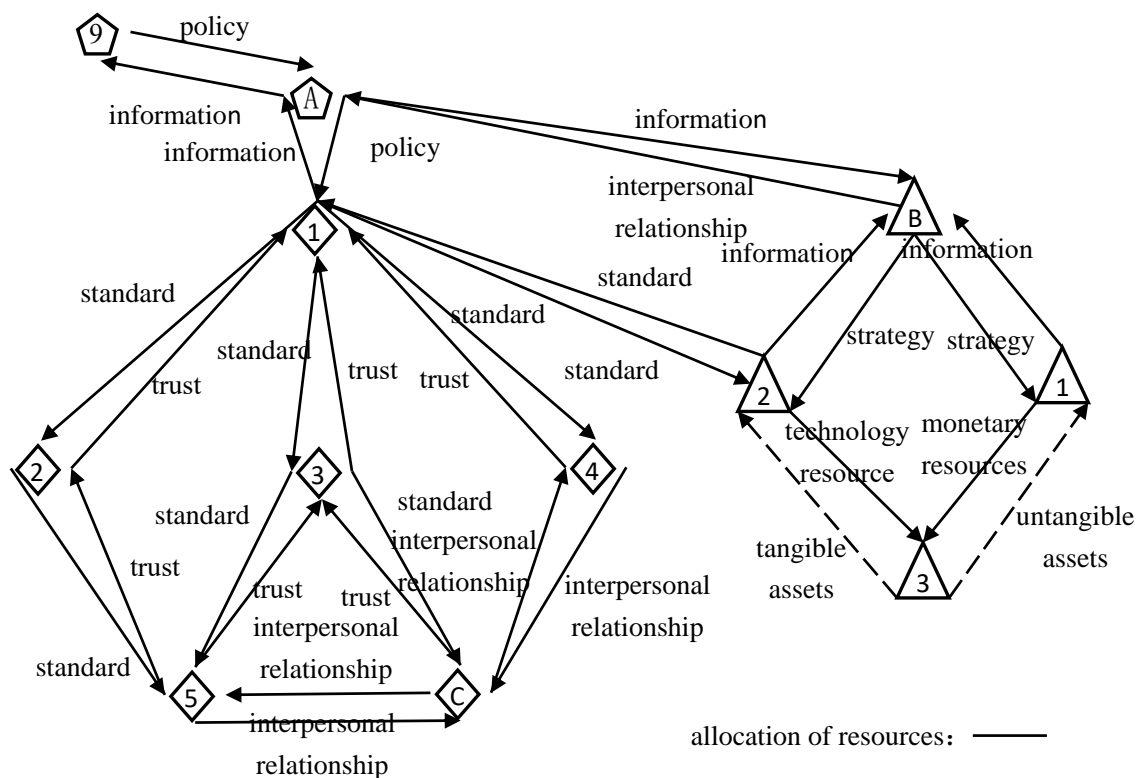


Figure 4-10 The network structure of "government-community-enterprise"

(2)The network of "government-community-third-party organization".

In social networks, "enterprise-community-third-party organizations" form a

community-centered communication platform that gathers monetary resources and social capital (Figure 4-11).

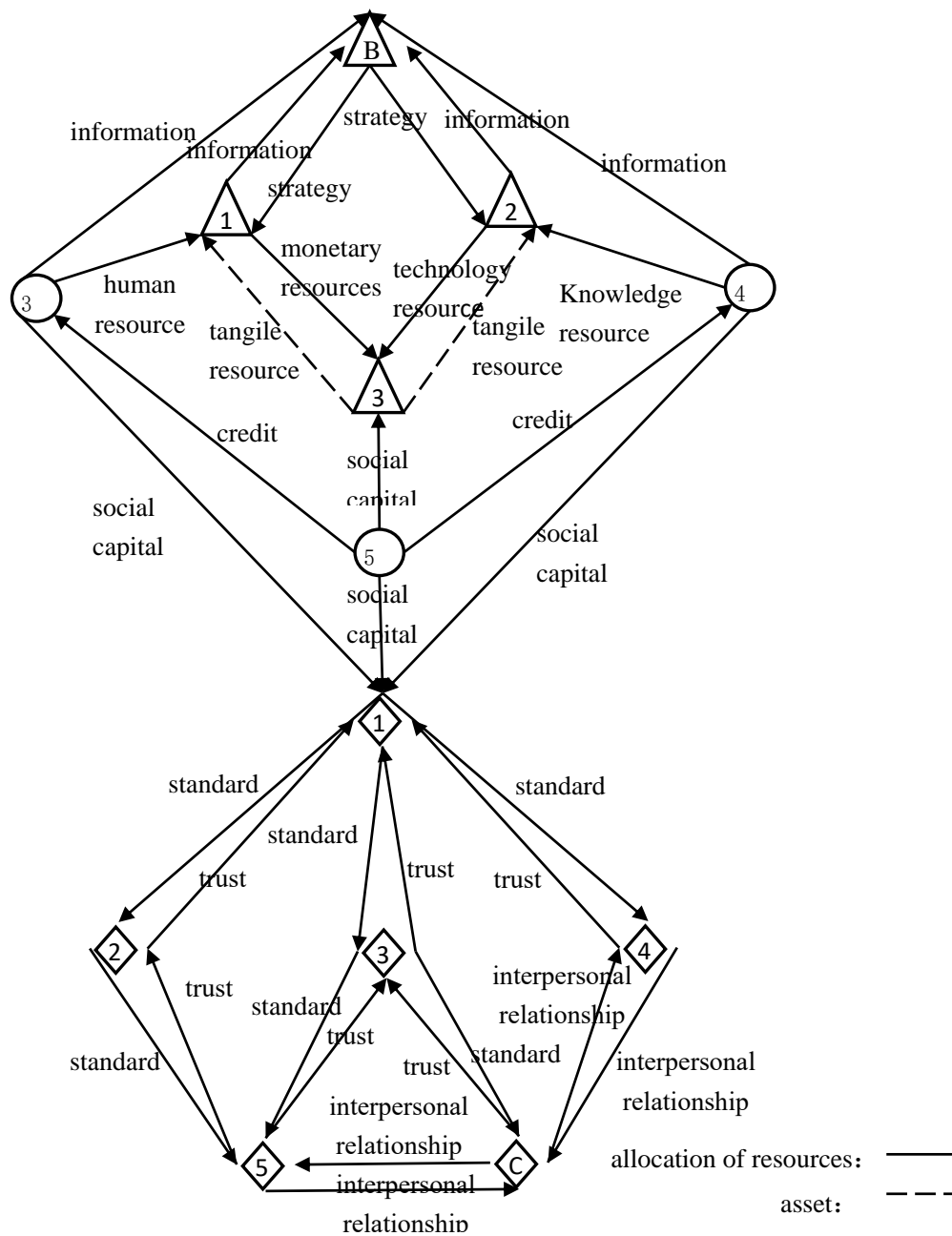


Figure 4-11 Government - community - third party organization network structure

4.3.2.3 Social system network prototype

Based on the correlation between point and line networks, the study comprehensively draws the system network prototype of the social network for the

governance of extreme poverty (Figure 4-12).

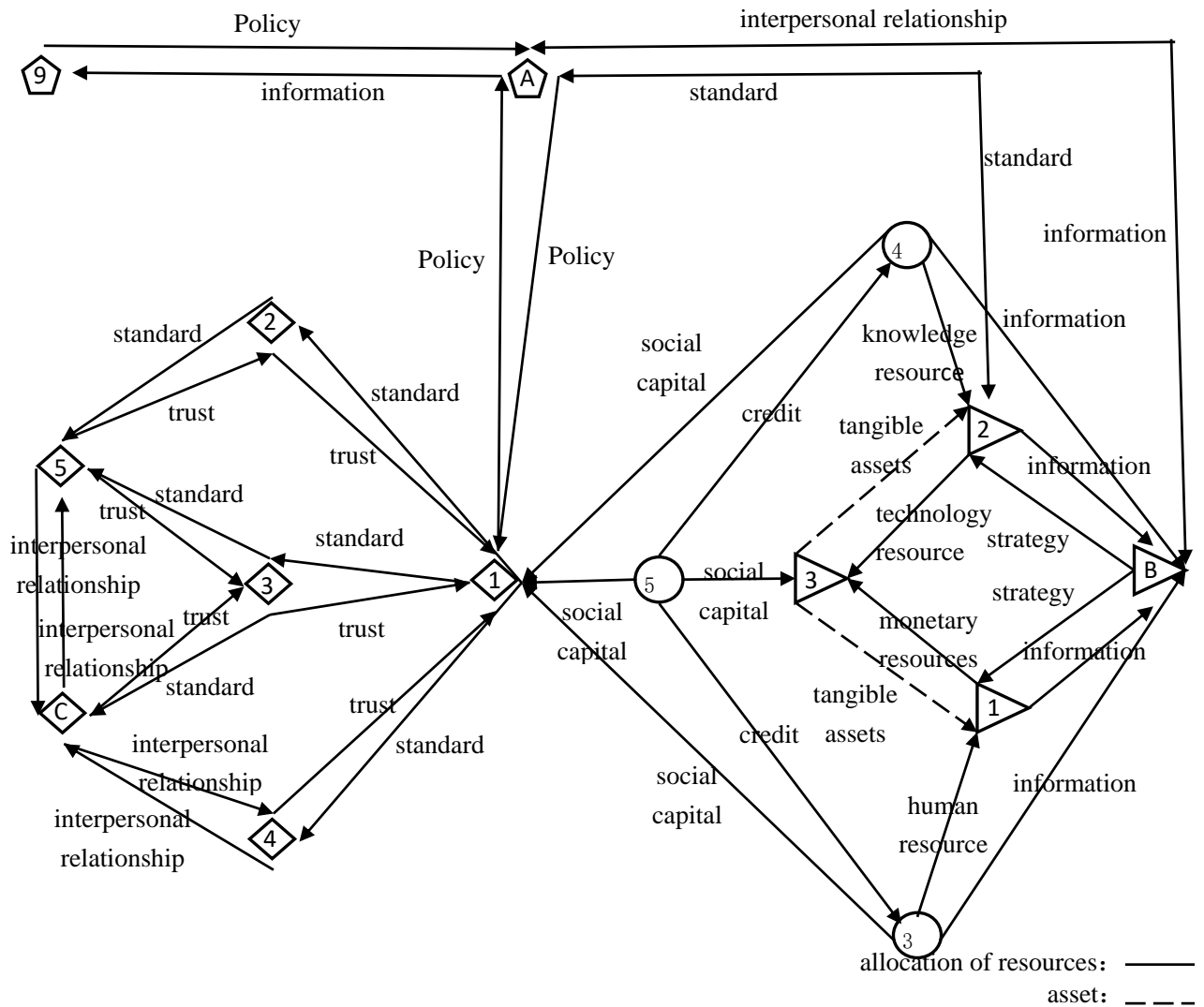


Figure 4-12 Social network prototype for extreme poverty governance

In the governance of extreme poverty, more external poverty alleviation resources can be transformed into endogenous power through social network so as to expand the opportunity and ability of poverty alleviation for the extreme poverty population. Social network also provides a baseline guarantee and margin support for the poverty population and empowers them. In this way, those extremely poor groups which are independent outside the network have the opportunity to connect with other governance subjects as a community and on

this basis the endogenous power of poverty alleviation has been produced. For the overall development of the social network for the extreme poverty governance, on the one hand, the cooperative relationship formed between the governance subjects can significantly reduce the insecurity of each governance subject in implementing the governance of extreme poverty, which is conducive to reduce the uncertainty in economic activities; on the other hand, with the development of social network, the governance subjects in the network can improve the degree of trust to each other through continuous and close communication so as to form a unique social capital in the social capital network and promote the production of positive externalities from the exchanges between the governance subjects such as trust, communication standards and social network. This is ultimately beneficial to the social security of the whole social network and the improvement in efficiency, which can enhance the ability of social network in extreme poverty governance.

4.4 Application design of extreme poverty governance network

The design of the network prototype expresses the theoretical state of extreme poverty governance system. It is necessary to further analyze specific extreme poverty problems with network prototypes and design the research performance expression of extreme poverty governance network from two aspects of analysis principles and key ideas.

4.4.1 Analysis principles of the extreme poverty governance network

4.4.1.1 The iterative principle

In order to understand the development of the governance system for extreme poverty, the research must start from the structure, function and process of the governance system under certain external environment conditions so as to observe the desire for innovation and the ability to pursue results of stakeholder groups around the problem of extreme poverty. Structure defines the stakeholders and relationships of the governance system for extreme poverty, function defines the outputs or results of the system, and process defines the sequence of activities and how to produce results. With the change in environment, the structure, process and function of the extreme poverty governance system evolve iteratively (Figure 4-13).

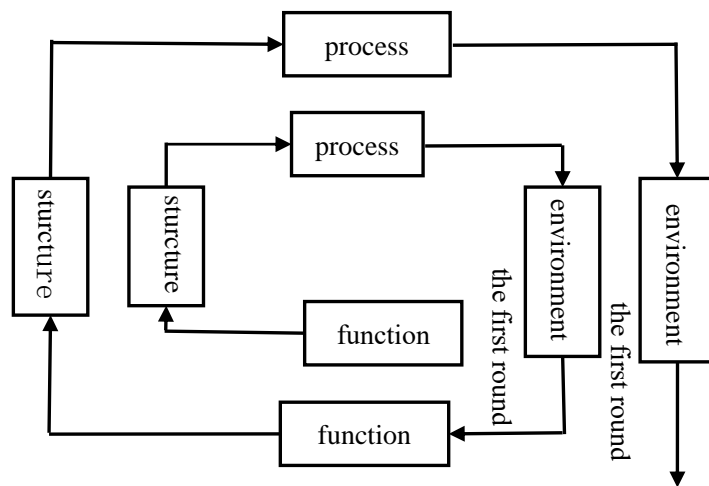


Figure 4-13 An iterative diagram of the extreme poverty governance system

In fact, this principle has been used in the discussion of the macro-level evolution of the extreme poverty governance system in chapter 3. It is corresponding to the expression of function as strategy, structure as governance subject relationship, process as evolution mechanism, and environment as problems faced by the new stage.

The problem of extreme poverty is a process of continuous iterative evolution from the perspective of governance system, while the problem of extreme poverty from the

perspective of governance objects (poor households) is a process that is constantly screened and leaked by the original mechanism. Therefore, after specific the prototype characterization of the extreme poverty governance network from the micro perspective, the study has the opportunity to further use the iterative principle to deduce the governance mechanism of the extreme poverty problem from the micro perspective.

4.4.1.2 Multidimensional principle

In the evolution of the extreme poverty governance system, we also need to understand the other factors that play a role in this system, namely the dynamic mechanism. The dynamic mechanism of the extreme poverty governance system is usually reflected in five aspects, including wealth, rights, knowledge, values and social integration. The extreme poverty governance system does not intend to separate these five dimensions and study them separately, but to emphasize their interactions (Figure 4-14).

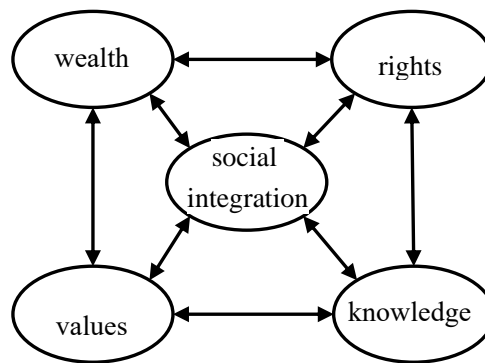


Figure 4-14 Multi-dimensional mechanism diagram of the extreme poverty governance system

This chapter uses industrial network to express the relationship between the generation and distribution of wealth and rights in the governance system of extreme poverty and uses social network to express the generation and distribution of knowledge

and values in the poverty governance system. Therefore, in the multi-dimensional principle, the specific changes in industrial network and social network in micro operation can help us understand the micro dynamic mechanism of extreme poverty governance.

4.4.2 The analysis thought of extreme poverty governance

The analysis of extreme poverty governance network is to think about the future governance model based on the current network PPPP governance model. From a micro perspective, we can start with a specific case, analyze the changes in the extreme poverty governance network before and after the case through an iterative method, summarize and extract the information and knowledge generated therein, and find out the cognitive gap for optimizing the performance of network governance.

First of all, the study should use more details to depict the initial state of industrial network and social network of micro extreme poverty. Secondly, key factors hindering the effective governance of extreme poverty are analyzed from five dimensions of wealth, power, knowledge, values and social integration so as to find gaps in information and knowledge. Thirdly, systematic design is done to make up for these gaps in the network iteration; finally, it is necessary to describe the new network state. The analysis thought is shown in figure 4-15.

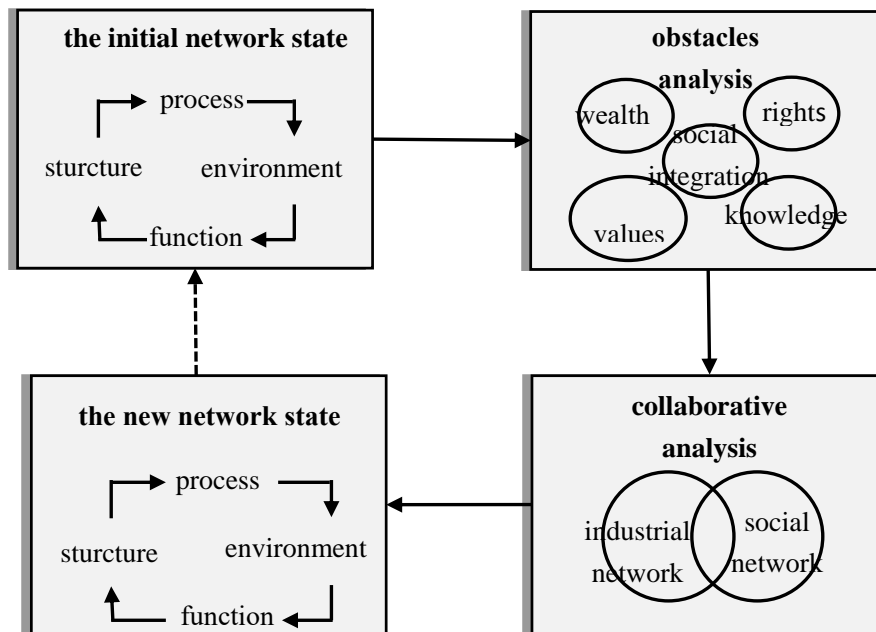


Figure 4-15 Network analysis thought map of extreme poverty governance

4.5 Proposed theoretical Model and Main Hypothesis

Stakeholders of extreme poverty governance build up various networks under different circumstances, thus the prototypes of industrial networks and social networks in theory are presented in different patterns. The key subjects in the networks, e.g., poor households, enterprise, and the government, all need to review the status of the networks they are facing and also the impacts to the evolvement of the networks brought by their activities. The main focus will be geared on the role of “enterprise” when exploring how the business mechanism influences the performance of poverty governance, by analyzing how enterprise changes its role from part of exterior networks to interior networks of poor area.

The networks of extreme poverty governance implicates rare resources sought by the enterprise, while the structure of the networks affects how the resources are shared and distributed. On the one hand, enterprise needs to embed into the social networks of

extreme poor area to obtain more support of networks resources through the “interpersonal relationship” networks of poor households; on the other hand, enterprise also needs to embed into its industrial networks to enable the related subjects access to the external economy brought by industry division, and to accelerate the accumulation of knowledge and capability of all stakeholders including the poor households. In this process, the enterprise is playing both the economic and social roles. Its dual identifies thus requires the enterprise double embedding of social and industrial networks of the extreme poor area.

Enterprise will get embedded into both the exterior and interior networks of the extreme poor area when it is involved in the extreme poverty governance. The difference in nature of the interior and exterior networks will undoubtedly lead to the variance of the resource allocation, and further influence its engagement in extreme poverty governance. For the enterprise itself, such involvements needs not only the internal system operation, but also obtain of external resources. Its localization capability is interpreted as an internalization process of recourses which includes the capability on both technology and social localization. Technology localization implies the capability of enterprise to impact the external environment through adoption and application of natural resources, infrastructure, regulation circumstances, and technology. Social localization refers to the capability of enterprise to absorb and apply the capital of social and human resources of the social elements of poor area. The resources targeted by the two capacities match the ones required by the establishment of industrial and social networks of the enterprise.

The sustainable development of business model is of essential importance to the enterprise to get involved in extreme poverty governance. Meanwhile, the lack of infrastructure, market medium, support organization, and information facilities in general leads to serious dysfunction of market because of inadequate market, imbalanced information and the shortage of public product. It is thus the key measurement on the sustainability of the business model when evaluating the result of extreme poverty governance from the perspective of the market.

Cost is unavoidable to cope with poverty for the whole society at large. Who should pay the cost and how to make the payment will be another key question to address when evaluating the result of poverty governance. If the sustainability of the business model in poverty governance networks is reviewed on its capability to produce value, then the cost structure of social governance will be evaluated on the capability of the networks to effectively utilize resource allocation to the affected subjects through professional problem solving mechanism. Because of the informal circumstances of internal social networks, the extreme poor groups at the base of the pyramid present highly socialization orientation which relies heavily on local social norms and customs to carry out life, production and trade in an informal system. It is thus very easy for the cost structure of social governance to be impacted by the networks embedment and localization capability.

Based on the analysis stated above, a proposed theoretical model is established for further testing (Figure 4-16), with six main hypotheses in three groups.

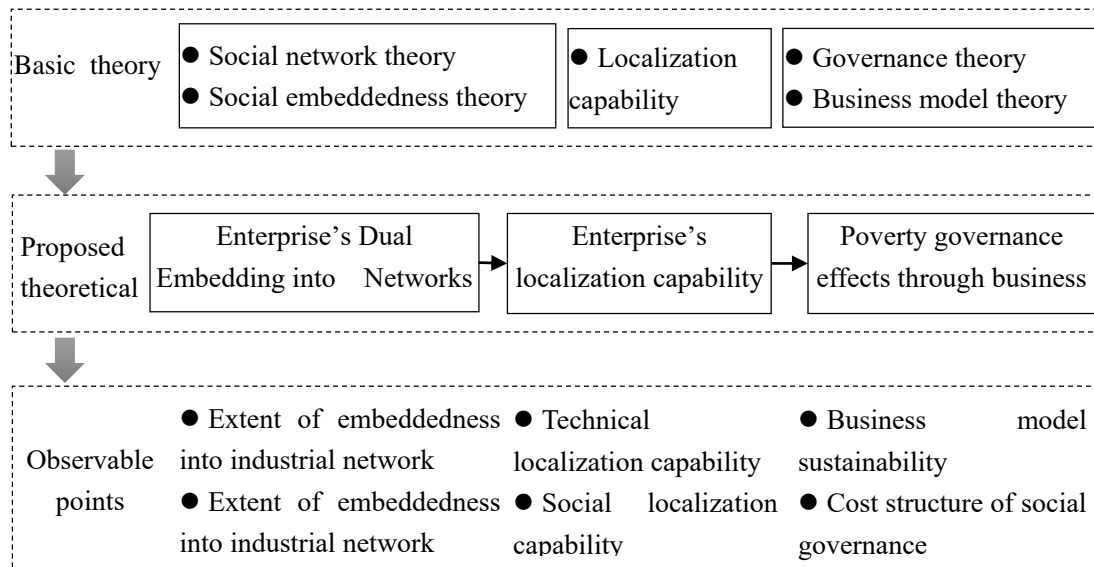


Figure4-16 Mechanism model to be verified

Group One: Main hypotheses are on the status of enterprise’s double embedment into the internal networks in poor areas.

Hypothesis 1: The deeper an enterprise embeds itself into the internal industrial networks in poor areas, the more helpful it will be for the enterprise to build its technical localization capability in poor areas, and the more sustainable its business model will be.

Hypothesis 2: The deeper an enterprise embeds itself into the internal social networks in poor areas, the more helpful it will be for the enterprise to build its social localization capability in poor areas, and the more coordinated its social governance cost structure will be.

Group Two: Main hypotheses are on the status of enterprise’s external networks when it embeds into the matching internal networks in poor areas.

Hypothesis 3: The deeper an enterprise’s external industrial networks is embedded into the internal industrial networks in poor areas, the more helpful it will be to utilize the established technical localization capability and help to open up market for the

products in poor areas, and the more sustainable the enterprise's anti-poverty business model will be.

Hypothesis 4: The deeper an enterprise's external social networks is embedded into the internal social networks in poor areas, the more helpful it will be to utilize the established social localization capability, to help raise attention to poor households, and the more coordinated its social governance cost structure will be.

Group Three: Main hypotheses are on the status of enterprise's external networks when it embeds into the mixing internal networks in poor areas.

Hypothesis 5: The deeper an enterprise's external industrial networks is embedded into the internal social networks in poor areas, the more helpful it can use the advantages of its external industrial networks to help improve the comprehensive industrial capabilities of poor households and improve its technical localization capability to build a business model to support poor households.

Hypothesis 6: The deeper an enterprise's external social networks is embedded into the internal industrial networks in poor areas, the more helpful it can utilize the advantages of its external social networks to help improve the social localization capability of poor households and improve its social localization capability to build a business model to support poor households.

4.6 Summary

The prototype design of the extreme poverty governance network is an instrumental development process that transforms the macro cognition of poverty governance into the micro analysis of extreme poverty governance. Among them, the

point of the network is the stakeholder of extreme poverty governance and the line of the network reflects the relationship between stakeholders. In the extreme poverty governance system, the study sorted out 27 stakeholders of five categories including government, community, enterprises, financial institutions and third-party organizations and preliminarily defined their roles in the poverty governance system based on their respective demands for rights and interests and available resources.

The relationships among stakeholders in the extreme poverty governance system are defined mainly by the resources they invest and the interactions they have in the network. Affected by the targeted law of resource flow, different stakeholders invest different initial resources in the governance of extreme poverty, which forms a cooperative game relationship consisting of resource allocation, asset and capitalization, including policy suggestions, resource sharing, behavior influence and information sharing.

Industrial networks and social networks are the core carriers to realize the "entrepreneurial" resource production of the extreme poverty population and expand the capital reproduction. The structure and function of the governance subject of extreme poverty in the industrial network reflects the generation and distribution of wealth and rights in the governance system and determines the economic structure of the value added of entrepreneurial resources for the extreme poverty population. The structure and function of the governance subject of extreme poverty in the social network reflects the generation and distribution of knowledge and value in the governance system and determines the social structure of the value added of

entrepreneurial resources for the extreme poverty population.

