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Embedding the poor into the industrial system: what we can learn from poverty alleviation through industrial development in China

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ABSTRACT

Poverty alleviation through industrial development in China contributes to the long-standing debate on how the poor could benefit from the development. It creates four industrial organizing approaches (i.e. households operating independently, intermediary organizations providing linkages, modern enterprise leading and asset income distribution) and three ways of participation for the rural poor (i.e. participating as petty commodity producers, wage workers and shareholders), in which productivity has been improved and production relations adjusted. While highlighting the specificity of China's situation, this paper argues for the more general implications of China's case for other developing countries due to its theoretical hybridity in addressing poverty alleviation and development.

KEYWORDS

poverty alleviation through industrial development; China experience; rural poor; development

1. Introduction

On 25 February 2021, President Xi Jinping declared victory in the battle against poverty, announcing that China had officially completed the task of eliminating extreme poverty. By the end of 2020, all of the 98.99 million rural residents, 832 counties, and 128,000 villages that previously fell below the 'official' poverty line (2300 RMB a year or 343 US dollars per annum) had been lifted out of poverty (Guo and Liu 2022).

Such an achievement is particularly glittering considering the persistence of absolute poverty in many other countries in the world. Countries in the Global South have been muddling through with various strategies (sometimes combined), including: import-substitution industrialization, export-oriented development, structural adjustment policies, sustainable development, pro-poor growth, etc. In general, these strategies and policies have not succeeded in markedly reducing poverty in low-income countries (Hayami and Godo 2005, 256). The COVID-19 pandemic has made matters worse since 2019, adding another layer to the challenge of global poverty reduction. According to the *Sustainable Development Report 2021* (Sachs et al. 2021), extreme poverty increased in 2020 in sub-Saharan Africa and in other parts of the world. The COVID-19 pandemic pushed an estimated 120 million people into extreme poverty (defined as living on less than \$1.90 a

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day), mostly in low- and middle-income countries (Atanda and Cojocar 2021). The pandemic has also affected access to food and has increased food insecurity for millions of people (FAO 2021).

To fight against poverty, many different policies and projects have been implemented, depending on what has been blamed as the root of poverty: unequal access to resources, corrupted government, institutional barriers or cultural and individual factors. Entrepreneurship, land tenure, climate, eco-services, oil palm agriculture, husbandry and fishery, forestry and poultry, among many other factors, have been studied to see whether and to what extent they could contribute to poverty reduction (Thoms, Karna, and Karma-charya 2006; McCafferty et al. 2012; Leichenko and Silva 2014; Suich, Howe, and Mace 2015; Mottet and Tempio 2017; Sutter, Bruton, and Chen 2019; Santika et al. 2019). Findings of these studies are divergent and striking controversies have arisen, particularly when three economists won the Nobel Economics Prize in 2019 for their innovative insights on poverty that stressed the mechanics of individual and household choice. Opponents argue that their studies, concentrating mainly on the micro level, were hardly applicable to poverty reduction at the regional level and beyond and did not ask any big questions about development (Akram-Lodhi 2014). In addition, their studies ignored China's experiences in poverty reduction, suggesting that China's fruitful experiences and practices in poverty alleviation have not been effectively or systemically consolidated into economic theory (Zhou and Zheng 2020).

In light of this, this paper focuses on poverty alleviation through industrial development (*Chanye Fupin*, abbreviated as PADI hereafter) and attempts to explain China's success in poverty alleviation in recent decades, taking into account relevant historical details. PADI is an endeavour with the widest possible scope that seeks to maximize participation in the 'Five Measures for Poverty Eradication' (Li 2016).¹ By the end of 2019, 92 percent of households in poverty in China had participated in industrial development, and 67 percent of the population had been lifted out of poverty, mainly through being involved in industries (Ministry of Agriculture and Rural Affairs of China 2019). This paper addresses two key issues: (1) how China has been able to develop industries in poverty-ridden rural areas; and (2) how the poor have been able to benefit from such development. We argue that the Chinese government has succeeded in alleviating absolute poverty through a combination of boosting industrial productivity and adjusting relations of production, thereby assisting the poor to gain a relatively fair share in the ensuing economic growth. Strong political will and capacity in allocating resources and personnel have been essential factors underlying such success.

This paper is structured as follows: the next section introduces the methodology. The third section traces the idea, history and linkages of PADI. The fourth section analyses four different models that emerge from PADI and is followed by micro-analyses of how the poor become involved in and benefit from such development. The sixth section wraps up the paper with a discussion and conclusions.

¹These five measures were proposed by Xi Jinping in the High-Level Forum on Poverty Reduction and Development on 16 October 2015. They are: (1) boosting the economy and providing more job opportunities, (2) relocating poor people from inhospitable areas, (3) compensating for the economic losses associated with reducing ecological damage, (4) improving education in impoverished areas, and (5) providing subsistence allowances for those unable to shake off poverty through their own efforts. (See Li, C.W. 2016.)