The network prototype composed of subjects roles and relationships may overlap or be absent in actual micro-poverty governance. Therefore, the study will scrutinize how the business models will affect the result of poverty governance through embedding into internal networks by establishing “enterprise double embedment- enterprise localization capability- poverty governance through business achievement” theoretical models which need be tested. It also set up six hypothesis in three groups.

Chapter 5 The Xide County case of extreme poverty

Liangshan Yi Autonomous Prefecture (hereinafter referred to as Liangshan prefecture), part of Sichuan province, but geographically located at the border of Sichuan and Yunnan provinces, is one of the most impoverished area in China. In Liangshan Prefecture, 74.6% of the administrative villages are poverty-stricken villages and more than 25% of the population are poverty households. (Jie Gao, 2017). Xide County, located in the north-central part of Liangshan Yi Prefecture, which has 24 townships, 169 administrative villages, 599 villager groups, 3 street communities and a 2206.44 square kilometers total area of the district, is a representative area reflecting the poverty situation of Liangshan Prefecture. By the end of 2017, the total population of Xide County is 225,813, ranking the national-level poverty-stricken counties in 2018 and one of the 45 depths poverty-stricken counties in Sichuan Province¹³. The poverty incidence of Liangshan Prefecture and Xide County is shown in Figure 5-1¹⁴.

¹³ The data comes from the < statistical bulletin of Xide County's national economic and social development in 2017>.

¹⁴ According to liangshan government work report and Xide County government work report

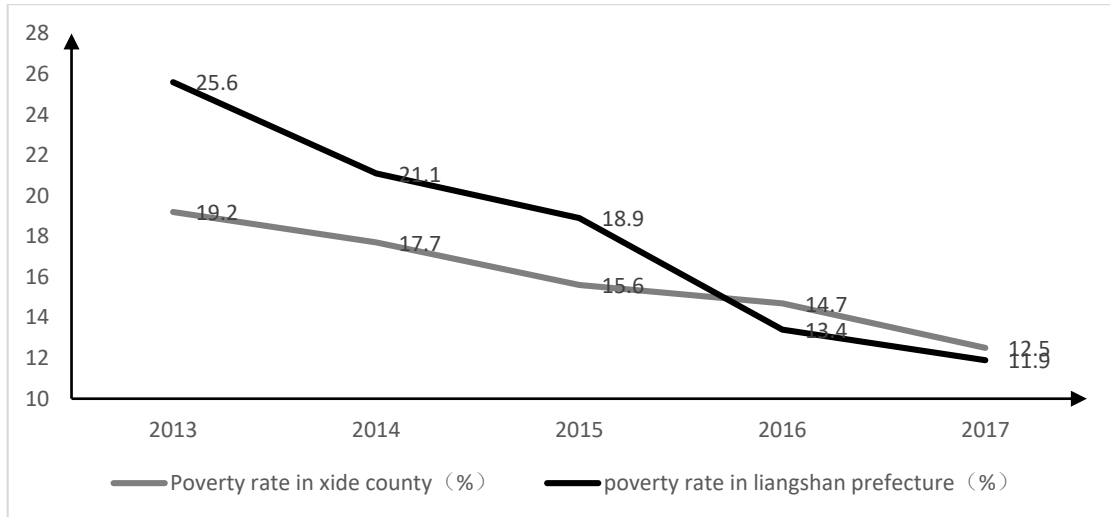


Figure5-1 The poverty incidence of Liangshan Prefecture and Xide County

Xide County is a typical area representing extreme poverty. The Tieqilishi Group (hereinafter referred to as Tieqilishi group) led by the author has personally participated in the practice of poverty management in Xide County. Therefore, this chapter will select the extreme poverty governance in Xide County as a case study. By characterizing the initial state of the Industrial Network and the social network before the participation of Tieqilishi Group in the poverty management of the Xide County, the key factors that hinder the effective governance of extreme poverty in Xide County are analyzed, and information and understanding are identified, thus the author can systematically explore the problem of extreme poverty in Xide County and find a way to solve it. As the author is the Vice President of Sichuan Province and the deputy director of the agriculture and rural committee of the 12th Sichuan provincial committee of the Chinese People's Political Consultative Conference(CPPCC), the relevant information comes from the author's work information and the research information done in person.

5.1 Xide County's current situation of extreme poverty management in

Xide is a high-cold mountainous county inhabited by the Yi people from the slavery

society “one step across the millennium” to socialist society. The basic social and economic conditions and the history of poverty management help to study and understand the industrial network and social network status before the poverty governance involvement of the Tieqilishi Group.

5.1.1 Social and economic development in Xide County

(1)The population structure

By the end of 2017, the total population of Xide County is 225,813. The rural population is 194,572, accounting for 86.17% of Xide County’s population; the Yi population is 205,970, accounting for 91.2% of Xide County’s population. The county has a resident population of 173,600. Among them, the urban resident population is 44,000, the rural resident population is 129,600, and the urbanization rate is 25.35%.

Table5-1 the population structure information table of Xide County¹⁵

years	people (person)	men (person)	woman (person)	Proportion of agricultural population (%)	Urbanization rate (%)
2004	152000	79000	73000	91.59	-
2005	155000	80000	75000	91.44	-
2006	164000	84000	80000	91.23	-
2007	179000	91000	88000	91.29	-
2008	198000	100000	98000	91.66	-
2009	204000	103000	101000	91.57	-
2010	206000	104000	102000	91.19	-
2011	212000	107000	105000	91.05	-
2012	215000	110000	105000	90.90	-
2013	224000	113000	111000	91.13	22.71
2014	230000	116000	114000	91.24	23.07
2015	217000	111000	106000	90.94	23.71
2016	220000	112000	108000	85.84	24.25
2017	226000	115000	111000	86.17	25.35

The proportion of agricultural population in Xide County continues to account for about 90% of the total population, and the urbanization rate is about 25% (as shown in

¹⁵ According to <the statistical yearbook of Sichuan>

Table 5-1). Xide is still a national county dominated by agriculture. Due to the limitation of mountainous terrain, many areas still adopt slash-and-burn cultivation and wide-ranging cultivation methods. The degree of modernization of agriculture is low and the agriculture industry in Xide is highly dependent on the natural environment.

(2)Economic Output

In 2017, the GDP of Xide County is 227.778 million Yuan, of which the primary industry completed an added value of 73.245 million Yuan (up 4.2% year-on-year), and the second industry completed the an added value of 61.258 million yuan (up 9.84% year-on-year), and the tertiary industry completed an added value of 93.275 million Yuan (up 26.2% year-on-year).

Table5-2 the national economy information sheet in Xide County¹⁶

years	gross domestic product (RMB)	agricultura l (RMB)	industrial (RMB)	service sector (RMB)	per capita gdp (RMB)	per capita income of farmers (RMB)
2013	2011120000	585350000	824640000	601130000	11960	4650
2014	1914580000	606500000	673930000	634150000	11499	5329
2015	1914060000	655310000	561900000	696850000	11393	6347
2016	1999300000	702740000	557680000	738880000	11685	7031
2017	2277780000	732450000	612580000	932750000	13136	7816

From 2013 to 2015, the GDP growth rate of Xide County was around 3.2%, and agriculture still occupied an important position in economic development, as shown in Table 5-2. The agricultural population, which accounts for the vast majority of the population, has not created a corresponding agricultural output value. This aspect reflects the lack of agricultural productivity in Xide County and the fact that the agricultural population in Xide County is idle.

The output value of the private economy occupies half of the total output value of Xide County, and has become the main force driving the industrial structure change in

¹⁶ According to <the Xide County statistical yearbook>

Xide County, as shown in Table 5-3.

Table5-3 private economy information in Xide County ¹⁷

Years	Private economic added value (RMB)	Proportion of private economy (%)	The rate of change of the primary industry (%)	The rate of change of the secondary industry (%)	The rate of change of the tertiary industry (%)
2013	1183320000	-	-	-	-
2014	1096130000	57.3	4.5	-18.6	9.8
2015	1010170000	52.8	3.0	-18.8	5.3
2016	1021570000	51.5	4.1	-4.5	4.3
2017	1178350000	51.4	4.0	20.5	6.8

(3)The characteristic of national

More than 90% of the people in Xide County are Yi people, so the local social economy cannot be separated from the national characteristics of the Yi people. As Liangshan Yi area are located on the edge of areas with influence of Buddhism, Taoism and Tibetan Buddhism, the Yi people have a self-contained belief represented by "Bimo". With the original religion of "ancestor worship", other foreign religions are difficult to enter and to be accepted. The only two beliefs are “the same blood or kinship” (ie: that the family branch is a social organization with a patrilineal bloodline) and the "customary laws of the Yi nationality region" (ie: the basic norms and procedures for coordinating internal and external contradictions). If there is a case inside the family branch, the sin will more severe. Indeed, the expulsion of the family branch is the most serious punishment of the Yi people, and it is more serious than letting them commit suicide. The family branch has also expanded to form a close-knit village mutual help system.

The Yi people mainly eat potatoes, corn, and buckwheat as the staple foods, and beans, meat, and beverages as non-staple foods. The diet changes with different altitude

¹⁷ According to <the Xide County statistical yearbook>

of the residential area. The diet is mainly processed by rough processing, with the original flavor and less seasoning. Meat is mainly pig, chicken, cattle and sheep. Pork is the favorite meat of the Yi people, especially the piglets. In the holidays, the hosts will kill the suckling pig to please his guests. When the owner and the guests share the food, the owners always eat after the guests have eaten. Xide people loves alcohol, especially beer. The Yi slang said that "the Han people likes to spend money on tea, the Yi people likes to spend money on alcohol"; "No alcohol, no dinner; With alcohol, it is a feast."; "Drinking in wine, wearing on silver, and using it in God". Those are true portrayals of the consumption concept of the Xide people. Xide is proud of drinking alcohol and getting drunk. They can be easily satisfied with the current physiological pleasure and psychological pleasure brought by alcohol, thus lacking the necessary material accumulation concept for further development. This leads to form a national cultural mentality that they are non-utilitarianism who like sharing and care about interpersonal relationship, just like the slogan said, "drink alcohol as tea, kill piglets to host guests and respect all visiting guests ". Yi People are hospitable and can devote all of them to entertaining guests, even at debts.

The attitude of the Yi people to "death" is different from that of the Han people. Although the interior of the Yi people is in a large and scattered form, the connection between them is complicated. On the good side, the family and the in-laws are very close to each other and they help each other in trouble. On the bad side, people broadcasts other's candles that harm dignity of the individual. And for Yi people, dignity is more important than life. Thus, in the past, people died for saving their dignity.

The Yi people have their own national language and script. And their national culture has contributed to the cultural diversity of the Chinese nation, as shown in Table 5-4. Xide County has the standard voice of modern proverbs, and is also one of the

birthplaces of Yi lacquer-ware¹⁸. It is known as “the hometown of Yi people's lacquer wares”, the hometown of the native culture of the Yi people”, “the hometown of Yi Kezhi” and “the hometown of good wine”.

Table5-4 List of national intangible cultural heritage of Yi culture

years	Batch	content
2006	The first batch of	Torch Festival of Yi people
2008	The second batch of	Yi Kezhi、 strings mouth of music、 Wool Testile、 rolling craft、 the makig skills of Yi sliver jewelry)、 the Painting skills of Yi lacquerware
2011	The third batch of	Yi years、 the traditional marriage of Yi
2014	The fourth batch of	the legend of bishura、 Ma Mutyi、 Bimo drawing、 Bimo music、 Yi dress)、 Liangshan yi nimu cuobi sacrifice

(4)The status of poverty

Due to the geographical location of Liangshan, the terrain of Xide County is dominated by middle mountain. The low mountain, middle mountain and high mountain account for 94.93% of the county area, and the middle mountain accounts for 70% of the county. 90% of the county's poor population is distributed in the second half of the mountain. The altitude difference in the county is very large, and there are natural disasters such as hail and mudslides, which have a major impact on the traditional agricultural production that depends on the weather.

Table5-5 The poverty population changes in Xide County¹⁹

Years	The beginning of the cumulative number of poor card construction (person)	The number of people lifted out of poverty that year (person)	The number of people in poverty at the end of the year (person)	The rate of change of the poor population (%)
2014	39334	5416	33918	13.76
2015	39334	6841	27077	17.39
2016	61386	6466	41706	10.53
2017	68024	10723	38623	15.76

18 Yi nationality's lacquerware decoration technique is one of the national intangible cultural heritages in Xide County of Sichuan province and dafang county of Guizhou province.

19 According to <the Xide County statistical yearbook>

Although the number of poor people is decreasing, the problem of huge poverty population, large poverty and deep poverty in Xide County has not been fundamentally solved(as shown in Figure 5-1 and Table 5-5). The main cause of poverty in the poverty-stricken population in Xide County is shown in Figure 5-2.

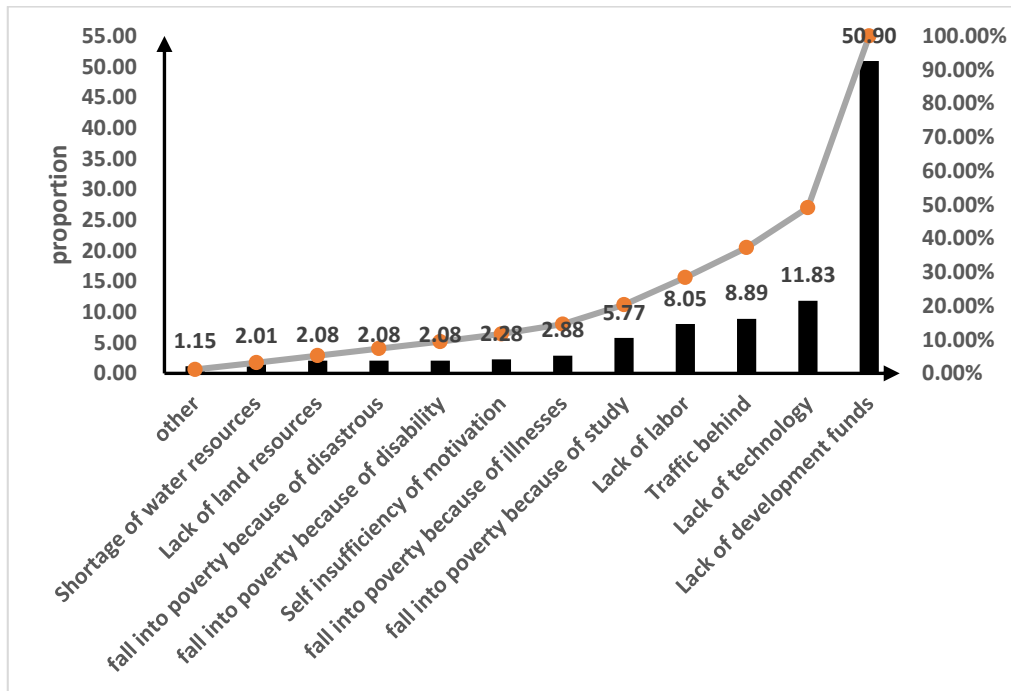


Figure5-2 The scale chart of the factors causing poverty in Xide County²⁰

Due to the lack of development funds, the proportion of poverty reaches as high as 50.9%. This mainly includes two levels: (1) insufficient funds for overall anti-poverty development. Xide County has financial difficulties and weak financing capabilities. For example, in the case of resettle residents in poor areas, in 2017, it is supposed to complete the housing construction task of 9,896 households and 35,883 persons with the investment of 470 million Yuan. While the superiors only completed the housing construction plan of 1,050 households with project funds of 31.5 million Yuan, the

²⁰ Data source: 2016 Depeng Shan’s research report <local practice research of targeted poverty alleviation policy -- based on investigation of poverty-stricken counties in contiguous poverty-stricken ethnic minority areas>.

project of relocation and poverty alleviation of 4,773 people with project funds of 1,193,500,000 Yuan, and aid construction funds of 10 million Yuan in Foshan City, Guangdong Province, and aid construction funds of 20 million Yuan from the Sanxia Group. In total, there is still a housing construction funding gap of 286 million Yuan²¹.

(2) Insufficient use of financial anti-poverty funds. The farming industry which farmers live on, has a long-term investment return cycle. Therefore, most poor households are difficult to meet the conditions for granting loans and without mortgage loan, it is difficult to benefit from financial poverty alleviation plans.

Besides, lack of technology and lack of labor are also the main factors causing poverty in Xide County, accounting for 11.83% and 8.05% respectively. At the same time, the proportion of households who are poor due to vast spending on education is 5.77%, which is far greater than the proportion of 2.88% due to illness. In other words, not only the wanting education quality and education infrastructure in the poor areas have restricted the long-term development of poor villages, but also accompanying spending, living expenses and tuitions have made many poor households feel struggling.

5.1.2 History of poverty Governance in Xide County

The elevation in Xide County is generally above 2000 meters, and there are many mountains and hills. The lack of congenital conditions, coupled with the backwardness of infrastructure, has made economic and social development seriously lagging behind other parts of the main land. The county has long been in poverty and backwardness, with large-scale poverty, serious poverty, poor labor quality and low productivity. Most peasants live below the subsistence level. Since 1980, the government has used development funds to support the development of production. By 1988, the extreme

²¹ Data source: Xide County government

poverty situation in the rural areas of the county had eased. The peasant's annual income per capital was 196 Yuan, and the per capita possession of food was 400 pounds.

In 1989, Xide County was listed as a poverty-stricken county in Sichuan Province. In 1991, it was listed as a provincial poverty-stricken county. In 1993, it was listed as a national poverty-stricken county. As the Chinese government gradually increased poverty alleviation and development efforts, it invested a total of 16.275 million yuan in poverty alleviation and development funds. By 1994, it basically solved the problem of the survival of 11,248 poor households in the county and the annual net income per poor household in the county reached 200 yuan, and the per capita possession of food achieved 600 kilograms.

In 1994, Xide was listed as a national supportive county for poverty alleviation. In order to solve the problem of food and clothing for the 52,000 poor people in the county, the Chinese government invested 65.396 million Yuan as poverty alleviation funds. Xide County has established five indicators: First, the poor households have 0.5 to 1 unit of high-yield area(land); Secondly, every household should find a unit of courtyard or a land with 20 to 30 economic trees per person; Thirdly, every household should have a backbone projects which combine planting and cultivation industry; Fourthly, every household should have one labor force transferred from grain production to develop diversified operations, work or engage in tertiary industry; Fifthly, all households should have one person who can master one or two practical technologies. Until the end of 1999, the annual per capita net income went up to 500 Yuan, and the per capita food possession reached 800 kilograms of grain after six years of construction. In the same period, the Chinese government invested 11.125 million Yuan to carry out poverty alleviation through the image of changing the customs and improving the living and living environment of poor farmers.

In 2002, the state of Xide County was identified as a key county for poverty alleviation and development. The poverty alleviation and development form shifted from “blood-transfusion” to “blood-making of poverty alleviation”, focusing on alleviating poverty by education, alleviating poverty by health, alleviating poverty by migration, constructing by New village, and rebuilding by 'three rooms'. Education, health, transportation, electricity, communications, human and animal drinking water and other social public welfare infrastructure construction speeded up and mountain migration, new village construction, "three rooms "²² transformation improved the production, living conditions and living environment of poor farmers. By 2006, Xide County achieved the per capita net income of farmers of 2033 Yuan, and the per capita possession of grain of 960 kilograms.

In 2010, Xide County was identified as the Poverty Alleviation in Wumengshan Area. In 2012, a major flood occurred in the county. The county was seriously affected by a large area. Seventeen of twenty four towns were affected, more than 100,000 people were affected, more than 8,000 houses collapsed or were seriously damaged, and 16 bridges and a large number of roads were destroyed. The county’s economic loss was 3.16 billion Yuan. Xide's poverty management is closely integrated with post-disaster reconstruction. Thirty one county-level leading cadres in the county all implemented the tasks of helping poor families and poor households through establishing the mechanism that creates archives for every person, improves quality of every person, assists every person, plans project for every household, sends funds to every household, and makes industrial development for every household. The Initial

²² The “three-bedroom” transformation refers to the reconstruction of “tile house, stone house and thatched house”

strategy was the "seven ones" poverty reduction strategy (ie, a group of people in the development of characteristic industries, a group of people in innovation and entrepreneurship, a group of people in resettlement, a group of people in low-income policies, a group of people supported by medical insurance, a group of people for drug treatment and drug rehabilitation, and a group of people in social tradition transformation).

In 2016, Xide County was recognized by the State Council as the National Key Ecological Function Areas²³. In the same year, Xide County took the lead in achieving 100% of the poverty-stricken population insured and 100% of village-level preschool education coverage rate in the poverty-stricken counties of Liangshanyu District. Xide completed the planning of characteristic industry development, a group of 9,410 households with 21,733 people in the development of characteristic industries, a group of 1,036 households and 1,856 people in innovations and entrepreneurships, a group of 5,656 households with 22,439 persons in resettlement, a group of 4,554 households with 12,401 people in the low-income policy, and a group of 1426 households with 1588 people supported by medical insurance, a group of 306 households with 316 people for drug treatment and drug rehabilitation, and a group of 10,741 households with 42,701 people in social tradition transformation. According to the township (town) and village (group) three-level bidding self-examination, in 2016, the number of county's poor population which has an annual per capita net income of more than 3,100

23 Is to optimize the spatial pattern of land and resources of the People's Republic of China, unswervingly implement the main body function area system, and promote the construction of ecological civilization system of the designated key areas, bear the water conservation, water and soil conservation, windbreak and sand-fixation and biodiversity maintenance important ecological functions, such as sustained or larger area of the country's ecological security.

Yuan, medical insurance, safe drinking water, food guarantee, safe housing, compulsory education and radio and television, reached to 10,812. By the end of 2017, there were still 8,687 poverty households and 38,623 poverty people in the county.

5.2 Original network of Xide County extreme poverty management

From the history of poverty management in Xide County, 2002 and 2016 are two important turning points. In 2016, the Tieqilishi Group led by the author was invited by Liangshan Prefecture and the government of Xide County to participate in the industrial poverty alleviation of Xide. Therefore, this section presents the author's researches from the three-time Xide personal visits to characterize the state of the poor governance original network in Xide County before 2016.

5.2.1 Main body and activities of the original network of extreme poverty management in Xide County

5.2.1.1 Main body of the original network of the extreme poverty management in Xide County

Under the conditions of Xide County's extreme poverty management activities, the following three types of stakeholders are critical.

The first type of stakeholder is the stakeholder of government. From the State Council to the People's Government of Xide County, all levels of government at the administrative level have always been the dominant players in China's extreme poverty management activities. Although in recent years, the role of enterprises in poverty governance has become increasingly prominent, the government is the dominating player in governing extreme poverty. The main function of the government in the poverty management activities of Xide County is to formulate, introduce and subdivide

various policies. The government is responsible for uploading, releasing, widely advertising the policies and creating a good environment for extreme poverty management, thus guiding more participants to engage in Xide extreme poverty management.

The second type of stakeholder is the stakeholder of community. There are three main functions of the community in the extreme poverty management activities of Xide County. First, as the practice carrier of the village system and the village committee, community is the bridge and channel linking the extremely poor groups with the external resources, which helps to achieve self-management and self-service in poverty management. Secondly, as the leader of the Yi organization, community plays the important role of unifying the ultimate poverty-stricken group's willingness of poverty elimination. Finally, as an active anti-poverty actor, the community is the main body of behavior that exerts the initiative of poverty alleviation and enhances the ability and willingness to lift poverty.

The third type of stakeholder is the stakeholder of third parties. For the purpose of helping the society, the extremely poor governance subjects that do not mix any profit demand can become a third-party organization. Their function in the process of extreme poverty management in Xide County is mainly to make up for the lack of other types of poverty alleviation subjections. Through a variety of forms of poverty alleviation and functions of poverty alleviation, third-party organizations can provide support and solutions for extremely poor groups in education, culture, science and technology, and ideas.

5.2.1.2 Activities of the original network of the extreme poverty management in Xide County

Various stakeholders have carried out various activities for the network of poverty governance, as shown in Table 5-6.

Table 5-6 extreme poverty control native network activity in Xide County

The practices of extreme poverty government	The detailed practices of extreme poverty government	The main body of extreme poverty government
The image of poverty alleviation	Formulate the plan, implement the responsibility system of assistance, formulate supporting policies, implement classified guidance, make key breakthrough serial recommendation, inspection and acceptance; Housing improvement, separation of people and animals, clothes on the body, bedding, grain in the cupboard, livestock in the pen, trees in the field, environmental beauty, children going to school, the implementation of family planning;	county-level government and township government
The special of poverty alleviation	Relocation, migration, poverty alleviation, reconstruction of "three houses", construction of new villages, poverty alleviation through education, health, biogas, and village access projects;	Provincial, state and county party committees and governments
The industry of poverty alleviation	2000: pilot project of returning farmland to forest and grassland for family pasture; 2002, Sichuan pepper industry poverty alleviation project; 2004: Pollution-free meat goat financial science and technology poverty alleviation project 2007: Pollution-free ecological black bone capon industrialization project; 2009, Potato industrialization development poverty alleviation project; 2011, Pig breeding industry poverty alleviation project;	Provincial, state and county party committees and governments
The social of poverty alleviation	Professional farmer cooperatives drive development; "Sunshine playground" project of China foundation for poverty alleviation、Provincial organs designated to help、"Hundreds of townships and villages" poverty alleviation project、Jiuxi cooperation、Jiusan society cooperates with the people's government of Xide County、Welfare food、Hong Kong shunde fellowship association donates to students、Charity foundation projects, etc	County government, community organizations, third party organizations, extremely poor group

The party committee of Xide County, the People's government of Xide County and the Animal Husbandry Bureau, the Municipal Finance Bureau, and the Poverty Alleviation Immigration Bureau are responsible for the post and implement the poverty management policies issued by the State Council. Those policies include the implementation of image poverty alleviation projects (housing improvement,

separation of people and animals, etc.), special poverty alleviation projects (allopatric land transfer and poverty alleviation, "three-room" transformation, new village construction, poverty alleviation in education, poverty alleviation in health care, etc.), and industrial poverty alleviation projects (returning farmland to forests, poverty alleviation in science and technology education, etc.). Those parties must ensure that policies benefit the extremely poor groups, so that their resources can be fully utilized and improved, such as improving the living standard and survival rate of extremely poor groups, breaking old stereotypes, maintaining close cadre relations, promoting rural infrastructure construction, and promoting the development of the local economy, etc.