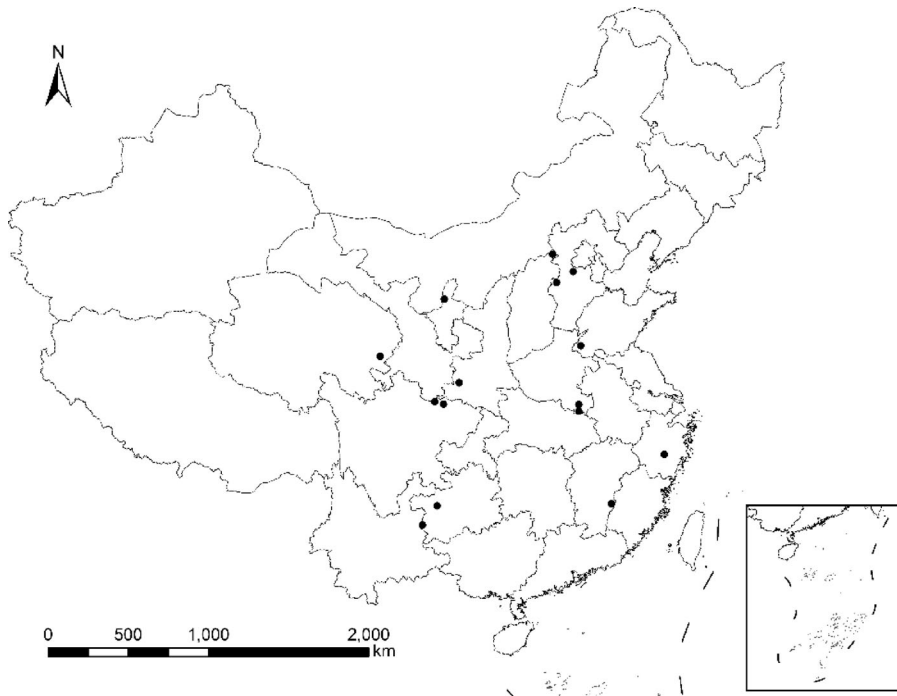


Figure 1. Map of China showing the research sites.

2. Methodology

This paper is based on the research project ‘Exploration and Prospects for the Establishment of Long-term Mechanism of Poverty Alleviation through Industrial Development after 2020’ conducted by a research team of the College of Humanities and Development Studies of China Agricultural University from April to October 2020. Commissioned and supported by the China Poverty Alleviation Development Centre of the National Administration for Rural Revitalization, the team conducted research in 15 counties, as shown in Figure 1.²

Research sites were selected based on the following rationale. Firstly, research sites mapped the overall spatial distribution of poor areas in China which are mainly concentrated in the central region, western mountainous areas and southwest areas. Common characteristics of those impoverished regions include a harsh natural environment, lack of resources and poor infrastructure, low education level of the population, and a weak economic foundation. Among them, the so-called ‘three regions and three prefectures’ (*Sanqu Sanzhou*) are areas in extreme poverty; these include Tibetan areas in Tibet, Sichuan and Xinjiang Uygur Autonomous Region, and three autonomous prefectures in Sichuan, Yunnan and Gansu, respectively. More than 80 percent of the ‘three regions and three prefectures’ are located in the Qinghai-Tibet Plateau. This research targeted the typical western and mountainous areas (such as Y County, FP, TZ, LB), southwest areas (such as NY, PZ), and Tibetan and other ethnic minority areas (such as MN and

²All places and names are anonymized in the text.

ZK). In addition to these typical impoverished regions, there are also a few poor counties in the more developed eastern area (such as HZ and JY). These counties are mountainous or relatively remote within their province, and thus have some commonalities with other poor regions.

Secondly, the development of industries for poverty alleviation was a major factor in selecting research sites. Albeit in differing natural and socio-economic conditions, the research counties and towns have put great effort into developing various industries in rural areas to alleviate the poor, such as agriculture, tourism, photovoltaics (PV), electronics, etc. Therefore, such diversity provides the possibility to generalize regarding some fundamental mechanisms in PADI.

Research data were collected through field studies simultaneously carried out by different research teams. In each research site, the research team firstly visited county government and township governments to interview all the related department heads and officials in charge of poverty alleviation and rural industries. The team then went to villages covered by industries for poverty alleviation to interview village cadre, villagers (from both targeted poor households and ordinary households), and managers of enterprises, workshops, cooperatives and large farms. Inter-team discussions were organized during and after fieldwork to promptly exchange information and findings (Table 1).

3. Conceptualizing ‘poverty alleviation through industrial development’ in China

This section traces the history of PADI to help the reader understand how this strategy is applied institutionally. In Chinese history, poverty alleviation has been deeply interwoven with the development of the Chinese economy in general and agrarian change in particular. We therefore define PADI both broadly and narrowly, based on different institutional settings.

3.1. Institutional review of ‘PADI’: a glance at contemporary China’s agrarian change

From the founding of the People’s Republic of China in 1949 to 1978, China applied relief-based poverty alleviation. The government’s primary strategy of eradicating poverty was to provide assistance to impoverished groups in rural areas through civil affairs departments and collective economic organizations to guarantee the survival of the poorest. With rural China so extremely backward in every respect, they initially focused on guaranteeing basic survival rights – food, clothing, basic medical care, etc. (Brown 2021, 129). Such relief-based poverty alleviation played a positive role in ensuring the basic livelihood of the poor, but could not eliminate poverty at its source.

The rural reform that started in the late 1970s stimulated economic vitality in rural areas by permitting farmers initiative in production, and significantly improved agricultural productivity. In just seven years, from 1978 to 1985, the impoverished population in rural areas was halved (Ye 1996). The comprehensive reform of the rural economic system became the main driving force for the rapid development of both the rural and the national economy, and the increased incomes of rural residents became the main factor for poverty reduction during this period. As Figure 2 shows, the urban–rural income gap in 1984–1985 was lower than it had been since 1949. Despite the overall

Table 1. Research sites.