A total of 115 villagers from Yuanquan Village, Kela Township, Xide County, invested a total of 2.53 million Yuan. In 2011, the village secretary Mr. Yuan led to establish the Chengyuan pig farmer professional cooperative in Xide County which provided feeding and selling services of pigs, wild boars, colorful chickens, and mallard ducks. One of the main model to drive extreme poverty groups out of poverty is to lead locals to do things like breeding, processing, selling live pigs, wild boars, chickens, colorful pheasants, mallards ducks, and importing and exporting agricultural products. There are 38 cooperatives whose models are similar to the one Mr.Yuan proposed, including the Xingnong Vegetable Planting Professional Cooperative of Xide County. For example, Mr. Liu from the Peace Village of Lushan Town invested in the construction of a greenhouse, which helped four households.

With the support from the Finance department of the Sichuan province, the Finance department of Liangshan Prefecture, the People's government of Xide County, the Animal Husbandry Bureau of Xide County and the Municipal Finance Bureau of Xide County, these cooperatives (the cooperatives of 138 villages in Xide), greatly







stimulated the economic development of Xide and achieved the dual play of industrial and social roles. Indeed, a few cooperatives, Chengyuan as the representative, have been incorporated into the agricultural industrial park and became provincial-level farmer cooperative.






Other types of social organizations cooperated with the Xide County People's Government to participate in Xide's extreme poverty management activities. For example, the China Foundation for Poverty Alleviation, the Amity Foundation, and the National Science and Technology Poverty Alleviation Office establish assistance projects in Xide County and bring warmth and capital to poor group. The government unit of the Sichuan provincial, such as the military region of the Sichuan provincial, the security service of the Sichuan provincial, the Power System in China, the Archives Bureau of Sichuan Provincial and other organizations directly help the extremely poor groups. In the cooperation with the government, those organization participate in the poverty alleviation projects of thousands villages and realize poverty alleviation through tourism. The Democratic Party asked Jiu San study center to cooperate with the People's Government of Xide County to implement the Science and Education Poverty Alleviation Project, which helps improve the education level of the extremely poor populations. Hong Kong Shun Tak Fraternal Association devoted all possible effort to the development of education in Xide County. It donated money to build and support schools and made important contributions to the development and cultivation of local talents. The Hanyuan County Rural Economic Development Organization helps the extremely poor groups to improve their basic living conditions by making energy-saving stoves in the local area.





5.2.2 The structure of the original network of extreme poverty management in Xide County

The stakeholders and activities of Xide's original network help us to further understand the status of each subject in play, as shown in Table 5-7. And the original network structure diagram of extreme poverty management in Xide County is depicted, as shown in Figure 5-3.

Table5-7 Analysis on the stakeholders and relationships of the primary network for the governance of extreme poverty in Xide County

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship
government 	the State Council	—		Departments of the State Council	the relationship of allocation resource
	Departments of the State Council	—		the State Council	the relationship of allocation resource
				The people's government of Sichuan Province	the relationship of allocation resource
	The industrial sector in local government	Agriculture and Animal Husbandry Bureau of Xide County		The people's government of Xide County	the relationship of allocation resource
				Chengyuan pig breeding farmers professional cooperative in Xide County	the relationship of allocation resource
	The poverty alleviation sector in local government	poverty alleviation Immigration Bureau of Xide County		The people's government of Xide County	the relationship of allocation resource
				extremely poor groups	the relationship of allocation resource
	The public resource management sector in	Finance department of Sichuan provincial		Finance department of Sichuan provincial	the relationship of allocation resource

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship	
	local government	Finance department Liangshan Prefecture		Municipal Finance Bureau of Xide County	the relationship of allocation resource	
		Municipal Finance Bureau of Xide County		The people's government of Xide County	the relationship of allocation resource	
				Chengyuan pig breeding farmers professional cooperative in Xide County	the relationship of asset	
	The party sector in local government	The people's government of Sichuan Province	The people's government of Liangshan Prefecture		Departments of the State Council	the relationship of allocation resource
					The people's government of Liangshan Prefecture	the relationship of allocation resource
		The people's government of Liangshan Prefecture		The people's government of Xide County	Agriculture and Animal Husbandry Bureau of Xide County	the relationship of allocation resource
						Municipal Finance Bureau of Xide County
		The people's government of Xide County		The people's government of Xide County	poverty alleviation Immigration Bureau of Xide County	the relationship of allocation resource
					Chengyuan pig breeding farmers professional cooperative in Xide County	the relationship of allocation resource
					China Foundation for Poverty Alleviation	the relationship of allocation resource
					Amity Foundation	the relationship of allocation resource

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship
				iusan society	the relationship of allocation resource
				Hong Kong Shun Tak fraternal Association	the relationship of allocation resource
				rural economic development organization in hanyuan county	the relationship of allocation resource
				the military region of Sichuan provincial	the relationship of allocation resource
				the security service of Sichuan provincial	the relationship of allocation resource
				the Archives Bureau of Sichuan provincial	the relationship of allocation resource
				Power System in China	the relationship of allocation resource
				National Science and Technology Poverty Alleviation Office	the relationship of allocation resource
	Public official	General Secretary Xi Jinping		the State Council	the relationship of allocation resource
community organizations 	Counmmity organization	Village counmmity		non-poor Yi people in Xide County	the relationship of allocation resource
				extremely poor groups	the relationship of allocation resource
				the same blood or kinship	the relationship of allocation resource
		the same blood or kinship		non-poor Yi people in Xide County	the relationship of allocation resource

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship
				extremely poor groups	the relationship of allocation resource
	Other non-poor labor force	non-poor yi people in Xide County	◇5-1	Chengyuan pig breeding farmers professional cooperative in Xide County	the relationship of allocation resource
	Poverty households	extremely poor groups	◇6	Chengyuan pig breeding farmers professional cooperative in Xide County	the relationship of allocation resource
the third-party organization ●	Functional cooperative	Chengyuan pig breeding farmers professional cooperative in Xide County	②-1	The people's government of Xide County	the relationship of allocation resource
				Agriculture and Animal Husbandry Bureau of Xide County	the relationship of allocation resource
				Municipal Finance Bureau of Xide County	the relationship of asset
				poverty alleviation Immigration Bureau of Xide County	the relationship of allocation resource
				non-poor Yi people in Xide County	the relationship of allocation resource
				extremely poor groups	the relationship of allocation resource
	NPO	China Foundation for Poverty Alleviation	③-1	The people's government of Xide County	the relationship of allocation resource
				extremely poor groups	the relationship of allocation resource
		Amity Foundation	③-2	The people's government of Xide County	the relationship of allocation resource

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship
				extremely poor groups	the relationship of allocation resource
		Jiusan society	③-3	The people's government of Xide County	the relationship of allocation resource
				extremely poor groups	the relationship of allocation resource
		Hong Kong Shun Tak fraternal Association	③-4	The people's government of Xide County	the relationship of allocation resource
				extremely poor groups	the relationship of allocation resource
		rural economic development organization in Hanyuan county	③-5	The people's government of Xide County	the relationship of allocation resource
				extremely poor groups	the relationship of allocation resource
		the military region of Sichuan provincial	③-6	The people's government of Xide County	the relationship of allocation resource
				extremely poor groups	the relationship of allocation resource
		the security service of Sichuan provincial	③-7	The people's government of Xide County	the relationship of allocation resource
				extremely poor groups	the relationship of allocation resource
		the Archives Bureau of Sichuan provincial	③-8	The people's government of Xide County	the relationship of allocation resource
				extremely poor groups	the relationship of allocation resource

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship
		Power System in China	③-9	The people's government of Xide County	the relationship of allocation resource
				extremely poor groups	the relationship of allocation resource
	Research Institute	National Science and Technology Poverty Alleviation Office	④-1	The people's government of Xide County	the relationship of allocation resource
				extremely poor groups	the relationship of allocation resource

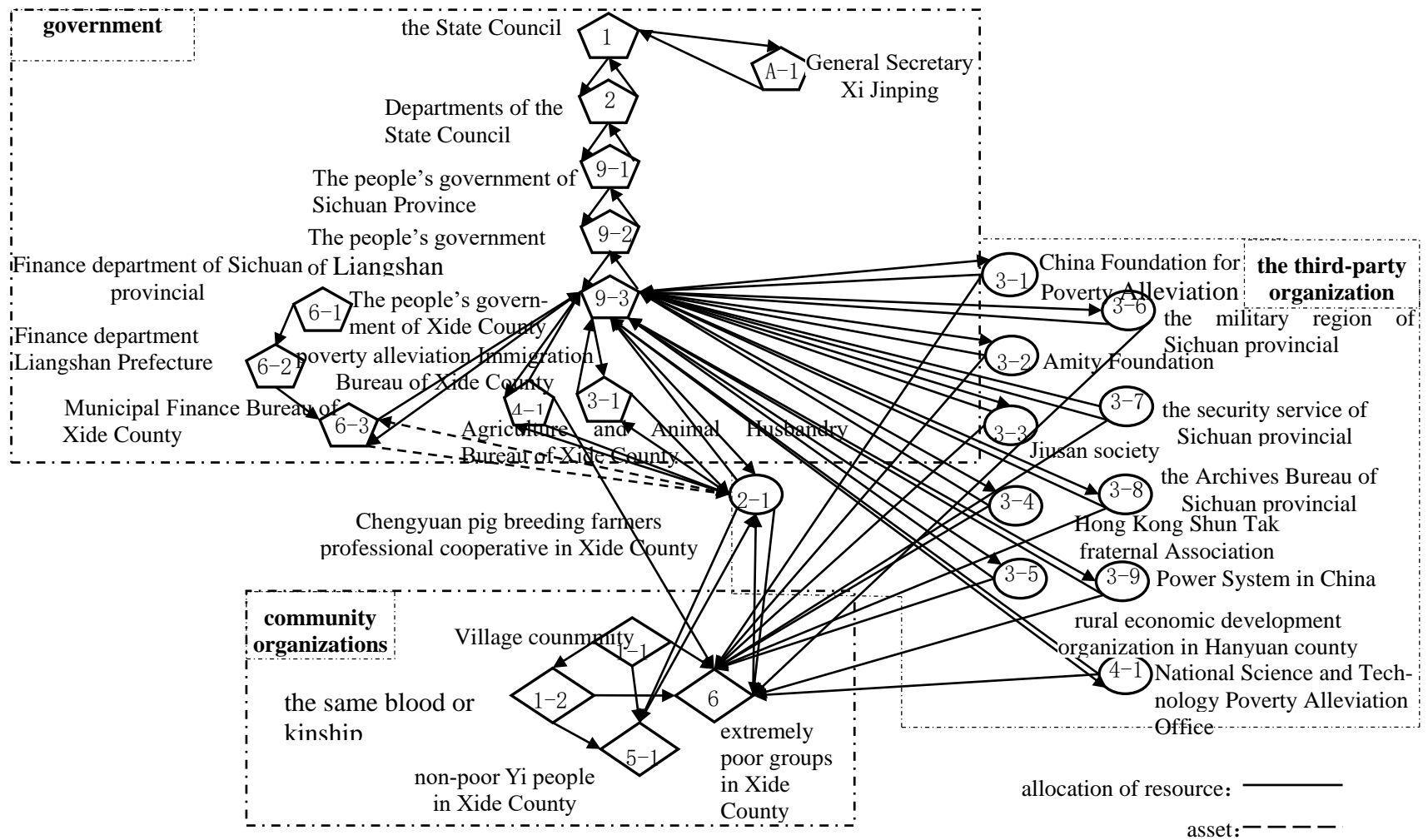


Figure5-3 the native network structure chart of extreme poverty control in Xide County

The development of extreme poverty governance has experienced two phases in its networks status of Xide County, which has seen the most basic networks in place.

For the first phase, the simplest networks reconstruction thought is introduced to the poverty governance in Xide County, i.e., the external networks are brought in to support the matching internal networks to realize poverty alleviation replying solely on social networks or solely on industrial networks.

Poverty alleviation model replying solely on social networks is demonstrated in chart 5-4. The red dotted lines on the left represent the internal social networks in poor areas, and the red dotted lines on the right the external social networks. The players linking the two networks together are mainly the government or noneconomic organization as the third party. Examples include what have been mentioned earlier, road construction for Heboluo Village of Xide County from Sichuan Academy of Social Sciences, hogpen investment at Heboluo Village from Sichuan Military Division, both belong to such poverty alleviation model relying solely on social networks.

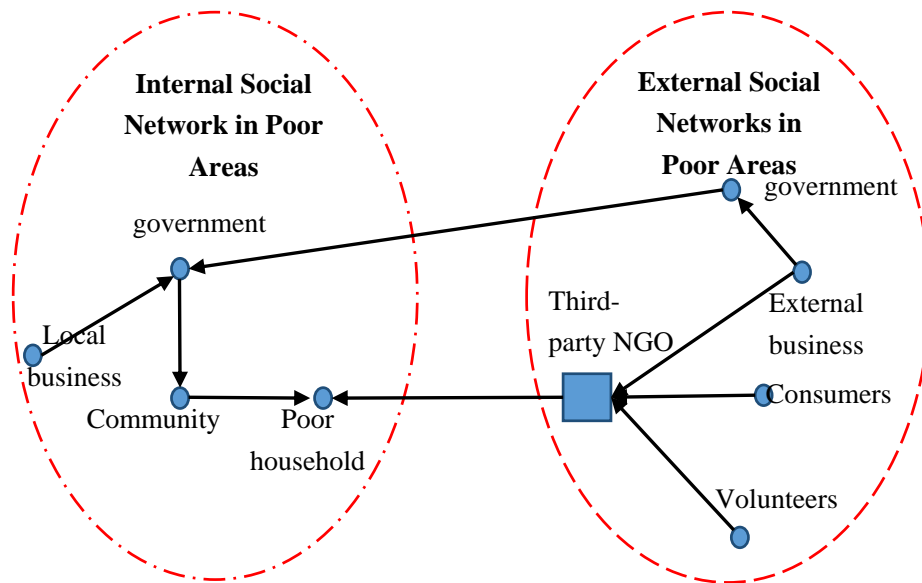


Figure5-4 Network diagram for relying on social networks to alleviate poverty

Such model does not create economic value, rather, it only has social value in short term through redistribution of wealth through means of currency or commodities. As it in general does not require the establishment of technical localization capability as occasional, non-contractual through the third party not for profit organizations, it is one-way action for poor households, although it usually matches some of the community social resources demonstrating primary partial social localization capability, the purpose is mainly on introducing or promoting the projects to the poor households, which is not able to address even the obvious issues, leaving alone the root course of poverty. In general, poverty alleviation relying solely on social networks is low efficient, not a business model, resulting in the social governance cost structure not coordinated, thus it can be adopted as an emergency method for short term result only.

Poverty alleviation model replying solely on industrial networks is demonstrated in chart 5-5. The green dotted lines on the left represent the internal

industrial networks in poor areas, and the green dotted lines on the right the external industrial networks. The players linking the two networks together are mainly local enterprises of the poor areas. Chengyuan Pig-Breeding Farmers Professional Cooperative (CPFPC) of Xide County is following such model.

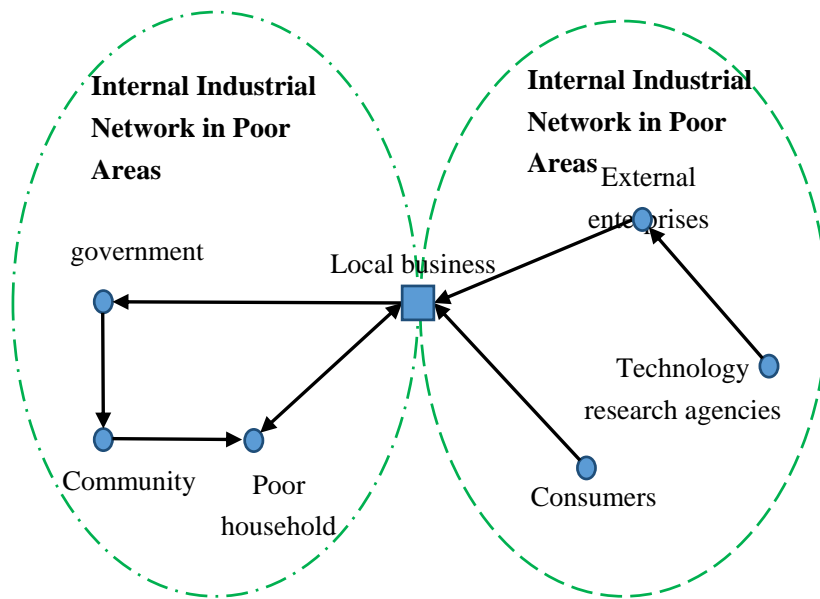


Figure5-5 Network diagram of relying solely on industrial networks to alleviate poverty

CPFPC was set up as a partnership by local resident Chengyuan Yuan, his son Ye Yuan and some friends sharing the same family names. Their business includes the sale of pigs, wild boar, pheasant and mallard, which does bring them certain economic value. However, as their business is at its pioneering stage, it so far only accommodates the needs of those relatively wealthy, yet for those suffering from extreme poverty, they are deprived the chance to have business with CPFPC. Meanwhile, the business itself is exposed to risk with limited capabilities to be resilient. In 2013, Xide County was hit by mud slide disaster, which almost damaged the overall business of CPFPC. It relied heavily on the support from the

government and made a narrow escape from calling bankruptcy.

In comparison to poverty alleviation model relying solely on social networks, the model relying solely on industrial networks are market driven and contractual. The local business inherits certain levels of technical localization capabilities, which supports the primary set up of business model of the enterprise, yet the sustainability and the risk resistance of such enterprises is not strong. It may produce some social value by having two-way actions for poor households through profit earning and hiring. Yet, the lack of a comprehensive modern enterprise governance system and the inherited social localization capabilities may limit its business activities to social capital of relatives and human capital of self capable individuals, leading to social governance cost structure on poverty alleviation not coordinated, the local enterprise is not capable or even not willing to share such social cost.

Poverty alleviation model relying solely on social networks and solely on industrial networks both have the defects. Thus, during the second phase of poverty governance at Xide County, dual embedding into both industrial network and social network is brought into the experiment and study. It has seen two different models, which is single point embedding and chain embedding.

Single point embedding model enables external enterprise to make local enterprises in poor areas suppliers or people in poor areas consumers; the enterprise partially embeds itself into the industrial network and social network in poor areas. The model is demonstrated in chart 5-6. Examples include Butuo County's poverty

alleviation efforts through purchasing its products of potatoes at price higher than market value by Southwest Science and Technology University, who makes the residents in poor areas as suppliers. P&G company sell their products, which are in smaller volume with reduced quality in packages, at lower and affordable prices to the countryside poor groups of Xide County. They make those in poor areas their consumers.

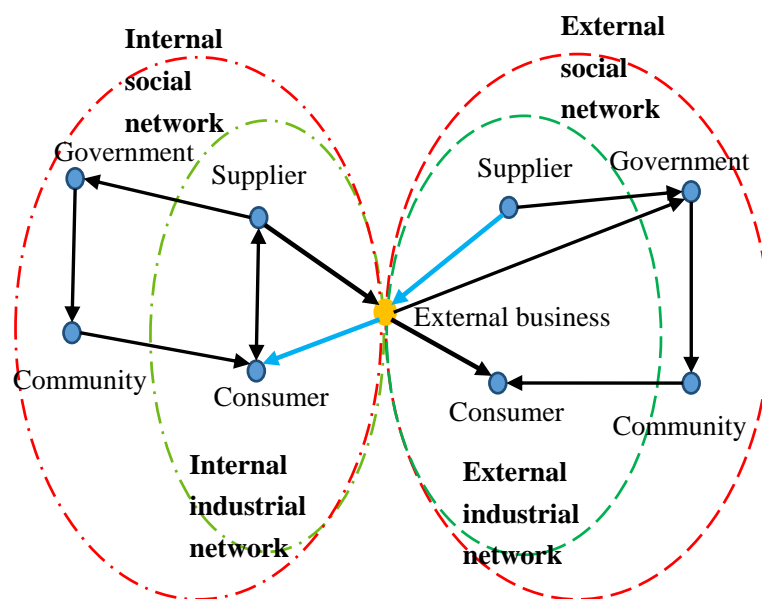


Figure5-6 Single point dual network embedding mode diagram

Single point embedding model derives from the basic business model of external enterprise. Except for the enterprise, there is no intersection between internal and external social networks and internal and external industrial networks. After consuming the potatoes produced at Butou County, the staff working at Southwest Science and Technology University may not necessarily enhance their overall attention to this extreme poor areas. By selling smller volumn of shampoos at lower price to the poor areas, P&G company may not really increase the life

quality of those poor villagers (as the poor are used to wash hair with saponin in remote areas in Sichuan and Guizhou provinces).

The external enterprise usually adopts a series of marketing methods, such as conference or sample present, to promote their basic business and to establish the primary technical localization capabilities and social localization capabilities. Such methods are about the basic business only, and there is no need to build more on the two capabilities, thus it often suspends once the initial target is realized. This model produces certain business value, while its social value is quite low. Meanwhile, it has negative consequences which are observed at Xide County. Some external enterprise withdrew from Xide due to its own marketing strategy, ending in economic loss to the locals who had business with the external enterprise. It leads to credit uncertainty of all external business by the locals in the poor areas.

Chain embedding model allows the external enterprise access the industrial chain in poor areas, help to improve the bottleneck of industries, and hire people in poor areas to work, get embedded into the industrial and social networks of poor areas. The model is demonstrated in chart 5-7. Examples include the “foster model of pig breeding” introduced by TieQiLiShi Group in Zhaohua County of Guangyuan City since 2012. This model guaranteed each breeder an income of RMB 120 Yuan per pig, which is a typical chain embedding model. Through the integration of industrial chains with the organized production in poor areas, the internal and external industrial networks intersect in the form of industrial chains, while internal and external social networks still intersect only through the enterprise.

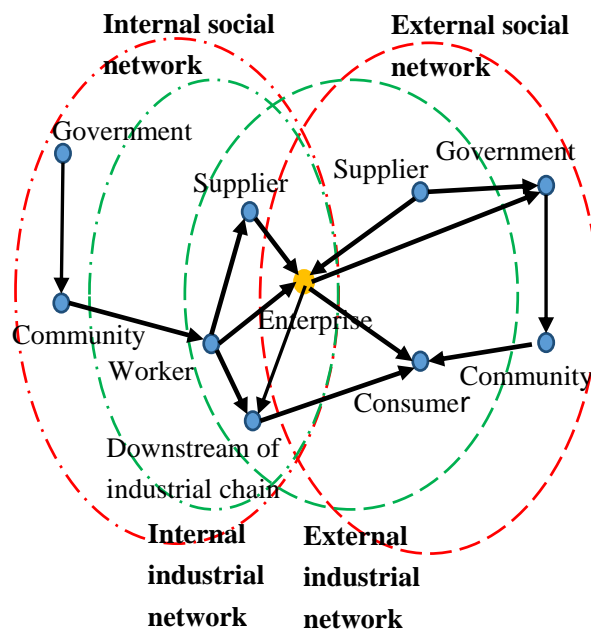


Figure 5-7 Chain-type dual network embedding mode diagram

Chain embedding model derives from the industrial need of “business outsourcing”, which achieves certain levels of poverty alleviation objectively, though the subjective goal is for the benefit of the enterprise itself. The closed-off outsourcing of the whole industrial chain, the technical localization capabilities and the original similarities of some features of the external industrial networks (such as similar natural resource environment, policy environment and technologies, etc.) all contribute to the sustainability of this business model when the enterprise applies its original advantage comprehensively to embed into the internal networks. However, due to the impact of business capital scale, the urgent need to seek successful case (such as the well-established local breeders) to distinguish the external enterprise from other competitors for its social localization capabilities, the farmer households involved in this model are in reality expected to have accumulated certain capital power and professional capabilities. The poor

households benefit more from the overall regional economic development, the social governance cost structure on poverty alleviation is relatively single.

5.3 Characteristics of the evolution of extreme poverty management networks in Xide County

After years of poverty management, Xide County has basically formed a poverty management model that combines “transfusion-type” poverty alleviation with “hematopoietic” poverty alleviation centered on poor households. From the experience of poverty management in Xide County, it can be seen that poverty governance is a process consisting of three stages: initial creation, development and sustainability. Those help the “entrepreneurial” team centered on poor households to grow. This “entrepreneurial” team includes three main groups: the poor households, enterprises and government. As the activities of different stages of the “entrepreneurial” process are different, the purpose and resources of the networked activities will change, and their dependence on the network will also alter.

5.3.1 Ways for poor households to participate in the network

(1) Poor households’ “start-up” initial creation period

The “start-up” period of poor households is the stage in which poor households seek to identify resources through the identification of opportunities and the motivation to change the status. The main task of poor households at this stage is to obtain “entrepreneurial” resources. However, due to insufficient resource endowment of poor households, their activities have to rely on external resources.

And the personal relationship network is the only channel for their contact and access to external resources.

The network relationship of the “start-up” period of poor households is manifested in a single social relationship, that is, an emotional-based social network relationship. This kind of initial social network based on emotions and with relatives and friends as the key nodes is just a natural network of daily life relationships, which usually does not support poor entrepreneurs to get rid of poverty. Therefore, poor households are passive at this stage, and essentially need external resources to complete resource allocation by connecting with the social network.

(2) Poor households' "start-up" development period

The “start-up” development period of poor households is a stage in which poor households further transform the “entrepreneurial” resources they have acquired through organizational activities into objects that can be commercialized. The main task of the poor households at this stage is to realize the assetization of “entrepreneurial” resources. The process of commercialization is full of uncertainty. It is a process of exploration that all participants, including poor households, continue to try, learn, discover and exploit opportunities. It is difficult to meet the resource needs of poor entrepreneurs for “entrepreneurial” development by relying solely on the emotionally-based initial social network. Poor households must seek partners through commercial education channels.

Seeking cooperation in commercial channels enables poor households in the “entrepreneurial” development period to transfer from a single social network

relationship to the industrial network relationship. Initially, poor households and other entities in the industrial network (especially enterprises) are strangers. Therefore, if poor households want to enter the industrial network, they must rely on market business rules to form a trading relationship with the partners. Compared with other network entities, poor households usually belong to the lack of capacity groups and they enter the industrial network through transactional relationships. On the one hand, they can participate in the industrial division of labor and share the additional benefits of division of labor and cooperation. On the other hand, they can also accumulate knowledge of growth, inspire the desire to grow, and change from passive to active status.