Province	Research site	Regional location	Major industries involved in poverty alleviation
Hebei	Y county	North	Agriculture
Hebei	FP county	North	Agriculture
Shandong	HZ city	East	Manufacturing
Zhejiang	JY county	East	Agriculture and manufacturing
Henan	X county	Middle	Agriculture and tourism
Henan	GS county	Middle	Agriculture
Shanxi	TZ county	Middle	Photovoltaic industry
Jiangxi	SCH county	Middle	Agriculture
Sichuan	GY city	Southwest	Agriculture
Sichuan	NJ county	Southwest	Agriculture
Guizhou	NY county	Southwest	Agriculture
Guizhou	PZ city	Southwest	Agriculture
Shanxi	LB city	Northwest	Agriculture
Ningxia	MN town	Northwest	Agriculture and manufacturing
Qinghai	ZK county	Northwest	Agriculture

improvement of the rural economy, special anti-poverty policies were still required for the remaining poor areas and poor people whose basic needs were still not being met. Therefore, in the mid-1980s, China established the policy framework of development-driven poverty alleviation, shifting its focus from relief to economic development which, in turn, serves to develop the commodity economy (Du 1991). On 30 September 1984, the Central Committee of the Communist Party of China (CPC) and the State Council jointly issued a circular to help poor areas make changes as soon as possible, proposing to help people in such areas improve their production capacity, develop commodity production and catch up with overall economic development.

Poverty is predominantly a rural phenomenon in China, as shown by the significant urban–rural income gap (see Figure 2). A large proportion of the rural poor are engaged in some sort of agricultural activity, and are typically smallholders with their own cultivation. In advancing the market-oriented economic reforms introduced in the late 1970s, the central government is firmly convinced that it is impossible to eliminate poverty simply by supporting subsistence production as part of the peasant economy. It therefore promotes commodified agriculture and fosters rural industries in order to bring more cash income and employment opportunities to the impoverished rural

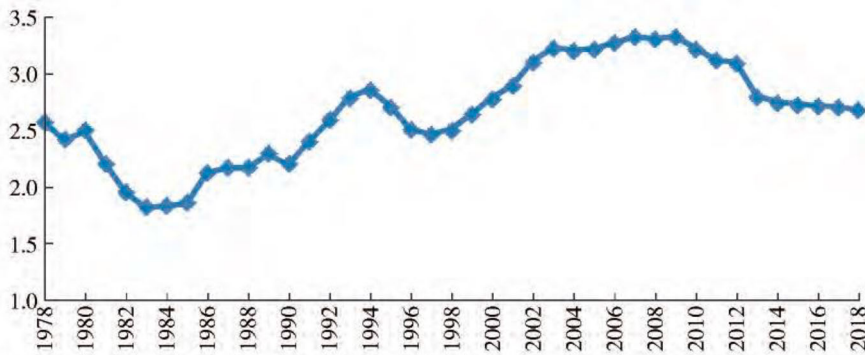


Figure 2. Urban–rural income gap ratio. Source: China Statistical Yearbook (2018); Statistical Bulletin on National Economic and Social Development (2018).

population. In 1993, the central government formulated and implemented the *Priority Poverty Alleviation Programme (1994–2000)*, continuing the policy of development-driven poverty alleviation, and encouraging poor areas and poor people to develop commodity production with the support of the government, so as to meet their basic needs and pull them out of poverty. In June 2001, the State Council issued the *Outline of Development-Driven Poverty Alleviation in Rural Areas (2001–2010)*, which formally set out the strategy of ‘poverty alleviation through industrial development’. The *Outline* regards the modernization of agriculture as one of the eight measures of development-driven poverty alleviation, arguing that more effort should be made to develop models of ‘companies plus farmers’ and contract farming, and to encourage agribusinesses to connect with poor farmers through vertical integration in order to build leading agricultural industries covering as many production chains as possible (Government of China 2016a). The *Outline of Development-Driven Poverty Alleviation in Rural Areas (2011–2020)*, issued in 2011, lists poverty alleviation through industrial development as one of the seven government-sponsored projects, which occupies an important place in the drive for poverty alleviation (Government of China 2020).

With President Xi Jinping’s elaboration on the importance and urgency of development-driven poverty alleviation since 2012, PADI has been seen as the fundamental solution to achieve targeted poverty eradication. Two distinctive features can be discerned in the institutional design of PADI: the agrarian-based industries and targeted involvement of poor people. Firstly, it is necessary to note that industry, in the context of poverty alleviation in China, is not confined to secondary industry as many Western readers might assume but pertains to a wider array of economic sectors. ‘Industry’ here in the poverty alleviation programme covers various categories of primary, secondary and tertiary industries, including agriculture, forestry, processing of agro-products, handicrafts and rural tourism, as well as resource-intensive industries such as hydropower, gas and PV. The commonality of the above industries is their agrarian base: located in the countryside (mostly at the village level), grounded on resources in rural space (crops, energy, landscape, etc.) and organized around agriculture (from planting to processing to trading) and catering to specific categories of rural people, the poor in particular. As many believe that the most successful development strategy is the creation of synergies between agriculture and industry, achieved by developing their complementarities and enhancing their dynamic linkages (Kay 2009), PADI also places emphasis on the integration of primary, secondary and tertiary industries in order to produce and leave more added value in the countryside.

Secondly, PADI is explicit targeted on poor areas and poor people. PADI required that 2–3 major industries for poverty alleviation should be developed in each poverty-stricken county, such that each poverty-stricken village that meets certain pre-conditions should have a special industrial base; and each poor individual with the capacity and willingness to work should be enabled to join such programmes. It focused on vertical integration between enterprises, farmers’ cooperatives, agribusiness and poor households through contract farming, shareholder dividends and other forms. The aim is to get poor rural households involved with the industrial system through such organizational arrangements; hence, mechanisms that share the benefits between poor farmers and other stakeholders are central to this programme.

3.2. Defining PADI broadly and narrowly

PADI can be interpreted both broadly and narrowly from an institutional point of view. *PADI in a broad sense refers to governments' policy orientation to reduce general regional poverty through developing industries by deregulating the market, relaxing restrictions on the inter-regional flow of capital and labour.* As Bernstein (2016) concluded, China's development trajectory has been successful not only because of its extraordinary economic growth centred around industrialization and urbanization, but also because of the strategically important focus on government-led rural industrialization (Bramall 2007), and the diversification of the rural economy into small-scale manufacturing, construction and other services stimulated by the remittances of migrant workers and the skills that returning workers bring back with them (Murphy 2002). The multi-level circularity between rural and urban, farming and non-farming linked through rural people's multiple jobholding positively feeds into industrialization without inducing social and political unrest, and helps to intensify agricultural production without demolishing the peasant mode of production (van der Ploeg and Ye 2010). Economic growth through industrialization particularly benefits rural regions and rural people who have become increasingly involved in manufacturing and the labour market. Between 1981 and 2011, the number of people in China living in poverty plummeted by 90 percent, from 838 million to 84.17 million (Brown 2021, 123).

Economic growth is key to poverty alleviation but not sufficient. Continuous economic development can be accompanied by a widening income gap, hindering the relief of poverty. Some former pro-poor institutions may decline when developed along with a market economy. For example, township and village enterprises (TVEs), as important entities for rural industries, used to provide substantial non-farm employment for rural labourers, estimated at 95.45 million employees in 1988 and expanding rapidly in scale during 1980–1995 (Pan 2015, 94). However, a large proportion of the former TVEs were transformed into private enterprise after the enterprise ownership reform in 1997, and increasingly concentrated into county and suburb areas distant from the rural poor. The widening of the urban–rural income gap from the late 1990s to the 2010s has weakened the effect of economic growth on poverty reduction (see Figure 2), and its benefits for the poorest households are less marked than its benefits for overall regional development (Qin 2020 september). Economic development in China was accompanied by an increase in rural poverty from 2008 to 2017 (Chen, Rong, and Song 2021); that is, as the economy developed so did the number of rural poor.

When economic growth is not sufficient to reduce poverty, growth policy needs to be complemented with government interventions in order to lift the poor out of poverty (Hayami and Godo 2005). Currently, the major international agencies and experts advocate promoting economic growth as the main recipe for poverty alleviation, and if this recipe fails to reach certain parts of the population, the gap can be bridged by social assistance programmes (van der Ploeg 2008). However, it is not economic growth alone but also how the economic growth is structured that plays a role in poverty alleviation. As Donaldson (2011) argued with his comparison of two Chinese cases, in Yunnan and Guizhou provinces, respectively, it is not a binary 'state vs. market' argument, but a question of the particular role the state plays and the strategy it adopts that is important for poverty reduction. The poor will benefit through mechanisms other than economic

growth. In the age of targeted poverty alleviation, which began in 2012, the Chinese government has come to play a leading role in developing industries, whilst channeling resources directly to the poor individuals and households. Therefore, *PADI in a narrow sense refers to the mechanisms through which the government intervenes in the market and with industrial organizations to establish economic ties between enterprises and poor people, so that poor people can participate in various industries and benefit from them. Narrowly speaking, it is the government's regulation of industries and an institutionalized requirement for market entities to fulfil their social responsibility.*

The concept of PADI in the broad and narrow senses essentially involves (1) developing locally specific industries in poor regions and (2) targeting poor people and connecting them to the industries. The former involves developing, improving, consolidating and upgrading industries to promote the overall economic growth of poor areas; the latter involves integrating poor households into the industrial system through various mechanisms. Both dimensions will benefit the poor, indirectly or directly. It is an institutional innovation that gives full rein to the dual advantages of the market economy and the state and coordinates the dialectical relationship between growth and distribution.

4. Organizing industries in poor regions: cases of four approaches

This research covers multiple research sites in the north, south, east and west of China. The organization of PADI differs among the regions because local governments adjust the PADI programme according to their local socio-economic conditions. These conditions are shaped by natural resource endowment, the level of economic development and the population structure and labour capacity of poor households. Among plentiful practices nationwide, four major approaches characterized by specific mechanisms and actors can be identified: (1) households operating independently, (2) intermediary organizations providing linkages, (3) modern enterprises leading and (4) redistribution of asset incomes (see [Table 2](#)). Cases from all the research sites could not be fully explored in the analysis given length limitations of the paper, but different places do share a commonality in organizing PADI around the four approaches.

4.1. Households operating independently through becoming commercial farmers

This approach encourages poor rural households to develop industries based on their own abilities and the local resource base. The industries managed by poor households usually have a low entry threshold and technological requirements, are strongly related to the production and life of rural people, and are suitable for the local natural and ecological environment. Poor households are provided with startup capital, technological support, marketing channels, etc. by the government to enable them to enter the market and operate independently. The income of poor households from those industries depends not only on their own labour input and governmental support, but also on market circumstances. This means that poverty alleviation of this type is mostly found in areas with relatively well-developed markets and a certain level of industrial foundation.