(3) Poor households' "start-up" sustainability period

The "start-up" sustainability period of poor households is the stage in which poor households further transform their "entrepreneurial" assets through market activities and construct new social networks. The main task of poor households at this stage is to realize the social capitalization of "entrepreneurial" assets. The transactional relationship with partners formed by the poor households entering the industrial network has great uncertainty and probabilities. Indeed, there are problems such as information asymmetry and high transaction costs. Therefore, poor households must interact with the anti-poverty environment to select and retain accumulated trading relationships.

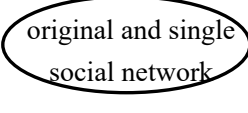
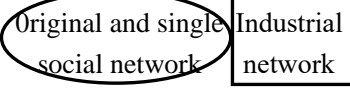
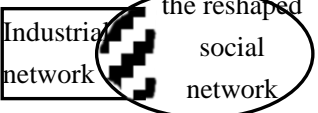
Specifically, for those who have repeatedly succeeded in forming a transaction relationship with the poor households, the degree of trust between the two sides has

been continuously improved with the increase of the frequency of transactions and the promotion of mutual learning. After the strangers gradually become acquaintances, the relationship between the two parties has gradually emerged. The relationship between the two parties has gradually produced an exchange relationship based on emotionality. The poor households eventually become the nodes of the industrial network. Indeed, through the relationship between the entrepreneurs behind the exchange relationship, the poor households can break through the initial social relationship network, expand the social network nodes into the industrial network, realize the dual network integration, and gain the ability to grow.

In summary, the way in which poor households participate in the governance network from the initial period to the development period to the sustainability period, is to continuously interact with social networks and industrial networks. It is not only the process of “starting” resources of poor households, but also the process of resource allocation from assetization to social capitalization. At the same time, it is a process in which a poor household breaks through the original social network relationship and integrates into the new social network relationship, as shown in Table 5-8.

Table5-8 the Network embedding characteristics of poor households

	start-up stage	development stage	extended stage
activities of poor households	acquire resource	resource capitalization	asset capitalization
the	affective	transactional relationship	exchange relationship

	start-up stage	development stage	extended stage
relationship of network	relationship		
network embedded	original social network	industrial network	industrial network and new social network
network embedding diagram			
the type of network embeddedness	single network embeddedness	separately dual networks embeddedness	overlap dual networks embeddedness
core mechanism	emotional trust	cognitive trust	composite trust

5.3.2 Ways for companies to participate in the network

We generally do not call enterprises a startup except for new ventures. But even if it is a company with a long history, when it enters a new market area (such as the BOP market), we can also think that he is starting a new business, and has to experience three stages of initial creation, development and sustainability.

Enterprise network embedding is mainly to obtain the complementary resources needed for the organization to grow. The extent to which an enterprise can obtain such resources depends on the status of the enterprise in the network. While the acquisition of the network status requires the enterprise to carry out the necessary network operations and payment of the corresponding network operating costs. Therefore, from the perspective of cost-benefit, the trade-off between the network operation cost and the network status of the enterprise can be the basis for judging the ability of the enterprise to embed the network.

(1) Enterprise embedded network initial period

When enterprises enter new markets, they face an unfamiliar society that is full of "strangers", in which they can only rely on their original industrial network. At this moment, the interpersonal relationship between the enterprise and the local or local institutions is still in a state of fragmentation. Thus enterprises are dissociate from the local social network relationship.

Due to the unfamiliarity with the local culture and the lack of experience in building social connections, it is difficult for enterprises to embed social networks. The enterprise relies solely on pure market transaction relations to maintain the connection between the enterprise and the local network, without excessive network operation cost burden. However, due to the lack of local social network support, the growth of enterprises in the local area is also limited. The ability of an enterprise to embed a network is in a state of "low network cost and low network status".

When a company initially enters a poor area, the main task is to improve its network planning capabilities. The first step is to understand the resource constraints that enterprises face in their local development, and then to understand where these resources exist and which paths can be used to obtain such resources. Enhancing the company's network planning capabilities, to a large extent, helps companies to identify key value activities and resource requirements in the process, thereby identifying the network needs of embedded activities, developing network relationship action plans in a timely manner, and having the ability to identify the balance of depth, breadth and relevance in network relationships.

(2) Enterprise embedded network development period

The development of enterprises requires primary production factors including non-skilled workers, capital, machinery and equipment, material resources, and advanced production factors including information, technical personnel, and management guidance. These resources of different nature belong to different networks. Primary production factors generally do not have special industrial attribute characteristics and are easy to store in social network. Therefore, enterprises can obtain through the expansion of social network. While advanced production factors have obvious industrial attribute characteristics, such as professional and technical talents, industry-specific Technology, etc., which are difficult to obtain in the social network of the enterprise. Therefore, enterprises need to embed into the industrial network to which the enterprise belongs, and obtain those advanced production factors by establishing a division of labor and cooperation relationship with the industrial network.

From one perspective, the labor force in poverty areas, has low education level and social status. The primary production factors acquired by enterprises can only be at the bottom of the market with obvious hierarchical structure. From another perspective, some enterprises enter a new industry which is totally different from their original industries, with a low network status. In order to overcome the weakness of the new market, companies must try to expand the network relationships necessary for enterprise development in unfamiliar areas and spaces. And enterprises have to spend higher network operating costs and afford higher

barriers to open up the network brought about by urban-rural division and industrial transformation. The ability of an enterprise to embed a network is in a state of “high network cost and low network status”.

When enterprises begin to engage in network embedding activities, due to the lack of effective support of social networks, their ability to accurately identify partners and select favorable network nodes is insufficient, resulting in high network construction costs and minimal network benefits. Therefore, the main task of the enterprise at this stage is to improve the network construction capabilities, including the ability to analyze network relationships and key resource requirements, the ability to judge the development potential and value contribution of different relationships, the ability to establish communications and cooperations within key knowledge nodes such as institutions of higher learning, scientific research and technology service agencies. Thus, enterprises can make up for the gap in its own network relationship and effectively establish network relationships.

(3) Enterprise embedded network sustainability period

When enterprises start to embed into the local network relationships, they may face high thresholds for network operating costs. However, if there is an opportunity to break through barriers to network relationships, they will lay the foundation for subsequent growth of activities that are completely dependent on market transactional relationships.

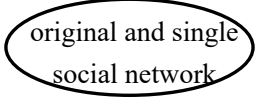
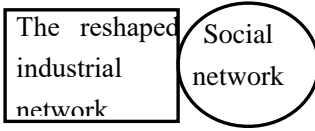
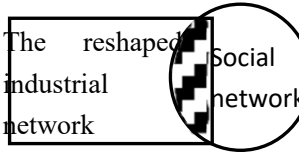
The regulation of the network relies on trust. If this trust is based on instrumental relationships rather than emotional relationships, it is easy to break the

network relationship chain. Once this happens, the network status of the enterprise will not be maintained, and the high network operating costs paid will become a heavy burden for enterprises and hinder the development of enterprises. This is one of the reasons why many companies in reality have entered the impoverished areas and eventually disappeared into obscurity. However, compared with the initial state of the enterprise network embedded relationship, as the network activity of the enterprise in the poverty-stricken areas continues to deepen, the network relationship is gradually enriched. Although this kind of network relationship needs high cost maintenance, the network status of the enterprise is gradually improving in the process of learning from other subjects. The ability of an enterprise to embed a network is in a state of “high network cost and high network status”.

After the enterprise activities have been successfully embedded in the associated network, in order to maintain continuous contact with key nodes, it is necessary to enhance the strength of the network relationship so that the enterprise not only stays at the level of simple transaction relationship. Therefore, the main task of this stage of the enterprise is to improve the relationship management capability of the enterprise, reduce the maintenance and maintenance costs of the network relationship, including improving the ability to integrate different network relationship resources, optimally coordinating the effects by rationally allocating resources to balance network relationships , and Incorporating network nodes into the enterprise through mergers, acquisitions and equity purchase and transforming them into enterprise-specific knowledge and capabilities.

In summary, companies constantly interact with the social network and the industrial network from the initial stage to the development period to the sustainability period. It is not only the continuous evolution process of enterprise network embedding ability, but also the process of enterprises breaking through the boundary of industrial network in poverty-stricken areas and continuously integrating into regional new industrial relations, as shown in Table 5-9.

Table5-9 the network embedding characteristics of enterprise

	start-up stage	development stage	extended stage
business activity	improve network planning capability	improve network building capabilities	improve the ability of relationship management
network status	low network cost, low network status	high network cost, low network status	high network cost, high network status
appropriate strategies	market development	resource development	value chain integration development
network embedding diagram			
the type of network embeddedness	single network embeddedness	separately dual networks embeddedness	overlap dual networks embeddedness
core mechanism	value discovery	value creation	value implementation

5.3.3 The way the government participates in the network

Poverty governance has always been one of the government's main social functions. If the network that targets poverty-stricken households is compared to

the “entrepreneurial” team, the government plays the dual role of angel investors and supervisors. As an angel investor, the government allocates the initial physical capital, human capital and even social capital in the poverty governance network by means of resource injection. As a supervisor, the government monitors and analyzes the performance of poverty governance in a policy-guided manner, maintaining the coordinated development of poverty governance and other national economic goals. According to the different degrees of government understanding of poverty, the way the government participates in the network can be roughly divided into three stages.

(1) The cognitive stage of income poverty

Income poverty has been defined as a family’s income is insufficient to cover the state of the minimum living expenses that are necessary to sustain members’ survival. Therefore, under this cognitive guidance, the government's main task is to invest the necessary material resources to meet the basic survival needs of poor households. Through the emergency relief plan and the top-down institutional relief system, the government allocates special funds to help the poor households. And poverty governance is simply a behavior from the government to the poor.

The essence of social assistance provided by the government is the redistribution of resources in the social system. On the one hand, it shows that the government acts as an angel investor. Its material capital comes from the new part of the overall national economic development. So the scale and extent of this rescue is essentially subject to the regional material resource endowment and economic

development level. On the other hand, the government's investment performance is mainly reflected in social performance. In this process, the initial association between government bureaucracy and poor communities has been formed. This has created a bureaucratic system similar to the government's grassroots level in community resource allocation. And the resource would gradually develop into an initial social network resources that poor households can rely on.

(2) The cognitive stage of capability poverty

The social assistance provided by the government is an external blood transfusion type of poverty management. The injected material resources cannot effectively form assets. As the poor households rely on social assistance for a long time, they will breed inertia and be reluctant to change. Therefore, this kind of blood transfusion of government is essentially the consumption of social wealth. Therefore, whether from the perspective of guaranteeing the stock of input material resources or from the perspective of stimulating the vitality of poor households, the input of government material resources should not only consider meeting the basic survival needs of poor households, but also consider improving their basic ability to guide them out of poverty. Therefore, the development of the industrial economy has become an indirect means of driving poor households out of poverty.

The development of industrial economy requires not only the input of material resources, but also the matching of human resources. Therefore, the government's main task is to invest the necessary material resources to invest in the development of human capital in poor areas. At the same time, the government should guide

industrial investment in poverty-stricken areas, transform material resources into physical capital, and jointly cultivate the self-accumulation and self-development capabilities. By arranging special poverty alleviation funds and formulating preferential policies for poor areas and poor people, the government can improve the infrastructure of poverty-stricken areas, increase investment in education, and guide the flow of external material capital into poverty-stricken areas. Then, the government starts working with other material capital owners.

The industry-led poverty governance orientation relies on regional resource endowment conditions to foster a number of local enterprises and forms a local initial industrial network in poverty-stricken areas. And the influx of education and external physical capital has created conditions for poor households to take the first step in contact with industrial networks.

(3) The cognitive stage of entitlement poverty

The industry-led poverty governance orientation requires a double choice: the choice of poor households and the choice of industrial targets. After a long period of poverty management, the original poor groups are differentiated by the “sieve” of poverty management methods at different stages. The remaining poor households are highly heterogeneous, and their micro-characteristics of poverty-reducing factors are extremely strong and unique. Even in the same poor community, not all of them are poor, which makes it difficult to select poor households. At the same time, the industrial target orientation is subject to the dual constraints of regional resource endowment and industrial external market environment. The planning

capacity of the government, especially the grassroots government, is insufficient. Therefore, stimulating the whole society to participate in poverty governance has become a new idea to drive poor households out of poverty.

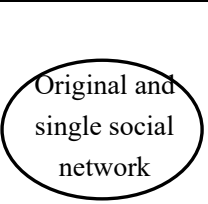
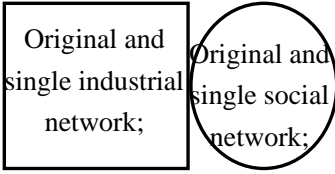
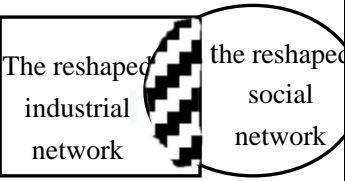
Poverty governance led by the government and the whole society is also a redistribution of resources. However, unlike the redistribution of resources in the cognitive stage of income poverty, (1) redistribution is no longer only to meet the basic survival needs of poor households, but also to guide and motivate other participating entities. So it is the flow of not only material resources but also physical capital. (2) Participation in governance means that the government is no longer the only angel investor. Instead, government pursues both economic and social performance with other angel investors.

Poverty governance led by the government and the whole society, emphasizes the pluralism of governance subjects, highlights the active participation of poor people, pursues the sustainability of anti-poverty, comprehensively develops poverty-stricken areas, and focuses on the comprehensive development of economic and social development in poverty-stricken areas. The government's anti-poverty policy focuses on the investment and development of human capital. Through the development of various social undertakings, it also increases the depth of social capital investment. It involves both physical capital investment and social capital investment, which has been enlarged by portions. The government and the investment institutions or third-party organizations formed by sharing their functions, provide a wider access point for social resources for the development of

industrial networks in the areas where poor households are located, creating conditions for the poor households to further embed industrial networks and new social networks.

In summary, the government's participation in the poverty governance network from the income poverty perception to the capability poverty perception to the entitlement poverty perception, constantly provides initial resources for social networks and industrial networks. This process of evolution is not only an interaction between rights and knowledge, but also an interaction between wealth and values, as shown in Table 5-10.

Table5-10 Government network embedding features

	income poverty awareness	ability poverty awareness	cognition of rights poverty awareness
Government activities	input Material resource	Material capital input	Material capital input
Governance objectives	meeting the survival needs of poor households	developing the human capital of poor households	stimulating the vitality of the main bodies and developing the human and social capital of the poor households
network status	The government targets the poor directly	government and enterprise cooperation	government leading and whole community participating in
Network embedding diagram			
Network embedding type	Single network embeddedness	separately dual networks embeddedness	Overlap dual networks embeddedness

	income poverty awareness	ability poverty awareness	cognition of rights poverty awareness
core mechanism	Centralized mechanisms	Separated mechanisms	Shared mechanism

5.3.4 Three-dimensional cube model of poverty governance network

From the analysis of the ways in which the three core poverty-stricken governance entities of poor households, enterprises and governments participate in the network, we have seen the different fractal dimensions of the overall network in the three dimensions of trust, value and rights. By coding these core mechanisms (as shown in Table 5-11), we can get a three-dimensional cube model of poverty governance network cognition, as shown in Figure 5-8.

Table5-11 the dimension coding of the overall network mechanism of poverty governance

Trust dimension	value dimension	rights dimension	code
emotional trust	value discovery	Centralized mechanisms	0
Cognitive trust	value creation	decentralized mechanism	1
Composite trust	value realization	sharing mechanism	2

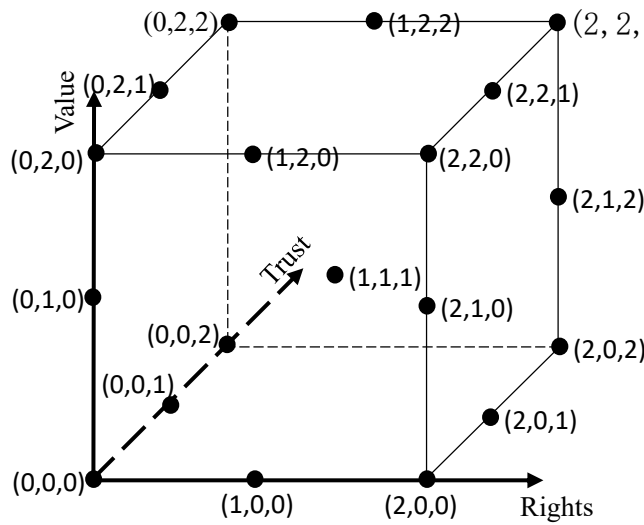


Figure5-8 the three - dimensional cube model of extreme poverty governance network cognition

Judging from the three-dimensional cube model of extreme poverty governance network cognition, we can see that the original network of extreme poverty governance in Xide County is in an unbalanced state of (1,0,0). This is mainly reflected in the following points.

First, the government, as the main body of anti-poverty, is an important structural hole in the network. In the original network structure of extreme poverty management in Xide County, almost all community external stakeholders have relations with the People's Government and its various executive departments in Xide County. And the central government's policies are linked to the resources of external third-party organizations. All need to be implemented through grassroots governments in poor areas. However, compared with the number of poor people, the number of executives in the grassroots government is insufficient. Besides, at the same time, they need a process of continuous learning for the adaptability and effectiveness of industrial docking poverty-stricken areas. Therefore, when facing

political pressure (such as the annual poverty alleviation indicators), they often appear to have insufficient capacity and urgently need to adopt a decentralization mechanism to outsource some of the specialized work (such as industrial development, cultural protection, basic education, etc.) to improve efficiency.

Secondly, as a main body of anti-poverty, enterprises have not formed structural holes in the network. In the original network structure of extreme poverty management in Xide County, whether it is a local primary enterprise or a foreign enterprise, the “transfusion-type” poverty alleviation method of donation is more adopted for poverty. The participation of enterprises in infrastructure construction is largely to improve the environmental conditions of the region. And there is almost no direct connection with poor households in the main business. The industrial poverty alleviation projects existing in the original poverty-stricken governance network in Xide County , are mostly faced with market economy problems such as production, sales or cost profit. This shows that the value discovery problem of the enterprise-based industrial network and the social network docking in Xide County has not been effectively solved.

Lastly, the community social networks in which poor households are located are relatively closed, and poor households are not yet at the center of the network. On the one hand, other entities regard poverty-stricken households as more targeted poor than industrial development cooperation partners. Therefore, in the network structure of extreme poverty management in Xide County, both the information and resources of poor households are unidirectional. On the other hand, the failure

experience of poor households in the past participating in industrial poverty alleviation, has also caused them to have a crisis of trust in external resources. To a certain extent, this also hinders poor households from crossing the initial social network and truly embedding into the industrial network.

5.4 Obstacles on the evolution of extreme poverty management networks in Xide County

From the perspective of the three-dimensional cube model of extreme poverty governance network cognition, the original network of extreme poverty management in Xide County urgently needs the unbalanced state of (1,0,0) to achieve the migration of the first phase to (1,1, 1) , and continues to lay forward to advance the second phase to the (2, 2, 2) equilibrium state.

The migration from (1,0,0) to (1,1,1) is essentially to break through the emotional trust of poor households through effective industrial layout, thus constructing the separation of industrial networks and social networks centered on poor households. Embedded structure. This process aims at not only the wealth creation but also the knowledge creation in which multiple subjects learn from each other. The development and evolution of the three dimensions of trust, value and rights face obstacles to development at different stages of multi-party subjects. The main obstacles to the evolution of the poverty management network in Xide County are shown in Table 5-12.

Table5-12 the evolution obstacle factors of extreme poverty governance network in Xide County

	Single network embeddedness	separately dual networks	Overlap dual networks	native network state in Xide
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		embeddedness	embeddedness	County
Rights	despotism	outlawed	corruption	outlawed
value	ignorance	inordinate	monopolization	ignorance
trust	unregulated	discriminate	lost of identity	unregulated

5.4.1 Obstacles on the development of the authority dimension

In order for the extremely poor governance network to play its anti-poverty function in the social economic system, it is necessary to build a network organization system. The organization of the network determines its ability to overcome current obstacles at a certain level. In the network structure of Xide's extreme poverty governance, the poverty alleviation policy issued by the central government, needs to be realized through a multi-level government governance structure. In this process, the more complex the organization's process is, the more government workers need to be done to manage it. Then, the control of the governing body becomes more and more broad and powerful. At the same time, the relevance and complexity of the network requires more complex and fine-grained management, which challenges the working ability and working style of current government agencies.

Specifically, these challenges are manifested in two ways. The first is the effectiveness of the management network. From the perspective of the government's governance structure system, the decision-making power is separated from the executive power. The longer the governance chain, the more information costs and communication costs will be brought, thus reducing the efficiency of effective implementation of governance objectives. At the same time, the

complexity and sophistication of governance objectives have forced government agencies to seek the help of external forces, making the subject relationships in the network more complex.

Secondly, there is huge management pressure in the short term. From the perspective of government work objectives, the central government's poverty alleviation and development goals will be decomposed into a short-term goal, but the specific management implementation links need to constantly try, correct and adjust. Managers face the dual pressure of short-term target and long-term learning cognition. And it is highly possible that short-sighted behavior will be adopted. This is also a glimpse of some poverty alleviation projects in the original poverty alleviation network in Xide County.

The two challenges have formed obstacles in three different stages of the development of rights: the autocracy of the bureaucracy formed by the failure of the management effectiveness challenge, the illegality caused by the failure of the short-term management pressure challenge, and the corruption caused by the failure of the double challenge.

For the original extreme poverty management network in Xide, the main obstacle to the development of the authority dimension is violations of laws. This is because the central government attaches great importance to the realization of the anti-poverty goal. In fact, the transferred higher-level departments and the dry tribes are stationed in the grass-roots government departments to specifically link poverty alleviation. This has shortened the chain of government governance structure to a

considerable extent and improved the effectiveness of management. At the same time, the further clarification of authorities is also more conducive to the grassroots government to work hard. However, in the following development, the way that the government's rights resources are effectively dispersed, and the cooperation that multi-party entities go through market and specialization, require the government to overcome the short-term management pressure. And the government should consider more from the perspective of learning and protecting poor households and establishing and improving a sound legal system.

5.4.2 Obstacles on the development of the value dimension

For companies, participating in a network of extreme poverty governance means a new market segment. Especially for the conditions of extremely poor areas, most of the time, enterprises are not entering an existing market, but entering a social system that is already existing but the enterprise may not be familiar with, seeking market opportunities and constructing a new market system. Therefore, value development is not only an economic issue, but also a social learning problem. So in the extremely poor governance network, value development faces the dual challenge of value production and value distribution.

The over-emphasis recognition on value production says that resource endowments and labor cost are the main factors for companies to effectively open up markets in poor areas. The market is a means of allocating resources, which determines what is produced, who produces it, and how it is produced. Therefore, the formation of poverty is the result of the inaction of the individual in the creation

of value, the natural law of survival of the fittest. Thus, the individual should bear the main responsibility.

The over-emphasis recognition on the distribution of value, believes that the creation of value is done in the social system. This process is inextricably linked to the parties in the social system. The value is created collectively. While the enterprise only creates its own profits. Therefore, a social system must be established to guarantee fairness. Poverty is one of the most important issues of the social justice system.

The two challenges have formed obstacles in three different stages of the development of the value dimension, including the ignorance formed by over-emphasizing the value production, the interference formed by over-emphasizing value distribution, and the monopoly formed by double over-emphasis.

For the original extreme poverty management network in Xide, the main obstacle to value development is ignorance. This is mainly reflected in two aspects, one of which is labor costs. Since Xide County used to rely on labor export to help the poor, there is no more “surplus labor” in the local area, and the labor force that can meet the development of modern industry is even scarcer. Therefore, companies need to cultivate a large number of industrial workers through their own industrial systems before the value is generated, which requires a lot of cost. The second is the cost of technological innovation. As Xide County is located in a high-altitude area, even planting crop products needs to consider the adaptability of varieties to geographical and climatic conditions. Especially, the development of culture,

processing and other industries, is more limited by resource conditions. Therefore, the value can be created only by adapting local conditions through industrial modernization and technological upgrading. Simply transplanting the original production varieties and models is not functional. In the following development, how to effectively break through the barriers of value production and cooperate with other multi-party entities to realize the organic distribution of value are issues that enterprises need to ponder in the value dimension of the extremely poor governance system in Xide County.

5.4.3 Obstacles on the development of the trust dimension

To form a network structure of extreme poverty governance centered on poor households, it is necessary to correctly understand the goals and means of multi-stakeholders, and to form a positive evolution of the trust mechanism of network governance structure for poor households. In the formation of the trust mechanism, the interaction between network members is very important. Trust comes from the process of the network coping with the contradictions between members.

The interaction between members can take many forms. If they have the same purpose and different means of realization, they will form competition. If they have different purposes and the same means of realization will form an alliance. If their purpose and means of implementation are the same, cooperation will be formed. Conflicts can arise if their purpose and means of implementation are different. Obviously, for poor households, the trust in the governance network structure should deal with the three contradictory challenges of conflict, competition and

alliance, and finally develop the trust mechanism of cooperation.

The three contradictory challenges of conflict, competition and alliance, form the obstacles of three different stages of the development of the trust dimension. Those stages include the lack of norms formed by the conflict challenge, the lack of recognition formed by discrimination brought by competitive challenge, and the lack of recognition formed by alliance challenge.

For the original extreme poverty management network in Xide, the main obstacle to the development of the trust dimension is the lack of norms. This is mainly reflected in two aspects, one of which is the conflict of values and objectives. Due to the inhabitation of the Yi people in the Xide area, social development is relatively closed, and the values in their culture are not compatible with the mainstream values. For example, the Yi people are not afraid of death, but at the same time, behind this cultural gene are the values of their instant pleasure and the motives of hatred on the rich group. Besides, the Yi people are a group of people that pays attention to culture, but at the same time, the hidden behind this cultural gene is that most of the Yi youths are more inclined to choose the government civil service occupation for stability. The second is the conflict of democratic means. The conflict response measures of the Yi people in the Xide region are more influenced by the customary laws of the Yi area, mainly by way of ruling. This approach has some competitive features of zero-sum game. While the means of network governance need to be built into a model that can resolve conflicts through the evolution of the environment and the nature of the subject. In the next development,

how to use more effective means to integrate more subjects into the multi-party objectives of the governance network, and how to realize the cooperation mode of network governance, are questions that need to be pondered in the extremely poor governance system of Xide County.

5.5 Summary

Xide County, a typical area of extreme poverty, has always been one of the poorest areas in China. Its poverty governance has completely gone through all stages of the macro-governance strategy, and its extreme poverty management network research is highly representative. From the history of poverty management in Xide County, 2002 and 2016 are two important turning points. Among them, 2002 was a turning point in poverty alleviation from “transfusion-type” poverty alleviation to “hematopoietic” poverty alleviation, while in 2016 it was a turning point in which its poverty alleviation transferred from extensive industrial poverty alleviation to precision industry poverty alleviation.

Combined with the time when the Tieqilishi Group led by the author, entered the industrial poverty alleviation project in Xide County, the Xide poverty alleviation management before 2016 was called the original state of extreme poverty management. The study shows that through years of poverty management, the original network of extreme poverty governance in Xide County mainly involves three types of stakeholders: government, community and third-party organizations. The network structure is relatively simple, and the integration of industrial networks and social networks is not tight.

Extreme poverty governance is characterized by three stages including initial creation, development, and sustainability periods. Those process helps the “entrepreneurial” team centered on poor households grow. This “entrepreneurial” team includes three main members of the poor households, enterprises and government. As the activities of different stages of the “entrepreneurial” process are different, the purpose and resources of the networked activities will change, and their dependence on the network will also alter. From the research of the mechanism of three major members embedded in social networks and industrial networks, the three dimensions of the evolution of authority, value and trust are sorted out and the three-dimensional cube model of the extremely poor governance network is constructed.

From perspective of the three-dimensional cube model of the extreme poverty management network, the original network of extreme poverty management in Xide County is in non-equilibrium state with a low-dimensional value. At present, the main direction of the further evolution of the original network of extreme poverty management in Xide County is to develop equilibrium value to the mid-latitude. However, combined with the actual research, the study found that this development needs to deal with the illegal obstacles of the authority dimension, the ignorance barrier of the value dimension and the lack of normative obstacles of the trust dimension.

Chapter 6 Tieqilishi Group's Industrial Poverty Alleviation Strategy in Xide County

Based on the analysis of the original network of extreme poverty management in Xide County, Tieqilishi Group, as a leading enterprise in agriculture and animal husbandry, has to comprehensively consider the development obstacles of authority, value and trust dimensions when participating poverty alleviation in Xide. And it also needs to develop a strategy that breaks the current low-dimension non-equilibrium state of extreme poverty governance, and to design its own structure embedded in poverty alleviation in Xide.

6.1 Strategic positioning of network

Since Tieqilishi Group entered Xide County in 2016, it has completed the first phase of the main business project focusing on the production of pigs. The strategic positioning of the Group's extreme poverty governance network in Xide County mainly includes the following four aspects.

6.1.1 Reduce the cost of poverty governance in whole society

Since China started the national governance of poverty, it has incurred huge costs in all aspects, including cost of production and cost of management. In the use of business mechanisms to combat poverty, the increase in network costs (such as cost of labor, cost of technological innovation) is a significant phenomenon. Under this situation, reducing the cost of poverty governance to solve the barriers of the original network in the value dimension through certain means, is especially important.

6.1.2 Create the top business card in Liangshan

The ultimate goal of creating the top Liangshan business card is to “create 1 benefits to Xide and create a good reputation for Great Liangshan”. Through the advantage of unique Yi nationality elements to present whole society about Liangshan, more people are willing to enter Liangshan, contributing more poverty alleviation resources, and building a good social environment. Therefore, it is committed to the realization of the cooperation model, and to solve the problem that the authorities are too concentrated in the original network as well as the obstacles that original network is difficult to break away from the emotional trust.

6.1.3 Reshaping the core competitive advantages of Tieqilishi Group

In order to create value, the enterprise should not only consider the anti-poverty social needs of Xide, but also consider the competition problems brought by docking of the industry and market. In order to effectively integrate into Xide's extremely poor governance network, Tieqilishi Group must take "technology" and "talent" as the core, and "capital" and "brand" as the two wings to create a "food, aquaculture and feed industry chain", and uses the combination of three industries to improve the level of agricultural modernization in the Xide area. Tieqilishi Group should find the original natural elements and excellent product categories in Xide, as well as produce and provide unique products and services that meet the needs of market customers, especially high-end customers. Then the market customers will yearn for and depend on Xide County, which is good for expanding the network size and capacity. The

expansion is also conducive to solving the obstacles faced by the original network in the value dimension.

6.1.4 Increase the motivation of poor households

The participation in the Xide's industrial poverty alleviation and managing extreme poverty aims to create social value, to enhance the ability to develop intrinsically of the extremely poor, to increase their income level and to improve their living conditions. In essence, it is expected to attract more poverty-stricken people to break through the borders of poverty and enhance the internal motivation to develop. This not only helps to solve the problem that the government's authority and resources in the authority dimension of the original network are difficult to be effectively dispersed, but also helps to solve the obstacles that the original network have trouble constructing a cooperation mode in the trust dimension.

6.2 Network's core structure

Tieqilishi Group's industrial poverty alleviation strategy in Xide, consists of seven modules: stakeholder contact, business plan, implementation, branding, risk prevention and control, information communication feedback and knowledge transfer. Based on the strategy, the various dimensions of the extremely poor governance network and the strategic positioning of the extreme poverty management network are linked, as shown in Figure 6-1.

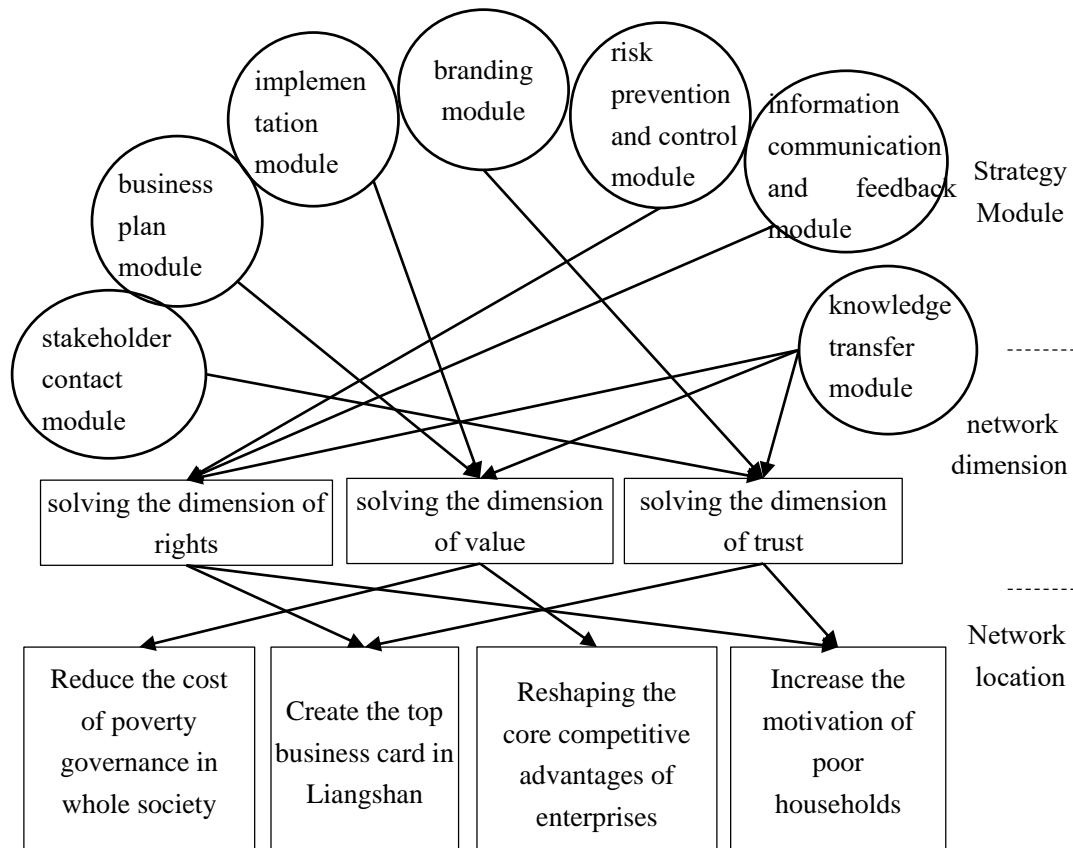


Figure6-1 The core structure of the industrial poverty alleviation strategy of Xide County of the Teiqilishi Group

Specifically, the risk prevention and control module and the information communication feedback module mainly interface with the authority dimension, to break through the obstacles due to the violation of the authority dimension in the evolution of the original network structure. The risk prevention and control module realizes the new steady state of the extremely poor governance network by controlling the multi-stakeholder rights distribution structure in the network. The information communication feedback module fully grants everyone rights and makes them bold by establishing a scientific and reasonable information communication feedback channel.

The business plan module and the implementation module are mainly connected

with the value dimension, trying to break through the obstacles of ignorance of the value dimension in the evolution of the original network structure of Xide. The business planning module is designed to effectively generate and distribute wealth, products and services, so that the new network can guarantee the rights of each stakeholder in the network. The implementation module is designed to bring the designed business to the ground. In other words, the implementation model aims to realize value, distribute value, and guarantee profits in the coordination and cooperation with the stakeholders.

The stakeholder contact module and the branding module are mainly connected with the trust dimension, trying to break through the obstacles of the lack of norms in the trust dimension in the evolution of the original network structure of Xide's extreme poverty governance. The stakeholder module helps more poor people to break through the original social network relationship and integrate into the new social network relationship by attracting more stakeholders to the Xide County Extreme Poverty Management Network. Through the connection with different subjects, the relationship is transformed from irrelevance to complementarity. At the same time, the trust relationship is established in the joint cooperation. The branding module has not yet risen to the level of social cognition with the creation of product power and execution. Only by enhancing the brand influence and social awareness of the network can the stakeholders be more responsive to the network and trust the network.

The knowledge transfer module is a comprehensive module that runs through the three-dimensionality of the Tieqilishi Group's industrial poverty alleviation in Xide. Through the transfer of knowledge in the network, in addition to the formation of

learning mechanisms that rely on multiple parties to participate in the network, the enterprise must focus on the dual integration of social learning that breaks through the initial social network, and the value learning that breaks through the initial industrial network, thus enhancing the motivation of enterprises and poor households.

6.2.1 Stakeholder module

Relying on the original network foundation of Xide County's extreme poverty management, Tieqilishi Group has further integrated the multi-disciplinary main resources on the basis of unifying the company's internal top-down ideas. And it helps incorporate more entities such as governments, communities, financial institutions, and third-party organizations to participate in the network (as shown in Figure 6-2, the upper and lower levels of the subject and the left and right order do not represent the level of the status. The figure only represents linkages).

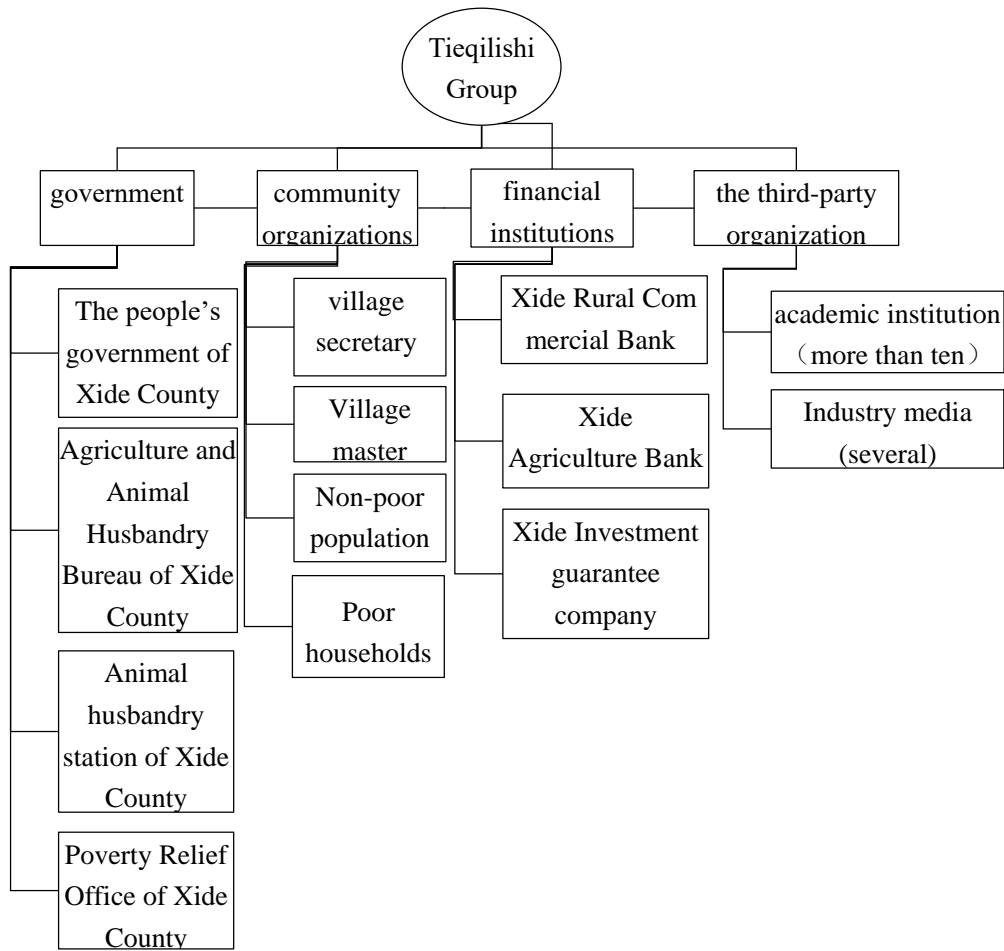


Figure6-2 The stakeholder contact module structure of the industrial poverty alleviation strategy of Xide County of the Tieqilishi group

This module enables multiple stakeholders to participate in the network in the meantime. Focusing on extreme poverty management activities, stakeholders can carry out interactive links, realize the integration and coordination of poverty alleviation resources, and improve the dynamic adaptability of the network. This does not only solve the problem of insufficient poverty alleviation, dual poverty alleviation means, and poor implementation of poverty alleviation strategies in the dual network integration, but also solve the problem of lack of trust in cooperation between entities in the network.

Firstly, enterprises should integrate government resources to form a government support network for extreme poverty governance, and provide protection for extreme poverty management in Xide County. On the macro level, the poverty alleviation policies formulated by the State Council and its subordinate departments, and the policies that have benefited the farming and animal husbandry enterprises, have greatly facilitated the company's work. The “*Guiding Opinions of the CPC Central Committee and the State Council on Winning the Three Years of Fighting Against Poverty*” mentions ways to improve poverty alleviation, including to motivate more poor people to participate, motivate poor people to work harder, motivate to diminish the indolence, and encourage them to get rid of poverty through labor.

Microscopically, the People's Government of Xide County and its subordinate departments and government officials should actively participate in the extreme poverty management of Xide. When Tieqilishi Group held the BOL Strategy Seminar of the Liangshan, it invited the Vice President of the Sichuan Provincial Academy of Social Sciences to discuss about the important issues and the strength of support. Tieqilishi Group and the People's Government of Xide County, including its subordinate Agriculture and Animal Husbandry Bureau, Animal Husbandry Station, Poverty Alleviation Office and other departments and departments responsible for the discussion, investigated the commercial basis and social foundation of the extreme poverty management activities in Xide County, and wrote a document taking about forming optimization plans to solving practical problem to the government.

Secondly, the connection between community organizations and extremely poor

people forms the subject-object relationship of extreme poverty governance, and takes the initiative for the extreme poverty governance of Xide County. With the help from the People's Government of Xide County, the author and the company's senior executives talked with the village party secretary and villager in Lak Township and Hepoluo Township of Xide County to locate labor forces among poverty populations and non poverty populations.

Thirdly, in cooperation with financial institutions, the formation of funds for the extreme poverty management provides financial support for the extreme poverty management in Xide County. Xide County Rural Commercial Bank, Agricultural Bank, and Xide State-owned Assets Investment Guarantee Company are all stakeholders that Tieqilishi Group must rely on to manage extreme poverty. With their strength, Tieqilishi has more guarantees of its business activities in Xide County.

Fourth, Tieqilishi cooperates with research institutes of the universities to form a think tank, making suggestions for the extreme poverty management in Xide County. The author and the company's senior management team extensively contacted more than 10 top-level senior poverty research experts and research institutes at home and abroad and convinced them to join Xide's extreme poverty management activities. Through investigating the company and Xide's extremely poor areas, those experts can present their opinions, suggestions and plans for “better governance for extreme poverty”. These universities and research institutes mainly include the International Food Policy Research Institute, Peking University, Chinese Academy of Agricultural Sciences, China Institute of Poverty Alleviation, Renmin University of China, Sichuan

Agricultural University, Xichang College, Southwest University of Science and Technology, and China Agricultural University.

Lastly, Tieqilishi Group integrates the media resources in the third-party organizations to form a team of extremely poor governance brand building, and shape a typical model for the extreme poverty management in Xide County. Since the establishment of Xide County, it has been a national poverty-stricken county. The Chinese government and leader have been highly emphasized on and tracked its development all the time. The author knows the importance of creating a typical model. So he used the power of well-known media inside and outside the industry, such as Xaar Media, Feed Industry Information Network, China Animal Husbandry Network, Animal Husbandry Head Net, Xinmu Net, Pig E Net, Scale E Pig Net, etc., to enlarge the effect. Through the convening of corporate brand strategy seminars and the power of multi-party media, the story of Tieqilishi Group's industrial poverty alleviation in Xide County will be told, and more people will know work done by Tieqilishi Group as a "think center, theoretical center, and information center." At the same time, more information and resources will flow into Xide, gradually changing the traditional values and legal views of the Yi people. Indeed, more and more Yi people will understand the situations of the Xide's extreme poverty governance network, thereby achieving the goal of attracting more people to participate in the governance.

6.2.2 Business Planning Module

On the business plan module, Tieqilishi Group strives to create a business implementation blueprint of the "133" Xide County extreme poverty management (this

blueprint has been divided into three phases, including the end of 2018, the end of 2020, and the end of 2023, as shown in Figure 6 3). By incorporating extremely poor people into the corporate value chain, the module helps Xide people get involved in pig farming and participate in the creation and distribution of value, thus ensuring that they have the authorities on guarantee.

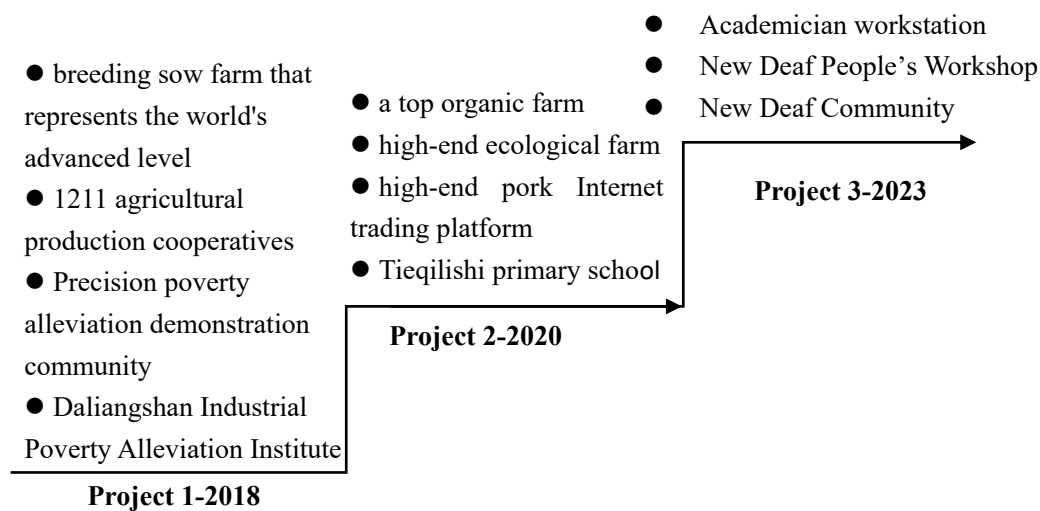


Figure6-3 Business plan blueprint of side extreme poverty governance network of Tieqilishi Group

The “133 Business Blueprint” aims to rely on the core business of the Tieqilishi Group (Pig Industry Division) – “1211 Live Pig Surrogate Business Model”. By fully integrating the extremely poor population, this model allows poor people to truly and actively participate in the extreme poverty management activities and make full use of their abilities. Specifically, the “1” in the “133 Business Blueprint” refers to the establishment of a “breeding sow farm that represents the world's advanced level”, and the first “3” refers to creating three farms through combining with Tieqilishi Group’s 1211 “pig breeding model”. The first farm is “exemplary family farm” (China's most

beautiful pig farm). The second farm is a top organic farm (high-end ecological farm and high-end pork Internet trading platform) and the third farm is "1211 agricultural production cooperatives (precise poverty alleviation demonstration community) that embody the characteristics of the Yi". The second "3" refers to the integration of the company's resources into the network, forming the "strongest brain" for Xide's extreme poverty management, and leading in ideas and technology, including "formation of the Dalian Liangshan Industrial Poverty Alleviation Institute", "Academic/PhD/Postdoctoral Workstation", and "New Deaf People's Workshop" (The establishment of the New Deaf Workshop begins with "Tieqilishi Group Poverty Alleviation Primary School") and "New Deaf Community". From the perspective of business model, after long-term exploration, "133 business blueprint" can be summarized as shown in figure 6-4.

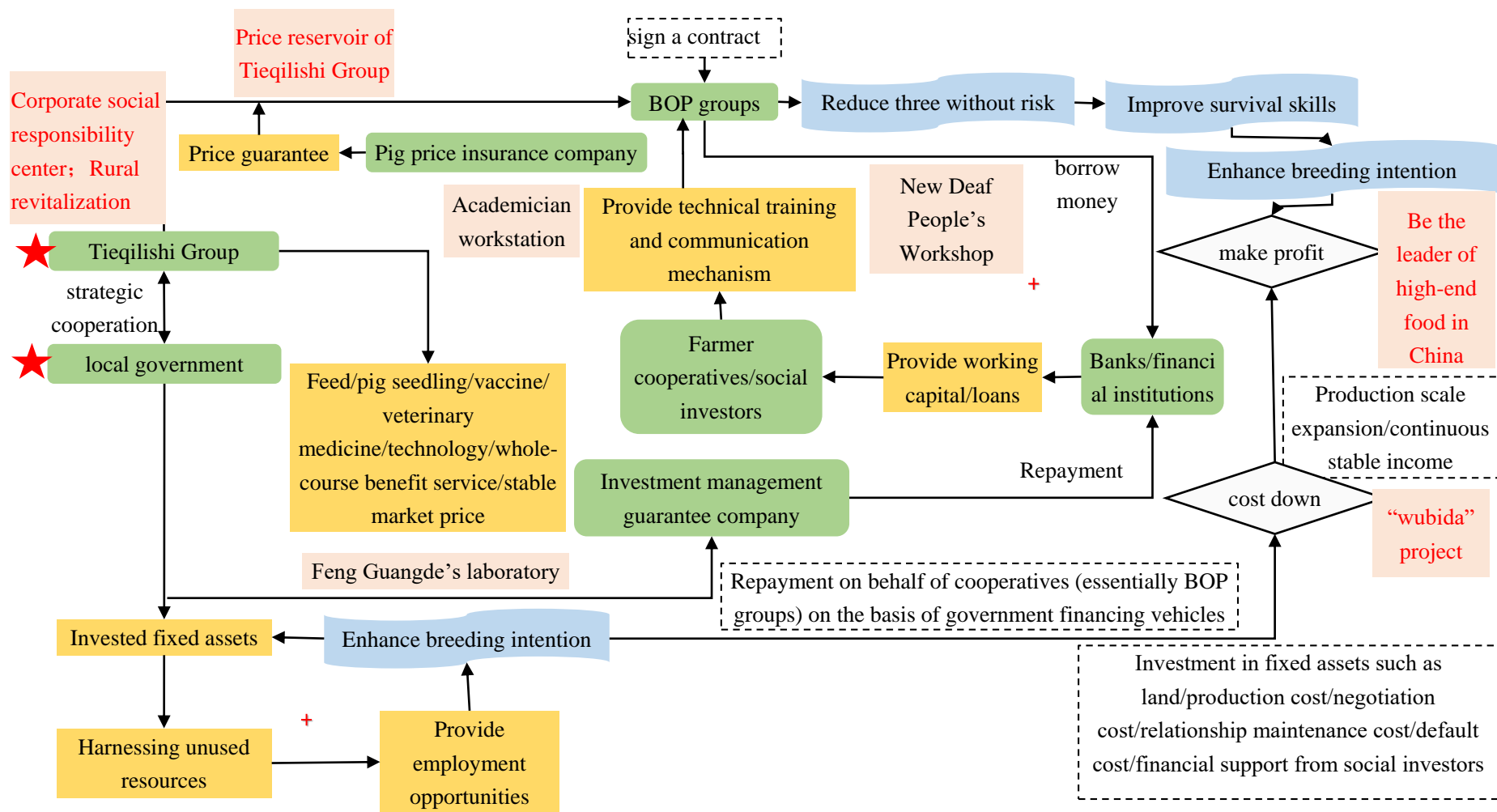


Figure 6-4 Business model chart of business 133 of ironman group

The “1211 Live Pig Surrogate Business Model” supported by the “133 Business Blueprint” refers to the high-efficiency pig breeding development model formed by Tieqilishi Group after long-term exploration. The model includes a pig house, two effective labors, an average annual output of 1,000 hogs, and an annual net profit of more than 100,000 Yuan. The “1211 pig breeding model” has many benefits for the farmers. Firstly, stable income can be obtained. No matter how the market conditions change, Tieqilishi Group will send the contract price to the farmers on schedule. Secondly, farmers do not have to worry about buying piglets, feed and vaccines, and they don't have to worry about the sales problems in the market. These services will be taken over by Tieqilishi Group. Thirdly, farmers do not have to worry about the problems of modern farming technology as Tieqilishi Group has a complete set of mature technology, and farmers only need to do their own work according to the company's standard procedures. Lastly, farmers do not have to worry about the lack of liquidity, because they can get all they need from the company and settle account when the pigs grow up. In general, by sharing the risks faced by farmers, the income of farmers can be divided into four modes, as shown in Figure 6-5.