Table 2. Organizational approaches of poverty-alleviation industries.

Features	Driven by modern enterprises	Intermediary organizations providing linkages	Rural households operating independently	Distributing assets as incomes
Typical regions	Regions with weak economic foundation but suitable for industrial development (esp. agriculture)	Regions with a certain industrial foundation and scale	Regions with good industrial foundation and scale	Regions with a weak economic foundation and not suitable for industrial development by local households
Targeted poor population	People with a good labour capacity but lower operational capacity	People with good labour capacity but lower operational capacity	People with a good labour and operational capacity	People with a poor labour and operational capacity
Industry subject	Enterprises external to villages	Local cooperatives/ large holders + rural households	Individual rural households	Enterprises external to the villages
Role of government	Providing support (e.g. subsidies, infrastructure and favourable policies) to enterprises; regulating enterprises to mobilize poor people	Providing support (e.g. subsidies) to intermediary organizations; regulating local organizations to mobilize poor people	Providing support (e.g. funds, technologies and marketing services) directly to rural households; further nurturing markets	Providing support (e.g. subsidies, infrastructures and favourable policies) to enterprises; regulating enterprises that distribute the profits to targeted people

JY County in the southwest of Zhejiang Province has convenient transport links and abundant local traditional products, including yellow tea, shelduck, wild rice stem, plum, clay oven rolls and local Shuang noodles. The area planted with yellow tea has reached 35,000 mu (about 2333 hectares). It is also the largest base of wild rice stem production in China, with 65,800 mu (about 4386 hectares) planted and an annual output value of 420 million RMB (about 62.8 million USD). Clay oven rolls and Shuang noodles are local traditional snacks. By 2020, 290,000 shelducks had been raised in the county. The common feature of these agrarian industries is that they have historically been mostly produced by small farmers. Farmers find it easy to engage in these areas and the effect on poverty alleviation has been significant. In 2014, JY County introduced a package of industrial support policies focusing on infrastructure, brand promotion, market development and skills training for these traditional products.

To be more specific, JY County has four kinds of industrial support measures. The first is constructing infrastructure. JY County integrates different kinds of funds, including government project funds and social funds, and has invested a total of 2.6 billion RMB (about 389 million USD) for new and renovated infrastructure, focusing on improving hilly roads, cold storage, logistics and wholesale markets, etc. to facilitate small farmers' handpicking and sales. The second is extending agricultural industry chains. The two traditional snacks, clay oven rolls and Shuang noodles, are made from locally produced and preserved vegetables and the local wheat flour. The county government introduced a subsidy for planting wheat and for processing equipment to preserve vegetables in order to encourage small farmers to engage in processing. The third measure is training farmers, especially those engaged in independent production. The government has invested bountiful resources to provide technical instruction for farmers as well as training for 40,000 people in preserved vegetable processing and cooking clay oven rolls. Finally, there is

a campaign of public brand promotion. The county government has opened demonstration stores nationwide and overseas, and is actively cultivating the market for clay oven rolls. By the end of 2020, there were 521 demonstration stores nationwide, and JY clay oven rolls have been certified as 'Famous Chinese Snacks'.³

The core of industrial poverty alleviation through poor rural households' own operations is to promote and facilitate the commercialization of their produce, which is considered the main transformation from a semi-subsistence agrarian society to a more diversified economy with higher living standards (Jayne et al. 2011). Smallholders often have abundant experience in agriculture and handicrafts, but need support with startup capital, technologies and promotion to establish a place in the market. In the organization of poverty alleviation through industrial development, the government mainly focuses on establishing and improving public services and creating a market environment that better enables smallholders to commercialize their produce and link into markets.

4.2. Intermediary entities linking through vertical integration

This approach is usually adopted in regions where agriculture has become increasingly featured with a boom in well-capitalized agricultural entities, including co-ops, registered family farms, professional farmers, etc. They are not only an important driving force of local industrial development, but also an intermediary between small farmers and the market. The intermediate entities mainly connect with small farmers through contract farming or through integrating the latter with product markets.

With an average elevation of 3700 metres, ZK is the county with the highest elevation, the most severe climate conditions and the harshest environment among the four counties in Huangnan Prefecture of Qinghai Province. ZK County has a total population of 78,000 people, of whom 98 percent are Tibetans and one-third are poor. Animal husbandry is the traditional industry of local people. Since the 1990s, with a rapid growth in population, the grassland area per capita has been declining, leading to serious grassland degradation. In 2011, the General Office of the People's Government of Qinghai Province issued the '*Opinions on Accelerating the Construction of Ecological Animal Husbandry*' (Qinghai Government 2011), in which the government proposed setting up cooperatives, within three years, for ecological animal husbandry in 30 counties across six prefectures, covering the pastoral areas of 883 villages. This aimed to address the problems of grassland resources and labour resources faced by herdsman who favour a dispersed management pattern.