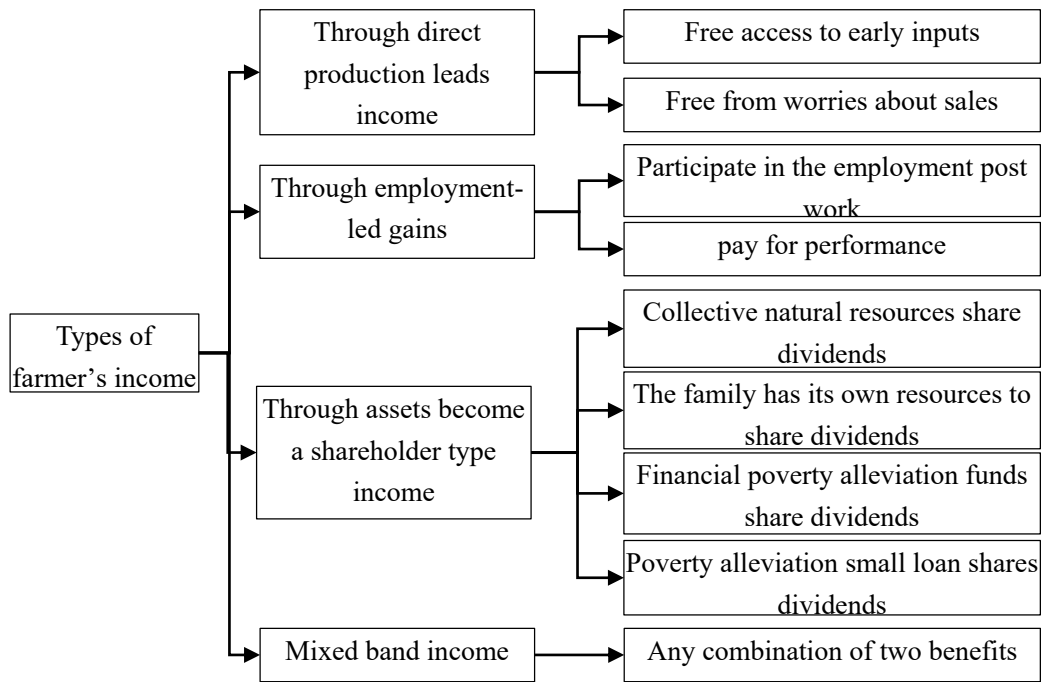


Figure6-5 The income of farmers in 1211 pig breeding mode

6.2.3 Implementation module

In the implementation module, Tieqilishi Group founded a Liangshan Prefecture breeding Company and established a professional pig operation center in Xide, to steadily advance and gradually realize the business blueprint. The module is also designed to involve poor households in the process of value creation and distribution. At the same time, it allows other entities to truly coordinate their operations, engage in governance behavior, and ultimately break through the barriers of value dimension.

The operational process of breeding program is listed below: Site selection - land survey - water source determination - general plan design - environmental assessment - site leveling - power installation - equipment tendering - construction drawing design - construction - construction maintenance demonstration site - housing construction - inspection of pig farm construction - find intentional generation Owners (large

households, professional cooperatives, village collective economy or investment promotion) - sign the subcontracting contract in batches (calculated according to the maintenance cycle, generally 2 batches/year) - seedlings - tracking the whole process of feeding - pigs - Live pig sales - transaction settlement

Site selection - land survey - water source determination - general plan design - environmental assessment - site leveling - power installation - equipment tendering - construction drawing design - construction - construction maintenance demonstration site - housing construction - inspection of pig farm construction - find intentional generation Owners (large households, professional cooperatives, village collective economy or investment promotion) - sign the subcontracting contract in batches (calculated according to the maintenance cycle, generally 2 batches/year) - seedlings - tracking the whole process of feeding - pigs - Live pig sales - transaction settlement

The current breeding work has completed the construction of the first phase of the project, and has achieved initial success in driving the extremely poor people out of poverty, forming a unique "Tieqilishi Group 1+8 precision poverty alleviation model", that is, during the implementation process of the 1211 pig breeding model, one able person will drive eight extremely poor people out of poverty.

The model has been approved by the vice president of the Sichuan Provincial Academy of Social Sciences and reported to the provincial party committee and the provincial government for the record. Finally this model has been approved to have intellectual property rights. Specifically, the "1+8" model refers to the fact that eight households with poverty alleviate send their poverty alleviation funds and financial

poverty alleviation loans into a farm with a large aquaculture household (capable person) to gain a certain share. Then the large-scale breeding households can get all inputs such as piglets, feed, medicines, vaccines, etc. from Tieqilishi Group by way of bookkeeping and raise those pigs based on company standards. At the end of the process, Tieqilishi Group refunds the purchase price after deducting the price of production materials to the larger agriculture household(capable person). The implementation module of the 1211 mode and 1+8 mode, mainly presents the following three characteristics (as shown in Figure 6-6).

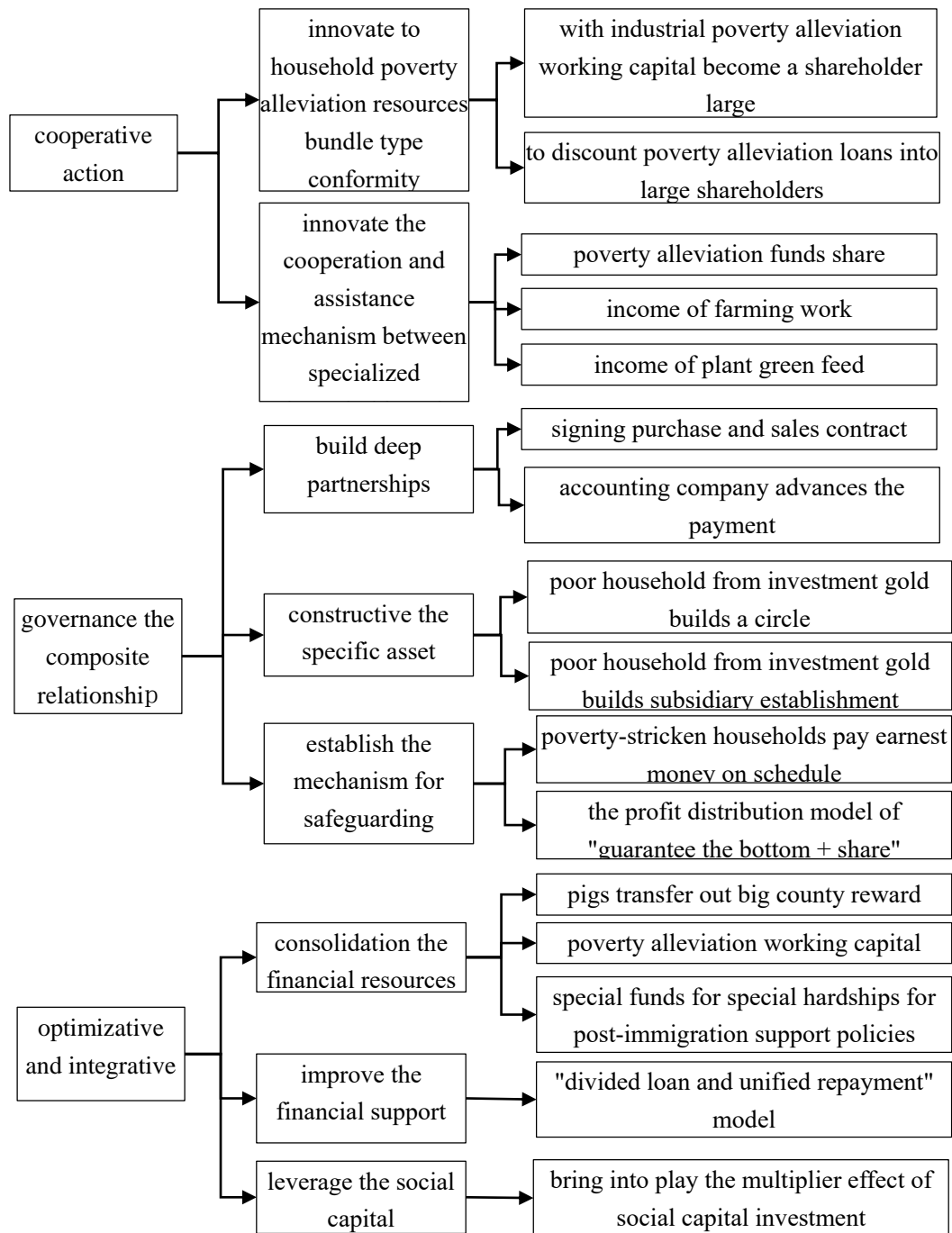


Figure6-6 Characteristics of "1+8 targeted poverty alleviation mode" of Tieqilishi Group

Firstly, cooperative action is used as a carrier to break down the bottleneck of poverty-stricken households participating in the of extreme poverty management. This not only solves the problem of insufficient investment capacity of individual poor households, but also avoids the shortage of labor, lack of funds, and lack of technology

for poor households.

Secondly, the construction of extreme poverty governance interest links is based on the relationship governance. This enhances the transaction frequency and transaction level, which helps the company and the farmers to establish mutual trust relationship. The two sides have established a strong willingness to cooperate, submit a deposit (300 yuan / pig) and sign a protection price acquisition contract (16 yuan / kg) to guarantee the basic income of poor households, and help prevent them from selling "stolen" pigs.

Thirdly, with the focus on optimizing integration, the efficiency of poverty alleviation resources will be improved. The poverty-stricken households will adopt the model of financial poverty alleviation driven by “dividing loans and repaying loans” (Loan to the bank - loan to buy shares - integrated use - income dividends - unified repayment - poverty alleviation). It not only allows poor households to develop wealth together with enterprises, but also allows social support to run through the development of enterprises, reducing the difficulty and cost of financing poverty management, and exerting the multiplier effect of social capital investment. In June 2017, Tieqilishi Group’s 1211 model of Xide County, has invested more than 18 million yuan in social and financial funds of 10 farms that have lifted 80 poor households out of poverty, which is 4.5 of the total amount of financial poverty alleviation funds.

6.2.4 Branding Module

Focusing on the strategic goal of spreading the network brand of extreme poverty governance in Xide County, the brand division has taken the following actions, as shown in Figure 6-7. The module aims to bring out the story of the industrial poverty

alleviation in Xide County, which attracts more people and media. Therefore, it can absorb more subjects around the network, thus enhancing the trust of many stakeholders in the network, consolidating confidence in the network, and increasing the attention of other entities outside the network to the network.

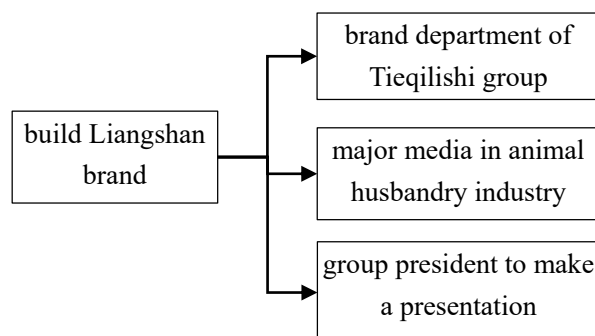


Figure6-7 The brand communication module structure of the industrial poverty alleviation strategy of Xide County of the Tieqilishi Group

The first action is to rely on the power of the brand department. Tieqilishi Group's brand department regularly or irregularly collects key people and highlights in the process of project construction and development process. The brand department will discover the stories behind, and write those stories to create hot topics as well as to attract everyone pays attention.

The second action is to let the industry media speak out for Xide. The group will also integrate many media resources in the industry, including traditional media and online media. Tieqilishi Group will invite the chief editor and the person responsible for the dissemination to discuss about Tieqilishi Group's branding strategy and the brand of the extreme poverty management network in Xide County. After telling them the story of the Tieqilishi Group in Daliangshan and Xide County, Tieqilishi Group will

ask for advice on how to spread these stories better to let more people know.

The third action is through the presentations of the CEO of Tieqilishi. When the breeding project in Xide County was in the process, Tieqilishi Group was the only company in China invited to participate in the China poverty reduction governance seminar for Japan. Mr. Li, CEO of the company, attended the meeting, presented the works that Tieqilishi Group has done to alleviate poverty in extremely poor poverty in Xide County, and disseminated the typical models. This presentation had brought more experts and resources national-wide and abroad for the extreme poverty management network in Xide County.

6.2.5 Risk Prevention and Control Module

There are five types of risk in the extreme poverty management of Xide County, including risk of capital, risk of market, risk of labor, risk of ethics and risk of authority. In order to cope with these five types of risk, Tieqilishi Group has developed the following actions (as shown in Figure 6-8) to prevent and control risks. The module aims to balance the interests of the stakeholders in the network. In other words, Tieqilishi Group will balance the interests of other parties under the premise of ensuring the interests of poor households.

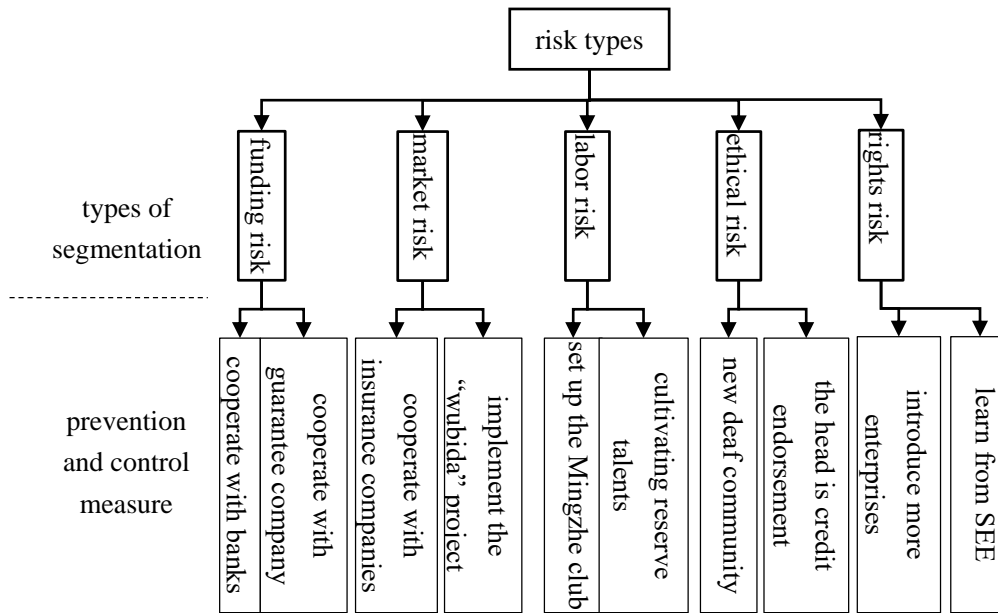


Figure6-8 the risk prevention and control module structure of the industrial poverty alleviation strategy of Xide County of Tieqilishi Group

Firstly, in order to deal with the risk of capital, Tieqilishi Group undertakes those actions. In the process of extreme poverty management in Xide County, Tieqilishi Group is operating in the form of light assets (fixed assets are mainly invested by the government and the sponsors). But in the process of overall farming, especially the inflow of liquid assets, such as equipment, piglets, etc.), Tieqilishi Group bears almost entirely risk. Therefore, the problems of bad capital turnover and investment being destroyed must be solved.

Tieqilishi Group cooperates with the Xide County local banks (Xide Agricultural Commercial Bank, Xide County Agricultural Bank, etc.) to provide guarantee for the funds. At the same time, in order to completely eliminate the financial risks of the households, under the guidance of “Implementation Opinions on Supporting Poverty Alleviation in Deep Poverty Areas” published by the People's Bank of China, China

Banking Regulatory Commission, China Securities Regulatory Commission and China Insurance Regulatory Commission, Xide government will cooperate with the “Xide County State-owned Assets Investment Guarantee Company” to provide loan guarantee services. With the guarantee of the “Xide County State-owned Assets Investment Guarantee Company”, the Xide County Rural Commercial Bank agreed to borrow money to the farmers during the breeding process.

Secondly, the market risks will transfer from households to Tieqilishi Group. Before the entry of Tieqilishi Group, the local pig breeding in Xide County was mainly free-range, and the farmers themselves undertook all the capital risks, disease risks and market risks. While, with the 1211 pig breeding model, the company completely bears these three risks for the farmers and guarantees the stable income of the farmers (that is, no matter how the market changes, the farmers are only responsible for raising the pigs. The other issues will be taken into Tieqilishi Group’s duties and the farmers’ income will be paid as contract price on schedule). As a result, the market risk faced by the Tieqilishi Group will be completely uncontrollable.

Tieqilishi Group chose to cooperate with local insurance companies in Xide County to provide commercial insurance, price insurance and death insurance for breeding. Since August, 2017, it has formulated the “Wubida Project” (the direct cost of one kilogram of pork is controlled below 10 yuan), which helps avoid the market risk from the price aspect and essentially reduce the cost on the company's industrial poverty alleviation project.

In order to deal with labor risk, Tieqilishi Group takes actions. In recent years, the

population structure of Xide County has clearly shown a hollow character. Young and middle-aged people go out to work, and there are only a few of labors left in the local area. The extremely poverty governance activities of the Tieqilishi Group in Xide County will not end with the finish of the country's 2020 poverty alleviation task, but look forward to having a long-term, sustained, stable activity in Xide. Therefore, in order to avoid the risk of insufficient labor participation or investment in the company's sustainable development, the author understands that it is essential to break the vicious circle of intergenerational transmission of poverty and even extreme poverty. In other words, it is necessary to start from the cultivation of the next generation to address the current situation of poverty transmission.

Indeed, Tieqilishi Group has established the “CMZ Diamond Club” and the “Mingzhe Diamond Club Xike Branch”, extensively attracting college students (major in management and animal science) to get in touch with the company's corporate practices. Also the Group sponsors their training camp for further study and invites the gold medal instructors to conduct basic skills training for these students for about one year to one and a half years, laying a solid foundation for the reserve of the company's reserve talents. Meanwhile, the company has established the “Corporate Social Responsibility Research Center jointly established by more than 400 members of the Group's management committee (with the declaration of the establishment of the Corporate Social Responsibility Research Center). Relying on the center and targeting the labor risk plan of Xide County, Tieqilishi Group has sponsored two hundreds of Yi students' Yi festivals in the Southwest University of Science and Technology for three

years.

To deal with risk of ethics. Tieqilishi Group, led by the author, is pursuing the family culture of “brothers” from the top down, which is also demonstrated in the work. For a long time, the employees of the company all worked with good intentions. For the partners, especially the poor households, they used practical actions to protect their interests, which left a good company impression at the beginning. Therefore, the households has a special sense of attachment to the employees. Thus it is easy to achieve cooperation. According to the author's research, when facing invitations of multiple companies (ie, New Hope Group, Tianzhao Group, Anyou Company, etc.), households always choose Tieqilishi Group.

However, the authors learned from the employee work daily report that along with the development of the first phase of the extreme poverty governance activity project, the ethics and the ineffective implementation of work are difficult to solve with just goodness. Based on this, in order to deal with risk of ethics, the company has made the following efforts.

The company's employees make full use of “technical, interpersonal knowledge and professional skills required to complete the work” to win the partners’ hearts, thus establishing a central position. Then Tieqilish Group trains the households participating in the breeding program and other non-participating households in extreme poverty free of charge. The company passes the right, beautiful ideas, techniques and lifestyles to Yi people and educates them, hoping to get changes on long-term cooperative actions. Meanwhile, the Group fully use the thoughts of “The family is bigger than everything,

the dignity is greater than life, and the expulsion of the family is stricter than the death penalty.” to limit the unethical behavior of the households.

Finally, to deal with the risk of rights, Tieqilishi undertakes high risks. From the point of view of the network, the government and Tieqilishi Group are the largest resource information gathering centers and are typical “structural holes”. However, Tieqilishi is basically in a lonely status in the extreme poverty governance network in Xide County. It is obvious Tieqilishi is the only company that participates in poverty management from the strategic to the executive level, which shows that Tieqilishi Group undertakes high risk.

Tieqilishi Group is committed to introducing more entities, especially enterprises, so as to link as many resources as possible to achieve multilateral win-win and scale effects. In essence, it is hoped to disperse governments’ authorities and to improve the "rights distribution mechanism and interest distribution mechanism." Also, Tieqilishi Group is committed to expanding its influence in the society through the establishment of “funds”, gathering social financial resources, and transforming from working on its own to working in groups, to better manage extreme poverty.

6.2.6 Information Communication Feedback Module

The reason why information communication feedback is also used as the core module of the Tieqilishi Groups’ extreme poverty governance network in Xide County is that after the new network is established, timely information communication and feedback are crucial for judging major issues and making important decisions, as shown in Figure 6-9. The module is designed to timely report and solve problems in the

network, and use appropriate organizational structure to assign appropriate authorities to participants to ensure the normal operation of the network.

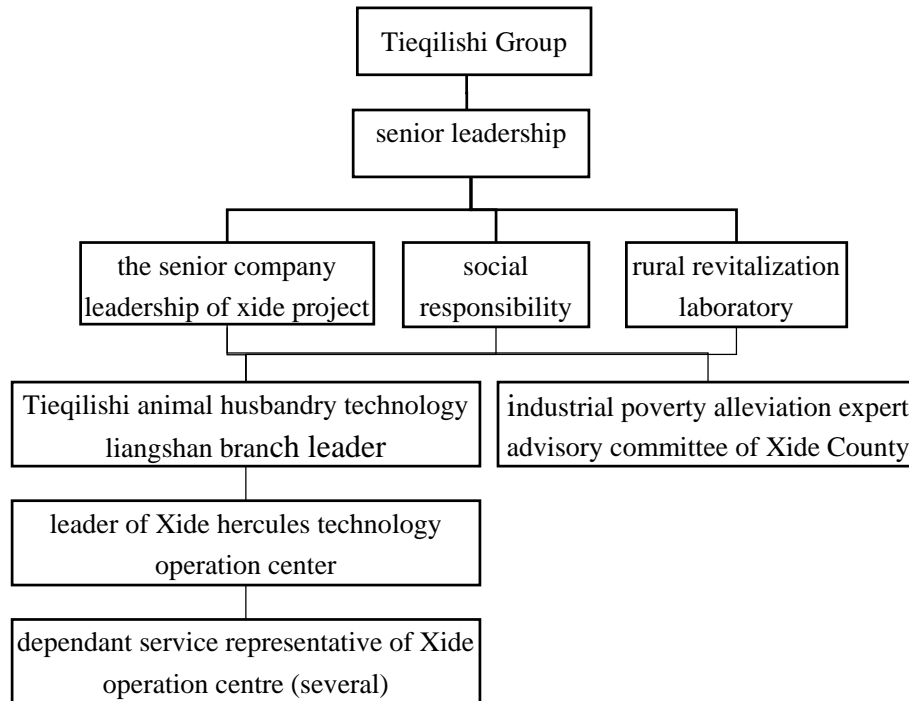


Figure6-9 The information communication and feedback module structure of the industrial poverty alleviation strategy of Xide County of the Tieqilishi Group

Firstly, the network should adhere to the principle of combining top-down and bottom-up, focusing on the interests of poor households.

From the decision to the final investment in Xide, the author made scientific and democratic decisions in the company by means of “project system”. From the company's senior leaders to the senior leaders responsible for the work of the Great Liangshan, to the Social Responsibility Center and the Rural Revitalization Laboratory, and then to the leaders of the Liangshan Prefecture branch and finally to the leaders of the Xide County Operations Center, a closed loop of communication is formed, which is good for Information communication and feedback mechanism. When encountering

major decisions, the Group will adopt a combination of “top-down” and “bottom-up” to collect project information extensively and comprehensively, and fully listen to the interests and opinions of the participants from the project. Then the Group will discuss with everyone to draw decisions. After the decision is made, it will be broadcasted and implemented.

From the Xide County householder’s service representatives down to the most basic level, the top leaders who are fully responsible for the extreme poverty management of Xide County must send “daily work reports” to the leaders every day. The basic situation of daily work, difficulties and problems encountered are reported. If major problems are encountered, the principle of “focusing on the interests of poor households” should be followed to make decisions. For example, In 2018, after the release of the rates of first batch of pigs, the Liangshan Prefecture maintenance manager and the company’s responsible leaders made a joint decision, agreeing on the plan to “guarantee the benefits of the poor households in Xide County anyway”.

Secondly, Tieqilishi Group should insist on listening to many opinions and form good feedback.

In addition to listening to the opinions of employees in the company, Tieqilishi Group should also listen to opinions from the outside. This relationship is not a formal work report relationship, but to some extent a relationship that assists the author in making decisions.

At present, in the extreme poverty management network in Xide, Tieqilishi Group and the Xide County Government integrate the external resources to establish the “Xide

County Industrial Poverty Alleviation Expert Advisory Committee”. This has played an important role in bringing into play the role of experts and scholars, furthering the scientific decision-making level of extreme poverty governance and promoting the in-depth development of extreme poverty governance.

Specifically, the committee's main duties are listed below:

- conducting research, decision-making consultation, and work on key and difficult issues of extreme poverty management in Xide County
- explaining and publicizing knowledge about industrial poverty alleviation
- guiding communication through industrial poverty alleviation relevant points of poverty management activities
- participating in consultation, completion acceptance and assessment of major poverty-stricken projects in Xide County
- participating in industrial poverty alleviation publicity training and exchange work
- timely summarizing and refining the good practices and good experiences of extreme poverty, and improving the work level
- providing advices and decision-making suggestions on poverty governance.

6.2.7 Knowledge Transfer Module

The development of the extreme poverty governance activities in Xide County and the success of the projects that have been carried out the continuous efforts made by Tieqilishi. All along, Tieqilishi has adhered to the corporate culture concept of people-oriented. During the author’s research in Xide County, every households participating in the breeding program, has the characteristics and spirits of Tieqilishi people , which

pleased the author.

Therefore, as the human capital of the Tieqilishi Group' poverty governance in Xide, Tieqilishi People in development have always promoted the achievement of the performance of extreme poverty management throughout the operation of the network. If there is no one to design and implement the plans, it is difficult to achieve success on this project. However, the cultivation of such human capital needs to be realized by means of the following knowledge transfer structure (as shown in Figure 6-10).