It was in this context that Erduo, the team leader of the second production team in L Village in ZK County, proposed organizing a husbandry cooperative, a brand-new form of organization for pastoral area. After he paid numerous visits to each household to persuade them, 217 members of 36 households joined the co-op with 6000 mu of summer pasture land and 74 yaks. The members agreed on the principal of unified grazing and land management, and equal risk sharing. Many of the villagers held a wait-and-see attitude. In 2013, with the support of County Animal Husbandry and Water Conservancy Bureau, the co-op carried out shareholding reform on ecological animal husbandry, and

³Famous Chinese Snacks are a range of Chinese food with regional uniqueness, certified by the Chinese Cuisine Association after an evaluation procedure.

villagers put their heads together to determine the specific standard for converting their individual assets into shares. The co-op held many meetings to discuss the shareholding system, with the longest meeting taking four days and four nights. As one co-op member recalled, 'about 10 representatives of the villagers started the discussion at 8:30 am, and had lunch and dinner at one house. At 4 am, some people went to sleep wrapped in sheepskin jackets, while others kept arguing about how to value a one-year-old calf'. Through brainstorming, the cooperative finally formulated a detailed quantitative standard for shareholding with pasture and livestock based on their local knowledge and consensus. For the poor households who did not have any livestock, the co-op allowed them to use the 6400 RMB of production assistance funds per person from the government as shares in cash (500 RMB per share) in a lump sum. The key methods and practices of the co-op's operation include grouping and semi-housed feeding of livestock, grassland zoning and rotational grazing, unified sales of cattle, sheep and livestock products, members' labour division in planting forage grass, grazing, milking and other dairy processing sectors, payments according to the work done.

Since these changes were introduced, marked improvements have been made in the ecological environment of L village. The grassland capacity and livestock rate have been improved, and about two-thirds of the labour force have been liberated from overseeing grazing to engage in other productive activities. By 2020, the co-op had expanded to 871 people in 180 households, accounting for 97.6 percent of the total village population. In 2010, the average per capita income in L village was only 2512 RMB. But from 2012 to 2019, the accumulated cash dividends of the co-op reached 23,698,700 RMB, and villagers' average per capita income in 2019 was 6544 RMB. The 'L model' was rapidly implemented across ZK County. By 2020, 64 ecological animal husbandry co-ops had been established with 10,344 people from 2066 poor households. From 2017 to 2019, 37 of these cooperatives in ZK County racked up cash dividends of 33.3 million RMB. On the basis of these co-ops, ZK County was declared a national modern agricultural industrial park in 2019, with the aim of introducing more enterprises to realize vertical industrial integration of enterprises, co-ops and pastoral households. It is worthy of note that such initiatives, trials and experiments are not unique to L Village nor ZK county; rather, they are commonly found and, indeed, taken for granted in rural China. Those that succeeded have been quickly joined by later-comers, and those that failed have been marked and avoided.

The core of the intermediary organization-linking approach is to cultivate and support intermediary organizations and regulate their performance, so that they can act as bridges linking small farmers with the market. Cooperatives are the most common intermediary organizations in PADI in China. The potential of cooperatives in terms of poverty alleviation has been well documented as they meet a number of key criteria associated with reducing poverty: providing opportunities, facilitating empowerment and enhancing security (Birchall 2003). Some believe that cooperatives can reduce poverty more effectively than other economic organizations, as long as they stay true to their values and principles and certain other preconditions are met (Hussi, Lindberg, and Brenneman 1993; Holmén 1990). In the Chinese context, cooperatives have emerged or been considered as an alternative mode of vertical integration despite the strong governmental preference and support for capitalistic firms (Huang 2011). Cooperative-led vertical integration has been argued to be more appropriate for countries with large numbers of small

farmers, helping benefit both the farming population and the national economy (Chayanov 1986). The extent to which cooperative-led vertical integration may figure in supporting small farmers in the future remains hotly debated in China. In many countries, cooperatives tend to become just a funnel for government services, financial credits and political favours (Laidlaw 1981), and their potential for helping bring small farmers out of poverty is highly conditional on their internal organization and government policies.

In the ZK county case, to ensure cooperatives operate regularly and to avoid the phenomenon of 'shell co-ops', the county government has taken three important measures. Firstly, they trained professional experts and encouraged college students to take on the role of facilitators. College students are still unusual in Tibetan areas. More than 30 college students were hired to assist the co-ops' operations, providing support especially in project management and developing industrial strategies. Secondly, a strict assessment system was established to guide the co-ops. The county government and the Agriculture and Animal Husbandry Bureau jointly carry out annual assessments of the co-ops and the township governments, based on their performance in terms of forage–livestock balance, ecological protection, benefits to poor households, etc. Thirdly, the co-ops are provided third-party services, which are paid for by the government, to improve their financial management, which also ensures the standardization of the financial management of the co-ops.

4.3. Modern enterprises leading through capital investment

The modern enterprise leading approach for PADI is mainly targeted on the impoverished western regions with a weak economic and industrial foundation. In this approach, different levels of government seek to attract or foster leading enterprises to get involved, offering them fiscal and financial support, to promote the industrial development of the region. These modern enterprises are assumed to have marked advantages in terms of their capital, technology, management and marketing skills. Under regulation of poverty alleviation policies, these enterprises undertake the social responsibility of alleviating poverty and to attract poor households to participate in industrial projects by establishing benefit linkage such as providing employment or technical support.

The MN Town of Ningxia Hui Autonomous Region is an immigrant town with a population of 43,508 in 2020. Since the 1990s, peasants from the arid rural regions of Ningxia have been successively relocated to MN Town which was a semi-desert area (of the Gobi Desert) at that time. Not only is it a migrant relocation area, but it is also severely impoverished and home to an ethnic minority, *Hui*, who have long been plagued by deep poverty. Migrant peasants engage in subsistence agriculture in the town by planting corn and wheat. In order to speed up the agricultural commercialization and narrow the socio-economic gap between MN Town and surrounding regions, the township government decided to promote household-based grape planting as at the eastern foot of Helan Mountain which has a reputation as a wine region. In 2010, the township government planned to plant 20,000 mu (about 1333 hectares) of vines in six villages. The government provided free vines to the peasants and promised procurement at a price no less than the market price. However, the project failed. One major reason was peasants' lack of planting knowledge. A large number of vines died of drought or disease, and those that

survived gave poor-quality grapes. Furthermore, the government promoted white grape cultivation as they were thought to fetch a higher price, but the winemakers preferred red grapes and were not prepared to pay the higher price for white grapes. Since 2013, most of the grape fields have been abandoned or replanted with corn, leaving only just over 500 of the original 20,000 mu of vineyards.

It is recognized that the PADI in western areas needs to not only consider the characteristics of local poor households, but also take into account the overall requirements of regional socio-economic development. Taking a lesson from the failure with planting vineyards, the MN Town government decided to introduce and support leading enterprises to boost the grape industry. Firstly, it attracted and supported enterprises to come to the area by developing a productive infrastructure and facilitating land transfers. Infrastructure investment is the basis of and premise for improving regional economic development, and the government's public investments play a key role in the early stage. Major progress has been made by township government in constructing paved roads and reservoirs. They built five pumping stations, eight engine stations, six trunk canals, 55 head ditches and 500 field ditches to create an irrigated area of 44,000 mu. The irrigation covered 80 percent of the land in the town and solved the urgent problem of having insufficient water for growing grapes. Additionally, the township government subsidized wine enterprises to the tune of 2000 RMB per mu, and the village committee assisted them in sub-contracting land from local households. The government also provided a favourable marketing environment for the incoming enterprises. It coordinated with e-commerce and express companies, building a cluster of e-businesses to facilitate the wine business and provide delivery services. A series of activities were held, such as an International Wine Expo and the 5th Grape Growing Festival of the East Root of Helan Mountain, to attract more resources for the development of 'wine + tourism', building consistent brand images for 20 local companies.

The key of the modern enterprise leading approach is to select and support enterprises that can play a leading role in mobilizing resources to maximize their advantages, and invite a variety of enterprises to participate in the economic development of poverty-stricken areas. At present MN Town is home to 13 wineries, including state-owned enterprises, such as COFCO Great Wall, and well-known private enterprises, such as the Delong and Lilan wineries. Covering an overall area of 70,000 mu, the annual output of these wineries reaches 26,000 tons, with a value of 920 million RMB. Meanwhile, MN Town government required enterprises to employ a minimum of 10 percent poor people and encouraged the large and medium-sized enterprises to give priority to workers from poor households. The wineries now employ 10,000 people, with a labour season that lasts from April to November and a daily wage of 100–120 RMB.

The modern enterprises leading approach can be seen as a domestic parallel of foreign direct investment (FDI). FDI is a key mechanism to transfer managerial and technical best practices across borders to speed up the structural shift in the economy in host countries and allow them to catch up with advanced economies (Klein, Aaron, and Hadjimichael 2001). By relying on foreign investment, host countries can import larger, more productive firms and stimulate productivity improvements. Some of the positive contributions of FDI to poverty reduction are achieved through spillover effects, employment creation, and an increase in investment capital (Meyer 2004; Gorg and Greenaway

2004; Magombeyi and Odhiambo 2017). In the approach of modern enterprises leading PADI, the 'foreign' firms and investments primarily come from eastern regions of China. As early as the 1980s, Deng Xiaoping emphasized the need to rely on central macro-management to coordinate regional development. The State Poverty Alleviation Plan (1994–2000) clearly proposed that the wealthier coastal provinces should each help one or two poverty-stricken provinces and regions in the west to develop their economies. In 1996, the CPC Central Committee designated nine provinces and cities in the east to collaborate with 10 western provinces and autonomous regions in poverty alleviation. Fujian Province and Ningxia Autonomous Region were paired up under the plan. In response to the paired-up assistance on poverty alleviation, a large number of eastern enterprises dedicated themselves to industrial development in mid-western regions. Due to the different geographical characteristics and advantages of east and west, they can utilize their comparative advantages and realize industrial synergies. While exporting managerial and technical experiences to the west, firms and capitals from the east regions, especially the labour-intensive, export-oriented enterprises, can boost their competitiveness by enlarging their market share and absorbing an additional labour force after relocating part of their operations to the western regions.

4.4. Asset income distributed through community-corporation partnership

The asset income distribution approach is mainly aimed at poor rural people with relatively limited labour capacity to help them generate income through productive activities. It converts the fragmented resources that poor households own into assets and integrates them into corporations and other economic entities in order to generate profits and position the poor to benefit from such cooperation. The asset income distribution approach has become an important innovation since 2013. This approach is mostly associated with the reform of rural collective property rights, which allows each member of a rural community to have a clear shareholding when the collectively owned resources or assets are put to productive use.