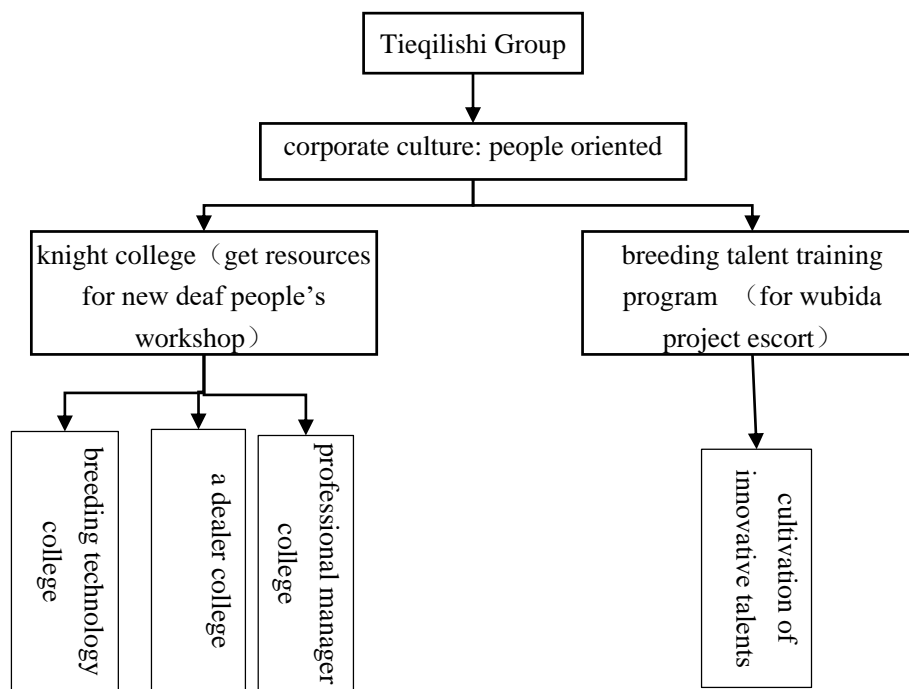


Figure6-10 the knowledge transfer module structure of the industrial poverty alleviation strategy in Xide County of the Tieqilishi Group

The knowledge of poverty alleviation can transfer through the "Knight College" and the lecturer resources of the "New Yi People's Workshop". Knights College is a corporate university of the Tieqilishi Group, which integrates external intellectual

resources and provides a solid foundation for the development of talents. The Knights College has a dean, consultants, honorary principal, and honorary deans in the organizational structure. From the department structure, it has a breeding technology college, a dealer college, and a professional manager college and is positioned to learn from world-class corporate universities. It not only serves the inside of the enterprise, but also serves the peer enterprises. It transfers and inherits the knowledge and skills accumulated by the Group over the years, and is committed to cultivating the professional and technical skills of the talents.

Moreover, based on the “Wubida Project”, Tieqilishi Group has specially developed the “Breeding talent training program”, which is another talent training and development project for high-end food leaders. This project requires pig raising to be not only high-end, but also highly efficient. In order to achieve the goal, enterprises should give full play to organizational strength, cultivate innovative talents, innovate thinking, find new methods, new tools and new means, learn from industry benchmarks, break through the status quo, carry out innovative work, introduce advanced tools and methods, and apply modern information technology transfer research achievements.

In general, through the Knight College and the breeding talent training program, Tieqilishi Group has formed a corporate atmosphere in which everyone learns, regularly shares and progresses together. This fundamentally improves the quality of people and improves their work behavior and concepts. During the training period, the Group strives to explore the potential of employees, motivate the potential of employees, and train all levels of workers. This is a training of process, reengineering and marketability,

thus providing opportunities to achieve better results on poverty alleviation in Xide.

6.3 New network for extreme poverty governance in Xide County

The above article mainly describes the industrial poverty alleviation strategy positioning and its sub-components of the Tieqilishi Group in the extreme poverty governance network of Xide County. In fact, after 2016, in addition to the industrial poverty alleviation project of Tieqilishi Group, there are many other stakeholders joined the Xide County extreme poverty governance network. Therefore, this section will use the information learned by Tieqilishi Group in the process of managing extreme poverty in Xide County after 2016, and portray the new network status of Xide County's extreme poverty governance after 2016.

6.3.1 The subjects and activities of the new network of extreme poverty governance in Xide County

6.3.1.1 The subjects of the new network of extreme poverty management in Xide County

After Tieqilishi Group entered Xide County to carry out industrial poverty alleviation projects, in addition to the subjects already covered in the previous description, broadly, there are four main types of stakeholders supplementing poverty alleviation and playing important roles.

The first type of stakeholder is government stakeholders. As the strategy maker, executive supervisor and environmental controller of extreme poverty governance, the government plays a leading role in the extreme poverty governance of Xide County. Firstly, the government, as a strategy maker, has formulated relevant policies for the

governance of extreme poverty, such as "Xide County Agricultural Industry Poverty Alleviation Special Project 2017 Implementation Plan", "Xide County Deep Poverty Area Agricultural Industry Poverty Alleviation Plan (2018-2020)". Secondly, as the supervisors, the government provides a good environment for the smooth progress of extreme poverty management activities, such as sending cadres from various counties and cities to Xide to provide assistance, and asking the subordinate institutions of the county to perform functions. Lastly, the government, as an environmental controller, effectively coordinates the conflicts between extreme poverty management activities and other activities, such as effectively resolving conflicts between poverty management activities and economic activities to some extent, and achieving the compatibility of subjects' economic goals, social goals, and environmental goals.

The second type of stakeholder is corporate stakeholders. In addition to the poverty management activities adopted by the Tieqilishi Group, enterprises can also contribute to the development of local infrastructure construction through the investment of poverty alleviation funds, such as the "state-owned enterprises enter into Liangshan" project. Besides, companies can also support basic education in poor areas, like Suntech institution, which entered Xi County in 2016.

The third type of stakeholder is financial institution stakeholders. In addition to the above mentioned loans and guarantees for Tieqilishi Group and the poor households, the role of financial institutions in Xide County is also reflected in the cooperation with third-party forces to create a new financial poverty alleviation model.

The Fourth type of stakeholder is the third-party organization stakeholders. In

addition to the introduction of Xide's local research institutes and media resources, local colleges and universities and counterpart support research institutes also contribute to alleviate poverty through starting schools and carrying out education and training.

6.3.1.2 Activities of the new network for extreme poverty governance in Xide County

In the new network, various stakeholders have carried out various activities around the network of poverty governance, which can be summarized as shown in Table 6-1.

Table6-1 the extreme poverty control new network activities of Xide County

Extreme Poverty Governance Methods	Descriptions of Extreme Poverty Governance methods	Subjects of Extreme Poverty
Industrial Poverty Alleviation	<ul style="list-style-type: none"> • “State-owned enterprises enter into Liangshan” poverty alleviation project: In 2016, “State-owned enterprises enter into Liangshan” organized a total of 4 batches of industrial cooperation agreements and signed 38 projects with a total investment of 226.708 billion yuan and an investment of 6.802 billion yuan. • “Tieqilishi Group Pig Breeding” industrial poverty alleviation project: In November 2016, Tieqilishi Group led by the author, signed the “2.2 million pig breeding park project strategic cooperation agreement” with Liangshan Prefecture People’s Government, and invested a total investment 2.5 billion to promote the development of the pig breeding industry in Liangshan Prefecture in three to five years. • “58 Group” information assistance project: In October 2018, 58 Group signed a counterpart agreement with the People’s Government of Xide County to empower the development of information services and help the people increase their income. • “Suntech Institutional Network Education” poverty alleviation project: In December 2018, Suntech helped the Xide County’s “Shangjinsheng Project-Xideban”, providing two years worth of two million yuan teacher qualification certificate training for peoples in Xide 	State Council, State Council, government officials, people's governments at all levels, State-owned enterprises, business owners, corporate strategic departments, corporate brand departments, enterprise executive departments, grassroots employees, local government industrial departments, resource enablers, technical enablers, local village committees, other

Extreme Poverty Governance Methods	Descriptions of Extreme Poverty Governance methods	Subjects of Extreme Poverty
	<p>County, This project gives full play to the advantages of Internet education enterprises, and strengthens intellectual support for Xide County to get rid of poverty.</p> <ul style="list-style-type: none"> In October 2016, Xide County achieved poverty governance by creating a financial three-dimensional poverty alleviation model, and introduced the “Xide County Financial Project Planning Plan”. 	<p>non-poor laborers, poor households, local government supervision Departments, local government agency investment departments, financial institutions, local government investment guarantee departments, research institutes, local government party and government departments, etc.</p>
Counterpart Support	<ul style="list-style-type: none"> “Shifang City Counterpart Help” project: In August 2016, the poverty alleviation collaboration in Shifang City, Deyang City, Sichuan Province, was established and was adhered to the principle of “satisfy Xide’s need and do what we can do”, the goal of “three guarantees” and “four good”. Thus this support contributed tremendously to the industrial development, infrastructure construction, people's livelihood security and intellectual assistance in Xide County. “Nanhai City, Foshan City, Guangdong Province” project : At the end of August 2016, Nanhai City, Foshan City, Guangdong Province established a counterpart relationship with Xide County, invested in the establishment of a flower production base in Xide County, and exported labor services to Nanhai City. . “Huidong County Counterpart Help” project: In November 2016, Huidong County and Xide County established a counterpart relationship to help the allopatric county land relocation and poverty alleviation work. "Zigong City Counterpart Support" project: In 	<p>Other local people's governments, local government party and government departments, non-profit organizations, other non-poor laborers, poor households, technical enablers, local government industrial departments, etc.</p>

Extreme Poverty Governance Methods	Descriptions of Extreme Poverty Governance methods	Subjects of Extreme Poverty
	<p>September 2018, Zigong City established counterpartnership in technology to help Xide County to get rid of poverty and tackle rural drinking water safety.</p>	
<p>Special Projects on Poverty Alleviation</p>	<ul style="list-style-type: none"> Allopatric Relocation and Poverty Alleviation projects: In April 2016, the National Development Bank granted a total credit of 48.5 billion yuan to the Sichuan Province's Yidi Poverty Alleviation and Relocation Project, supporting the relocation of 144 national poverty-stricken counties including Xide County. 	<p>National Development Bank, local people's government, poor households, etc.</p>
<p>Social Poverty Alleviation</p>	<ul style="list-style-type: none"> In July 2016, the first “farmer night school” in Sichuan Province was established in Xiaoshan Town, Xingshan County, which organized the poor households to learn Chinese, study policies, laws and skills. The Health and Welfare Bureau in Xide regularly conducts free medical examinations for them by understanding the situation of extremely poor groups. At the same time, it also explains new medical policies and health education knowledge for poor households. Cooperative assistance: The cooperatives in Xide County are still carrying out poverty alleviation work. Xide County Poverty Alleviation and Development Association: In April 2016, under the leadership and promotion of various government officials, the Xide County Poverty Alleviation Association was established to find projects that can help poor farmers to develop their industries. Media Support: The news media, through cooperation with the Xide County Propaganda Department, transmitted information on poverty alleviation needs and progress in poverty alleviation in Xide County to the whole society 	<p>Research institutes, government officials, other non-poor laborers, poor households, local government party and government departments, local cooperatives, resource enablers, media, local government party and government departments, industry associations, etc.</p>

When General Secretary Xi Jinping participated in the deliberation of the Sichuan delegation at the Fifth Session of the 12th National People's Congress, he put forward the requirement of “continuing to take poverty alleviation from the Tibetan areas in the region as the top priority”. The Sichuan Provincial State-owned Assets Supervision and Administration Commission actively participated in the provincial party committee on

Liangshan, and signed the strategic cooperation agreement with the Liangshan Prefecture People's Government - "state-owned enterprises enter Liangshan", to promote the poverty alleviation and stability in Liangshan areas. It is understood that in the past three years, the “state-owned enterprises have entered Liangshan” agreement have achieved a total of 4 batches of industrial cooperation agreements and 38 projects with a total investment of 226.708 billion yuan and finished investment of 6.802 billion yuan.

According to the unified deployment of the Sichuan Provincial Party Committee, Shifang City, Deyang City, Sichuan Province has contributed tremendously to the industrial development, infrastructure construction, people's livelihood security and intellectual assistance in Xide County. In addition, Nanhai District, Foshan City, Guangdong Province, under the call and arrangement of the Civil Affairs Bureau of Xide County, organized part of the labor force (including poor households and non-poor households) in the county to participate in labor skills training. Huidong County of Liangshan Prefecture also participated in the resettlement poverty alleviation work in Xide County. In 2017, it donated 1.95 million yuan of poverty alleviation funds to Xide County. The Water Affairs Bureau of Zigong City, Sichuan Province established the “Xide County Poverty Alleviation and Rural Water Drinking Safety Technical Assistance Work Leading Group” to coordinate the technical work of the assistants in Xide County.

The People's Government of Xide County has been working to move the poor in the alpine mountain area to places where living conditions are comfortable and the

natural environment is superior, and to build new houses and basic daily necessities for them. In April, 2016, the National Development Bank granted a total credit of 48.5 billion yuan to the Sichuan Province's allopatric poverty alleviation and relocation project, supporting the resettlement of 144 national poverty-stricken counties including Xide County. This model of credit-to-relocation and poverty alleviation projects is a new mechanism for innovative government procurement services explored by the Sichuan Branch of the National Development Bank. Through the “provincial-level lending, provincial-level plus city-level procurement” financing model, it effectively solves the financing problem caused by differentiation on regional operations.

Besides, the 58 Group signed a poverty alleviation cooperation agreement with the People's Government of Xide County to empower the development of information services to help the people increase their income. The specific work is carried out by 58 affiliated subsidiaries of the 58 Group, and the Xide County Government to set up a “58 Tongzheng Information Poverty Alleviation” service site or office, timely release relevant government notices, and set up an information service site in Xide. They set up an information service site at Xide, teach farmers and poor households to use smart phones to seek employment opportunities, to sell their native products, travels, etc. They mobilize and train a number of information poverty alleviation contacts from various administrative villages, and actively provide relevant information on agricultural products, job hunting, village affairs notice, and convenience service to alcaldes. So that all kinds of information in the villages can flow faster and better, which helps to activate the economy, to promote production, and to improve life.

The Suntech organization cooperated with the People's Government of Xide County to launch the “Shang Jinsheng Plan-Xide Class”, providing two years of pre-examination training courses for teachers qualification certificates worth two million yuan for Xide County, giving full play to the advantages of Internet education enterprises. For Xide County to get rid of poverty and strengthen intellectual support, Suntech fully implements the spirit of the 19th National Congress of the Communist Party and General Secretary Xi Jinping's important strategic thinking on poverty alleviation and development, and thoroughly implements the "Network Poverty Alleviation Action Plan." This helps some of the teachers hired to obtain teacher qualification certificates to help more local Yi people to get more employment options.

Another training institution is the first “Peasant night school” in Sichuan Province. It was established in the small mountain village of Lushan Town, Xide County. The teachers are mainly from secretary of the party organization, the main person in charge of the contact unit, the senior secretary, ect. This institution focuses on organizing the poor Yi population to learn Chinese, study policies, learn law, and learn skills. In addition, the Sichuan Provincial Academy of Social Sciences, Research Department, Personnel Office, Institute of Ethnic and Religious Studies, Institute of Political Science, Sichuan Academy of Social Sciences have their own counterparts, and regularly visit the objects of the pairing assistance to understand their current production and living conditions and practical problems, as well as provide them with measures to get rid of poverty and get rich.

In the financial sector, Xide County has implemented the financial three-

dimensional poverty alleviation model to achieve poverty governance, and issued the “Xide County Financial Engineering Project Planning Plan”, which is a financial poverty alleviation plan formulated after an in-depth study of the economic, financial and industrial development of Xide County through the field research and symposium of Finance and Risk Management Research Center of Wuhan University. After the proposal was put forward, Xide County held a seminar on county financial engineering and financial three-dimensional poverty alleviation implementation. The seminar formed three main consensuses. The first is to actively sign a cooperation agreement. The Xide County People's Government and the County Agricultural Bank and the Liangshan Prefecture Rural Commercial Bank Xide Branch signed the Xide County Industrial Support Risk Fund Cooperation Agreement. The second is to promote financial poverty alleviation. The financial support fund of 20 million yuan will be set up to support the poverty-stricken households, village-level collective economic organizations, and rural characteristic industrial economies in Xide County, giving full play to the leverage and guiding role of fiscal funds to promote poverty-stricken farmers to get rid of poverty and become rich. The third is to establish a system of joint government meetings. Those meetings based on "one village, one product, one town, one industry, flaky regional development", adhere to "government guidance, market operation, financial support, scale development" and have the function of rational allocation of resources. With point-to-face, centralized management, and demonstration effects, the government can timely analyze the difficulties and problems in industrial poverty alleviation loans, and effectively enhance the poverty alleviation effect of the








financial poverty alleviation industry.










Finally, a number of emerging poverty alleviation forces have emerged in the new network of extreme poverty management in Xide County. The County People's Government Health and Welfare Bureau regularly conducts free medical examinations for them as they understand the situation of extremely poor groups. At the same time, it also explains new medical policies and health education knowledge for poor households. The county cooperatives are still carrying out poverty alleviation work and the representative in charge of the professional cooperative of the Chengyuan pig breeding farmer in Xide County has also joined the pig breeding model of Tieqilishi Group. The representative transferred part of the land in the neighboring village as a pig breeding and Sichuan pepper planting areas. At the same time, all the poor households in the neighboring villages were employed as breeding workers or planting workers, which provided job opportunities and effectively led the village's extreme poverty management. The county poverty alleviation and development association was newly established and joined the industrial poverty alleviation work. For the villagers of the fruit group in Guangming Town, Xide County, who were both a five-guarantee household and a poverty-stricken construction cardholder, they found the road to make wealth as bee-keepers. The association also send technicians to teach those poor households beekeeping techniques. The county propaganda department also actively cooperates with the news media to transfer information on poverty alleviation needs and progress in poverty alleviation in Xide County to the whole society.

6.3.2 Structure of the new network of extreme poverty governance in Xide County

Based on all stakeholders and activities related to the new network for the governance of extreme poverty in Xide County in this chapter, this study further clarifies the status, role and functions of each subject, as shown in table 6-2. According to the table, the new network structure of extreme poverty control in Xide County is depicted as shown in figure 6-11.

Table6-2 Analysis on stakeholders and relationship of new network for extreme poverty control in Xide County










community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship	
Government 	the State Council	—		Departments of the State Council	resource allocation	
	Departments of the State Council	—		the State Council	resource allocation	
				The poverty alleviation and development center in Sichuan province	resource allocation	
	Local government industrial sector	Agricultural Bureau of Xide County	—		executive department of Tieqilishi Group	resource allocation
					Generation of Tieqilishi Group	resource allocation
					executive department of Tieqilishi Group	resource allocation
					executive department of Tieqilishi Group	resource allocation
		Forestry Bureau of Xide County	—		executive department of Tieqilishi Group	resource allocation
	environmental protection Bureau of Xide County	—		executive department of Tieqilishi Group	resource allocation	
	Land and Resources Bureau of Xide County	—		executive department of Tieqilishi Group	resource allocation	

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship
		Water Supplies Bureau of Xide County		executive department of Tieqilishi Group	resource allocation
		administration of power supply of Xide County		executive department of Tieqilishi Group	resource allocation
		Water Supplies Bureau of Zigong city		The people's government of Xide County	resource allocation
	Local government poverty alleviation departments	poverty alleviation Immigration Bureau of Xide County		Poor household	resource allocation
		Poverty alleviation and development center of Sichuan province		poverty alleviation Immigration Bureau of Xide County	resource allocation
	Delegated investing department of local government	rural tourism investment co. LTD of Xide County		Tieqilishi Group	asset
				Generation of Tieqilishi Group	asset
	Local public resource management departments	SASAC of Sichuan province		The people's government of Liangshan Prefecture	resource allocation
		civil affairs bureau of Xide County		technical artist	resource allocation
				Poor household	resource allocation
	supervision departments of	Animal husbandry station of Xide County		Generation of Tieqilishi Group	resource allocation

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship
	local government				
	party and government departments of local government	The people's government of Sichuan Province	9-1	The people's government of Liangshan Prefecture	resource allocation
		The people's government of Liangshan Prefecture	9-2	The people's government of Xide County	resource allocation
				Tieqilishi Group	resource allocation
				Daliangshan Industrial Poverty Alleviation Institute	resource allocation
		The people's government of Xide County	9-3	Strategic department of Tieqilishi Group	resource allocation
				Strategic department of 58 group	resource allocation
				Suntech institutions	resource allocation
				Strategic department of state-owned enterprises	resource allocation
				agricultural bank of Xide County	resource allocation
				bank of agriculture and commerce of Xide County	resource allocation
		propaganda department of Xide County	9-4	—	—
		civil affairs bureau of Xide County	9-5	—	—
		Health statistics bureau of Xide County	9-6	Poor household	resource allocation

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship
		people's government of Sifang city	9-7	The people's government of Xide County	resource allocation
				The tzu chi foundation	resource allocation
		people's government of Naihai city	9-8	The people's government of Xide County	resource allocation
		people's government of Huidong county	9-9	The people's government of Xide County	resource allocation
	government officials	General Secretary Xi Jinping	A-1	Departments of the State Council	resource allocation
		Secretary of the committee of Liangshan Prefecture	A-2	Strategic department of Tieqilishi Group	resource allocation
		County Clerk of Xide County	A-3	Strategic department of Tieqilishi Group	resource allocation
		Party secretaries at all levels	A-4	—	—
		Contact the main person in charge of the unit	A-5	—	—
		Major Secretary	A-6	—	—
community organizations ◆	community organization	village committee	1-1	executive department of Tieqilishi Group	resource allocation
				Generation of Tieqilishi Group	resource allocation
	Resources masters	Generation of Tieqilishi Group	2-1	executive department of Tieqilishi Group	asset
				grass-roots employees of Tieqilishi Group	resource allocation

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship
				Other non-poor labor force	resource allocation
				Poor household	resource allocation
		Leaders of specialized farmer cooperatives	◇2-2	Other non-poor labor force	resource allocation
				Poor household	resource allocation
	Technical masters	Labor training for skilled workers	◇3-1	Other non-poor labor force	resource allocation
				Poor household	resource allocation
		Technical personnel of Xide County poverty alleviation and development association	◇3-2	Poor household	resource allocation
				Contact person for information poverty alleviation	◇3-3
	Other non-poverty labor force	—	◇5	grass-roots employees of Tieqilishi Group	resource allocation
				Labor training for skilled workers	
				Labor training for skilled workers	resource allocation
				Poor household	resource allocation
	Poor households	—	◇C	grass-roots employees of Tieqilishi Group	resource allocation
				Leaders of specialized farmer cooperatives	resource allocation

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship
				Technical personnel of Xide County poverty alleviation and development association	resource allocation
				Contact person for information poverty alleviation	resource allocation
enterprise 	Corporate strategy department	Strategic department of Tieqilishi Group		Brand department of Tieqilishi Group	resource allocation
				Daliangshan Industrial Poverty Alleviation Institute	resource allocation
				rural tourism investment co. LTD of Xide County	capitalization
		58 group		58 same town	resource allocation
		Strategic department of state-owned enterprises		—	—
		Suntech institutions		Suntech executive branch	resource allocation
		the social responsibility center of Tieqilishi Group		executive department of Tieqilishi Group	resource allocation
		Rural revitalization laboratory of Tieqilishi Group		executive department of Tieqilishi Group	resource allocation
		Corporate brand department	Brand department of Tieqilishi Group		executive department of Tieqilishi Group
	customers				resource allocation
	Corporate	executive department of		grass-roots employees of Tieqilishi Group	resource allocation

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship
	executive department	Tieqilishi Group			
		58 same town	△ ₂₋₂	civil affairs bureau of Xide County	resource allocation
				propaganda department of Xide County	resource allocation
				Contact person for information poverty alleviation	resource allocation
		Suntech executive branch	△ ₂₋₃	Xide's teacher	resource allocation
	E-commerce service center of Xide County	△ ₂₋₄	customer	resource allocation	
	grass-roots staff	grass-roots employees of Tieqilishi Group	△ ₃₋₁	Generation of Tieqilishi Group	resource allocation
				Other non-poor labor force	resource allocation
				Poor household	resource allocation
	financial institutions	bank	China Development Bank	□ ₁₋₁	Poverty alleviation and development center of Sichuan province
bank of agriculture and commerce of Xide County			□ ₁₋₂	Strategic department of Tieqilishi Group	resource allocation
				Generation of Tieqilishi Group	asset
				farmer's specialized cooperative organization	asset
agricultural bank of Xide County		□ ₁₋₃	Poor household	asset	
insurance company		People's insurance of China liangshan branch	□ ₂₋₁	Tieqilishi Group	resource allocation
				Generation of Tieqilishi Group	resource allocation

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship		
	Investment and Guarantee Corporation	State-owned assets guarantee corporation of Xide County	3-1	Generation of Tieqilishi Group	resource allocation		
the third-party organization ●	Industry Association	Association for poverty alleviation and development of Xide County	①-1	Poor household	resource allocation		
	Functional cooperative	Chengyuan pig farmers professional cooperatives of Xide County et al	②-1	Poor household	resource allocation		
				E-commerce service center of Xide County	resource allocation		
	Non-Profit Organization	The tzu chi foundation	③-10	The people's government of Xide County	resource allocation		
	Academic institution				China financial engineering and risk management research center, wuhan university	The people's government of Xide County	resource allocation
					Sichuan Academy of Social Sciences	Daliangshan Industrial Poverty Alleviation Institute	resource allocation
					Daliangshan Industrial Poverty Alleviation Institute	The people's government of Xide County	resource allocation
					Peking University	Daliangshan Industrial Poverty Alleviation Institute	resource allocation
					China Agriculture University	Daliangshan Industrial Poverty Alleviation Institute	resource allocation

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship
		Southwest University of Science and Technology	④-7	Daliangshan Industrial Poverty Alleviation Institute	resource allocation
		The international food policy research institute	④-8	Daliangshan Industrial Poverty Alleviation Institute	resource allocation
		Daliangshan Academician workstation	④-9	Daliangshan Industrial Poverty Alleviation Institute	resource allocation
		New farmer's workshop	④-10	Xichang municipal party school	resource allocation
	Xichang college			resource allocation	
	Poor household			resource allocation	
		Xichang municipal party school	④-11	—	—
		Xichang college	④-12	—	—
		Peasant night school	④-13	Xichang college	resource allocation
				Party secretaries at all levels	resource allocation
				Contact the main person in charge of the unit	resource allocation
				Major Secretary	resource allocation
				Sichuan Academy of Social Sciences	resource allocation
				Other non-poor labor force	resource allocation
				Poor household	resource

community	stakeholder (initiative)	classify (initiative)	legend	cooperative stakeholders (passivity)	relationship	
					allocation	
		Xide's teacher	④-14	—	—	
	Media	web portals	⑤-1	propaganda department of Xide County	resource allocation	
		Self media	⑤-2	Brand department of Tieqilishi Group	resource allocation	
		Feed industry information network	⑤-3	Brand department of Tieqilishi Group	resource allocation	
		China animal husbandry net	⑤-4	Brand department of Tieqilishi Group	resource allocation	
		Animal husbandry toutiao net	⑤-5	Brand department of Tieqilishi Group	resource allocation	
		The new priest network	⑤-6	Brand department of Tieqilishi Group	resource allocation	
		The pig E net	⑤-7	Brand department of Tieqilishi Group	resource allocation	
		Scale E pig net	⑤-8	Brand department of Tieqilishi Group	resource allocation	
	Consumer	—		⑥	E-commerce service center of Xide County	asset
					Brand department of Tieqilishi Group	asset

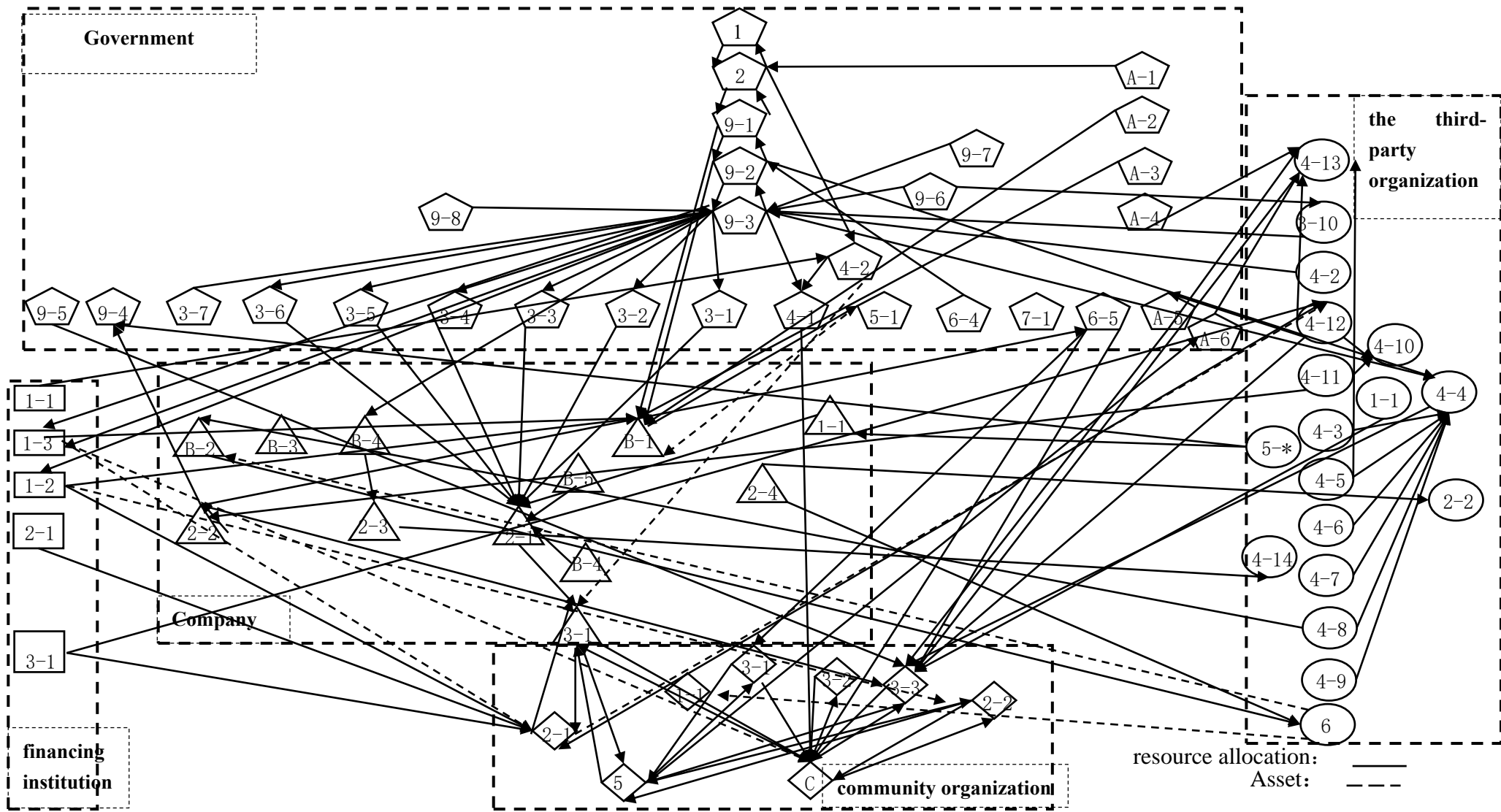


Figure6-11 extreme poverty control new network structure of Xide County

The abstract network status of TieQiLiShi Group's poverty alleviation in Xide County through industrial investment is demonstrated in chart 6-12. It is the enterprise's dual embedding into the networks through station embedding model, in which the external enterprise plays the role of a local business and gets dual embedded in the industrial network and social network. The re-construction of the networks affects not only the networks in poor areas, but also the enterprise's external networks.

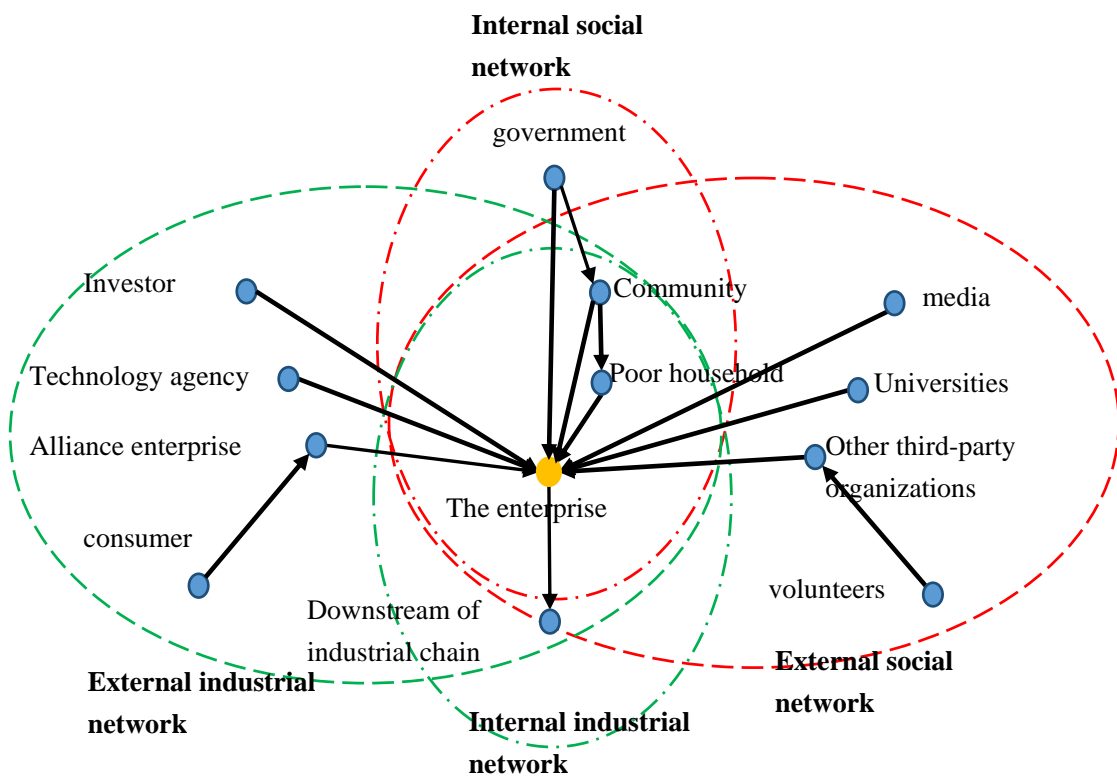


Figure 6-12 Medium-desktop dual network embedding mode diagram

Station embedding model originates from the strategic demand of expanding value chain and ecological community of TieQiLiShi Group, which sets poverty alleviation as a goal in its strategic development system since the project was initiated. The enterprise was exposed to a totally unfamiliar environment, with the

target to build a market from scratch serving population from the base of the pyramid. The enterprise itself did not possess any earned advantage, it simply adopted the dual embedding approach to the local industrial network and social network, while at the same time, inviting the poor households to also dual embed into the industrial network and social network of the enterprise, so that they could see progress through mutual learning from each other.

Such mutual learning through dual embedding into each other's networks enabled TieQiLiShi Group to enhance its technical localization capabilities and social localization capabilities in the poor areas. To take the industry of pig breeding as an example. Xide County is located at high altitude with big diurnal temperature difference, it thus presents a new challenge to the available design of pigpen, which was built mainly in the Basin area by the enterprise. TieQiLiShi Group also had to learn what pig breeds were available at Xide County, the local practice of pig breeding, and then evaluate their own technology and the latest research product of its scientific study unit, for a way to start and build up their technical localization capabilities.

As for the commitment to pig-breeding, "Jiazhi", the lineage concept in Yi Ethnic Groups as a recessive community relationship, plays a critical role to discipline the locals as a governance method, even more efficiently than general regulations. (A good example could be prohibiting spitting onto the ground through rules set by the ancestral temple as the introduction of fines turned out to be total failure.) Because of the unique local social norms, concepts like "Nengren" and

“Xiangxian”, well-respected individuals in the community, was given special credit when building up social localization capabilities.

The dual embedding into both industrial network and social network is finally represented in “poverty alleviation”, as it allows the professionals to be engaged in their expertise, so that the sustainability of the business model and a more coordinated social governance cost structure could be maintained. After the TieQiLiShi Group got involved with the extreme poverty governance networks in Xide County, it ended up the segregation of dual networks, yet led to the dual embedding into the industrial and social networks of the extreme poor areas. On one hand, it addresses the separation between social network and industrial network that the extreme poor population dwells in, such unlinked networks produce no value to support the poor population to step out of poverty. This model helps solve the challenge of “impoverishment” by allowing the poor population access to income. On the other hand, it answers the question of the separation between local and ultra-local networks that the development of poor population is excluded from the ultra-local networks. This model thus offers a solution to the challenge of “being stranded” as it enables the poor population to build on capacities with external resources.

The structure and behaviour features of Xide County extreme poverty governance networks were both changed. From the perspectives of structure feature, on one hand, it empowers the local industrial network and social network to build up strong links among government, business and poor household, realizing the

integration of local networks. On the other hand, through the bridging function of the enterprise, the local networks is invited and incorporated into the general networks. From the perspectives of behaviour feature, the industry development has cultivated marketization, which encourages the subjects of governance to build more contractual relations and frequent resource exchanges.

6.4 Verification of core hypothesis

Horizontal comparison among the five poverty alleviation network structure model, namely, “relying solely on social network”, “relying solely on industrial network”, “single point dual embedding into the networks”, “chain dual embedding into the networks”, and “station dual embedding into the networks”, is displayed as in chart 6-3.

Table6-3 Comparative analysis table of network embedding patterns

Network embedding mode	Relying Solely on Social Networks	Relying Solely on Industrial Networks	Single point embedding	Chain embedding	Station embedding
The degree to which enterprises are embedded in the internal industrial network in poor areas	without	low	low	middle	high
The extent to which enterprises are embedded in social networks in poor areas	without	low	low	middle	high
The degree to which the external industrial network is embedded into the internal industrial network in poor areas	without	without	low	middle	high
The degree to which	without	without	low	middle	high

Network embedding mode	Relying Solely on Social Networks	Relying Solely on Industrial Networks	Single point embedding	Chain embedding	Station embedding
external social networks are embedded into internal social networks in poor areas					
The degree to which external industrial networks are embedded into internal social networks in poor areas	without	without	low	middle	high
The degree to which the external social network is embedded into the internal industrial network in the poverty-stricken areas	without	without	low	middle	high
Technical localization capability	without	low	low	middle	high
Social localization ability	low	low	low	low	high
Business model sustainability (economic performance)	without	low	low	middle	high
Coordination of social cost structure (Social performance)	low	low	low	low	high

Note: The enterprise, which is listed on the left column, has its status of embedding into the local networks of the poor areas presented in this table. Meanwhile, its status of embeddedness is represented by its location of the enterprise in the graphic charts. As for to what extent the internal and external networks are embedded, they are illustrated through the overlapped areas

in the graphic charts.

The conclusion demonstrated in table 6-3 strongly support the six hypotheses in three groups raised in chapter four, which focuses on analyzing how business mechanism could impact poverty alleviation result through networks. It also proposes three key viewpoints on research about extreme poverty governance: 1, poverty alleviation relying solely on social network is low in efficiency, while the outcome through industrial network is proved to be more effectively than that through social network; 2, dual embedding into the industrial network and social network will enable positive outcomes in both business and social practices in poverty alleviation; 3. The network structure design of “points”, “chains” and “stations” of dual network embeddedness model is observed to produce an overall increasingly effective outcomes on poverty alleviation.

6.5 Summary

The Xide County Extreme Poverty Governance Network is committed to achieving a series of strategic goals such as reducing the cost of poverty all over the society and creating top-level business cards for Liangshan. In order to achieve these goals, the company has built and worked on stakeholders, business plans, implementation, brand communication, risk prevention and control, information communication feedback, and knowledge transfer. The operation of the seven modules helps to solve the obstacles and problems in the process of embedding the original production network and social network.

First of all, the development of extreme poverty governance activities in Xide

County of Tieqilishi Group helped poor households to break through the original social network relationship and integrate into the new social network relationship. Tieqilishi Group has attracted more entities into the original network. These entities play their respective roles and make contact with poor households in different ways, which allow poor households to move from a single network relationship to enrichment and diversification. Indeed they have brought with different poverty alleviation resources and the ability to integrate different poverty alleviation resources. In this process, poor households change their minds and status quo and actively participate in extreme poverty governance through the four methods mentioned above. Through those changes, poor households not only earn more income, but also cultivate the ability to develop poverty alleviated internally, thus fundamentally achieving autonomous poverty alleviation.

Secondly, the development of extreme poverty management activities in Xide County of Tieqilishi Group helps enterprises break through the boundary of industrial networks in poverty-stricken areas and continuously integrate into the new industrial relations in the region. Xide County is a representative of extremely poor areas. It has gathered almost all the poverty factors and the most extreme targets. From the author's researches, normally companies will not choose to invest and develop here. Even if they entered the market, the situation of hard work forces them to give up the market. However, the successful completion of the first phase of the project and the achievement of the performance prove that Tieqilishi Group can obtain more and longer development in Xide. Obviously, Tieqilishi Group has

broken through the original restrictions of rules and regulations on enterprise development in Xide and establish a relatively complete new industrial relationship on the basis of the original weak foundation of business development.

At last, the launch of the Extreme Poverty Governance Program in Xide County of Tieqilishi Group helped the government to provide a broader access point for social resources for the development of Xide's industrial network, thus creating conditions for the poor households to further embed industrial networks and new social networks. Also the problems of use of the money has been completely solved after the Tieqilishi Group participated in the extreme poverty of Xide governance, which solve the government's worries. At present, the poverty alleviation funds of the People's Government of Xide County have been revitalized and created more commercial value and social value. Through the industrial poverty alleviation project, the government has connected to more poverty alleviation resources and poverty alleviation entities, thus leading to more benefits to poverty households.

In summary, the development of extreme poverty management activities in Xide County of Tieqilishi Group solved many obstacles and problems in the process of embedding and integrating the industrial network and social network in Xide County, and truly realized the goal of treating poverty-stricken households as the center. In the future, Tieqilishi Group will continue to help Xide achieve sustainable development, and continue to help the extremely poor gain wealth and develop in the network.

Chapter 7 Conclusion and Future Research

7.1 Conclusion

This study uses the stakeholder theory, mechanism design theory, governance theory and other basic theories combined with the practical problems in poverty governance to establish an analysis framework of the network structure of extreme poverty government centered on poverty household from the theory exploring and case analyzing. Based on the evolutionary analysis of core stakeholders' participation in the governance of extreme poverty in the framework, the evolution model and core dimension of dual networks embeddedness were proposed. Taken together, the main conclusions are summarized as follows.

(1) From the perspective of theoretical research and practices at home and abroad, poverty has dual cognitive pathway with time dimension and spatial dimension. Extreme poverty refers to the situation in which the poverty population is deprived of his survival ability and development opportunities in both time dimension and spatial dimension and thus unable to meet their basic consumption needs on a sustainable basis. Therefore, it has the deepest rigidity. The introduction of this concept requires us to further analyze the poverty issue and poverty governance from the perspective of development and historical evolution based on the original cognition of income poverty, capabilities poverty and entitlement poverty. Moreover, the two cognitive pathways of poverty expressed by "income-capabilities-entitlement deprived" and "income-entitlement excluded-entitlement

deprived" also correspond to the dual economic and social attributes of poverty, indicating that poverty governance should face dual economic and social goals.

(2) Poverty governance is a framework system to eliminate the causes of poverty according to different mechanisms of poverty. In the practice of poverty governance in various countries, the strategic main line of poverty governance is clear. Economic growth is a necessary condition for poverty governance, special development is a fundamental approach to poverty governance, and social security is an auxiliary means to alleviate contradictions. From the historical evolution of poverty governance strategies, it can be seen that the current extreme poverty problem is often the final precipitation generated by the differentiation of poverty population with common characteristics in the form of "filtering", which is formed one layer after another in the implementation process of multiple poverty governance strategies. Therefore, more attention should be paid to the strategic mechanism in poverty governance. If several poverty-causing factors exist at the same time and reinforce each other's poverty-causing effect, it is difficult for a single poverty governance strategy to work. At this time, a compound poverty governance framework system should be selected and used together to act on different poverty-causing factors. The use of the business mechanism to solve social problems is a kind of compound poverty governance framework system. Business practices can run through three major strategies of economic growth, special development and social security and serve as an effective mechanism to govern extreme poverty at the deepest level.

(3) Poverty governance is the product of human poverty governance activities under socialized production conditions. The use of commercial mechanisms to solve poverty is, in essence, to create various possible conditions for the poverty population to realize the entrepreneurship activities under a certain socio-economic environment. The natural attribute of poverty governance is to promote the formation of "entrepreneurial" resources socialized production of the poverty population and the improvement in social productivity. Furthermore, poverty governance is also restricted by human social conditions, so it reflects certain relations of production and serves certain relations of production. The reflection of certain relations of production is the social attribute of poverty governance, which is restricted by the social productivity of "entrepreneurship" resources and has a strong reaction to the development of social productivity of "entrepreneurship" resources of the poverty population. The strategic choice and system evolution of poverty governance are the manifestation of the social attribute of poverty governance: the iteration in "entrepreneurship" resources of poverty population and the social resources associated with poverty governance affect the performance of poverty governance attributes.

Poverty governance, as the embodiment of the production relationship of the "entrepreneurship" resource for the poverty population, is essentially to coordinate the benefit distribution of the value added part of poverty governance activities among multiple participants due to the input of different resources and collaborative labor. From a static point of view, this profit distribution is rooted in the ownership

of different resources and the production model of different resources participating in poverty governance activities; from a dynamic point of view, the result of benefit distribution would affect the investment of "entrepreneurial" resources reproduction activities for the poverty population. Therefore, poverty governance adjusts the production relationship of "entrepreneurial" resources for the poverty population by coordinating the distribution of benefits, so as to make it adapt to the requirements of the development of available resources productivity for the poverty population.

(4) The production relationship of "entrepreneurship" resources for the poverty population is the mutual relationship formed in the production process of poverty governance, including resources ownership relationship, interpersonal relationship in poverty governance activities and distribution relationship of poverty governance achievements. For the study of poverty governance, it is crucial to understand the changes in the three dimensions of production relationship. It shows that the structural characteristics of the production relationship have a direct impact on the behavior of the governance subject. The extreme relationship and embedded relationship form different governance subjects and governance behaviors. The extreme relationship embodies complete trust in government (or markets) and the governance subject is the "visible hand" of the government (or the "invisible hand" of the market). The governance behavior is mainly autocratic (or laissez-faire) and the governance model emphasizes the analysis of the individual attribute characteristics of participants. The embedded relationship breaks the extreme authority of government (or market) in information and trust. Different governance

mechanisms are formed according to different states of embedded social relationship, so that the governance subjects are diversified to meet the changing requirements of social relationship such as information and trust. The different degree of embedding determines the convenience or restriction judgment of governance behavior to anti-poverty activities, thus making governance behavior check and balance each other. The governance model places more emphasis on the relationship between participants and the analysis of intensity changes.

From the perspective of historical evolution, the changes in the three dimensions of the production relations of the extreme poverty governance can be summarized as the expressions of denotation and connotation. Denotation expression is the structure evolution of poverty governance subjects and the research summed up as PPPP governance model (Public - Private - Personal Partnership model), that is, the public sector, the private sector and personal as well as other subjects build cooperation relations so as to improve the income level of the poverty population in a certain way and finally lift the poverty population out of poverty. How to form an effective network PPPP model is the most important thing for the extreme poverty governance. In the network "PPPP" model, there is no direct node between the government and personal households. But the effect of poverty alleviation may be amplified and transmitted to the personal households by constructing the social system through the community organization. In the network "PPPP", every triangle is a market. For example, the government-enterprise-financial institution is the policy-based financial market. The government-

community organization-financial institution is the evaluated intermediary market. The government-enterprise-community organization is the project market. The personal household-community organizations-enterprise is the labor market. The personal household-financial institutions-enterprise is the guarantee market. The personal household-financial institution-community organization is the capital management intermediary market. The enterprise-financial institution-community organization constitute filtering amplification layer (6 markets + 1 filtering amplification layer). Therefore, the extension of extreme poverty governance mechanism manifests as how to construct diversified market.

The connotation of the three-dimensional change in the production relationship in the extreme poverty governance is expressed as the cooperative elements around the input among various stakeholders in the governance of poverty, forming a multiple relationship based on resources, assets and capital. The distributive relation of investment income around capital formation is the advanced form of the subject relation of extreme poverty governance. The core stakeholders in the governance of extreme poverty play the dual roles of "economic man" and "social man" by relying on the differentiated resources invested in poverty governance activities. Therefore, it has the interest demands of economy, society and environment. The relationship formed by stakeholders around poverty governance is a production relationship formed by their own input of resources and their search for cooperative resources and necessary embedded social needs. No stakeholder is the complete owner of all resources. Therefore, the relationship

among the stakeholders involved in poverty governance model between different interest subjects evolves step by step from the input-output relationship to property right contract relationship and finally to investment distribution relationship with the effort of input resources of the subjects, control of resources (assets) and improvement in the efficiency of resources (capital).

(5) If the governance system is the basis for supporting and coordinating the production relationship of "entrepreneurship" resources for the poverty population, the two basic issues for poverty governance and development are who to start "entrepreneurship" and what "entrepreneurship" to start. This involves two interrelated subjects: one is the personal households as the target subject and the other is the related subjects as the carrier of the production mechanism. Thus, there are two kinds of networks related to poverty governance and development, namely, personal network and production network. Personal network mainly refers to the network dominated by the personal social relationship of poverty households, which reveals the interpersonal social connections and thus it is also known as social networks. Production network mainly refers to the value chain network formed by each independent subject through the different links investment of resources, assets and capital as well as the production and operation activities. This kind of network is often based on the collaborative business relationship, so it can be called industrial network. On the one hand, the development of poverty governance should pay attention to the embedding of social network, and obtain more network resources support through the "interpersonal relationship" of personal households;

on the other hand, attention should be paid to the embedding of industrial network so that relevant subjects can obtain the external economy generated by participating in the industrial division of labor, and accelerate the accumulation of knowledge and ability of all stakeholders, including the personal households. The dual embedding of social network and industrial network is the inherent requirement of poverty governance and development. It makes use of network analysis to transform the analysis method of the historical evolution into iterative principle. Besides, it transforms the multidimensional cognition of the production relation of poverty governance into the dynamic mechanism of the multidimensional extreme poverty governance system, which is usually embodied in five aspects, namely wealth, right, knowledge, values and social integration. In the network analysis, the extended expression of the three-dimensional change in the relations of production in the extreme poverty governance would be described in more detail. The prototype of the network is designed as a sub-network and integrated network system composed of "points", "lines" and "faces", which shows in detail the social network and industrial network status of extreme poverty governance. Therefore, a real case is more conducive to the description of network details.

Different subjects have different positions and functions in the evolution of industrial network and social network. The way that poor households participate in governance network constantly interacts with social network and industry network from the initial stage to the development stage and then to the continuous stage, which is not only the process from the allocation of resources to capitalization and

to social capitalization by the entrepreneurship resources of poverty population, but also the process for a poor household to break through the original social network relation and integrate into the new social network. From the initial stage to the development stage and then to the continuous stage, the way of enterprises participating in the poverty governance network constantly interacts with the social network and industrial network, which is not only the continuous evolution process of the enterprise's network embedding ability, but also the process of enterprises breaking through the boundary of the industrial network in the poor areas and continuously integrating into the regional new industrial relations. The way that the government participates in the poverty governance network changes from the cognition of income poverty to capabilities poverty to the entitlement poverty and continuously provides the initial resource conditions for the social network and industrial network, which is not only a process of the interactive evolution of rights and knowledge, but also a process of the interactive evolution of wealth and values. The actual case reflects the method analysis of three core poverty governance subjects (poor household, enterprise, government participating in network, helps extract the three measurement dimensions (trust, value and rights) embedded in the industrial network and social network of extreme poverty governance and thus sets up the three-dimensional cubic model of poverty governance network cognition. This model can be used to comprehensively locate the current situation of network governance in extremely poor areas and the obstacles that need to be broken through.

7.2 Future Research

Extreme poverty research is a complex systemic subject. Although this study designed research contents from multiple aspects involved in the concept of extreme poverty, the essence of extreme poverty, organization structure and network evolution, consulted a large number of literature materials and conducted investigation and interview and theoretical research combined with practical cases, there are still some problems for further research.

(1) Dynamic evolution analysis of network synergy. The current iteration analysis of industrial network and social network is proposed under the condition of historical development and current point, which is relatively static. But as this article constructed the stakeholders involved in the thinking of extreme poverty governance framework, the game of stakeholders could lead to the changes in the position and role of the various stakeholders in the governance, which may monitor the game results dynamically and be more conducive to form the governance strategy for the steady development of poor household.

(2) A study on the analog simulation of cooperative game. Based on a broader data standard, the analog simulation research would be carried out in the specific connotation of cooperation relationship such as the hegemony, negotiation rules, credit transmission and fame through the first-hand research and other means under the framework of extreme poverty governance with the participation and cooperation of stakeholders. In addition, the object of simulation can be solidified

into the development problems in each stage of the poverty governance value chain and the specific ways and means of stakeholder participation and cooperation can be analyzed.

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