TZ County in Shanxi Province is located at the juncture of Shanxi, Hebei and Inner Mongolia. About 80 percent of the county is mountainous or hilly, with an average altitude of 1100 metres. The county has a total population of 228,000 spread across 235 villages, more than half of which are classified as poor. The county is listed as an extremely poor region which has 19,300 households and 47,100 people living in poverty. TZ County has a vast potential for developing solar energy generation. It has on average 2803 h of sunshine per year and the effective potential for PV power generation is likely to be around 1500 h p.a. At the same time, TZ County has a weak industrial and agricultural base: crop yields are limited by water shortages, which makes it difficult to develop cash cropping of fruits and vegetables. Many young and able-bodied villagers have left to find a better future elsewhere and the villages' populations mainly consist of left-behind, elderly people. Given these demographic and natural resource conditions, TZ County has been identified as a key county for developing the PV industry and as a pilot county for poverty alleviation in Shanxi Province. Many households in deep poverty and without the capability to work full time are now being supported by this industry in an attempt to shake off their poverty. In August 2020 the county's PV power stations were connected to the national grid and since then have generated

67,142,700 RMB in revenue, benefiting 21,491 people in poverty with about 3124 RMB per capita.

The first key issue of the asset income distribution approach is to integrate segmented resources to develop the industries. The construction of PV power stations requires full consideration of key technical factors such as the temperature, altitude, and light angle, as well as using land intensively so as to integrate resources and utilize them to the maximum. TZ County established various construction modes for the PV industry. The county has built power stations for individual villages and collections of villages as well as household and centralized power stations, and has integrated PV with forestry, agriculture and animal husbandry. Different sources of land including collectively owned construction land, forest land, roofs of cattle sheds, greenhouses and villagers' houses are all utilized for solar panels. As of August 2020, TZ County had invested a total of 580 million RMB to build 25 grid-connected PV power stations for poverty alleviation, including 23 village-level ones, one centralized power station, and one household power station (covering 100 households).

The second key issue is to form and stabilize assets for poor households and poor villages through clarification of property rights in order to sustain their benefits. The county adopts the principle of 'full property rights, full coverage, and three clarities'. 'Full property rights' means 100 percent of the property rights of all village-level power stations belong to the village collective. 'Full coverage' means independent property rights of the power stations fully cover all the poor villages in the county. 'Three clarities' means that property rights, responsibilities and income are made explicit. The poor villages have the proprietorship and the right to profits. The operation right is held by the management agency, and the disposal and supervision right is held by the government.

The asset income distribution approach is of great significance for strengthening the collective rural economy. In 2016, the Central Committee of the CPC and the State Council of the PRC proposed exploring feasible forms of rural collective ownership and innovative operational mechanisms for the collective rural economy (Government of China 2016b). Under the policy deployment of the Central Committee of the CPC, PADI would be combined with the effective development of the collective rural economy, and plans were made and implemented to develop poor areas where the collective economy was weak. In addition, valorizing rural resources in poor areas is seen as an important step that can increase collective income through efficiently using collective resources. In TZ County, the asset income distribution approach has strengthened the safety-net function of village communities and their capability to deliver public service by activating their collective economy. For example, a village in this county has used the collective income from industry development to build a 20-room compound, providing accommodation for orphans, widows and poor elderly people.

The core of the asset income distribution approach lies in its community approach in which the community works as a collective agent with corporations in producing and distributing profits. A major goal of the community approach is to engage disadvantaged populations and neighbourhoods and to integrate economic and social goals. As a collective agent the community has an advantage in mobilizing community assets (such as land, forestry and ponds) through personal ties and consensus and in building further community assets (Torjman 1998) and public goods (such as care of the elderly, children etc.) that can be enjoyed by its members, especially the poor and disadvantaged. In this

case, the partnership of corporations and communities allows for a combination of the market mechanism and a community mechanism to realize profit-seeking and desirable distribution (Hayami and Godo 2005, 316).

5. Connecting rural poor with industries: three ways of participating

The way in which poor people participate in PADI and gain an income is central to the ultimate goal of poverty alleviation. Poor households participate in poverty-alleviation industries in various ways, including providing labour, transferring land, shareholding, etc. Given the heterogeneity of the rural poor, these forms of participation in PADI are determined by the type and organizational mode of the industry on one hand, and the characteristics (such as their labour capacity, education level, intention to participate etc.) of poor people on the other. Overall, there are three ways to get the rural poor involved in PADI: to involve poor people as petty commodity producers, as wage labourers through part-time or full-time employment, and as shareholders in specific industries (see Table 3). By targeting different types of rural poor, PADI has realized their inclusive participation in various ways, enabling them to obtain more income in productive activities.

5.1. The rural poor becoming petty commodity producers

The issue of rural poverty in developing countries is basically a ‘peasant question’, whereby poor peasants or smallholders find it increasingly difficult to sustain and reproduce their livelihoods in a commodified economy. As Harriss (1982, 22) asserts, the process of commoditization or the linking of rural household producers with capitalist production in various ways is probably the dominant process of change in contemporary agrarian societies. Bernstein (2010) has also argued that peasants in modern capitalism are *de facto* petty commodity producers since the extent to which peasants can satisfy

Table 3. Poor people’s participation in poverty-alleviation industries.

	Rural poor as petty commodity producer	Rural poor as wage worker	Rural poor as shareholder
Targeted population	Poor people with a labour ability and a willingness to develop small-scale production independently	Poor people with labour ability but lacking the willingness or ability to develop independently	Poor people lacking both labour ability and the willingness to develop on their own (especially those with a disability or serious illness, and the elderly)
What support do they get from government?	Loans, extension services and marketing	Employment opportunities and vocational training	Rural collective property rights reform
What do they do?	Manage family farm or family business with own labour and initiative	Work in enterprises or commercial farming as wage labour	Convert their poverty alleviation funds and contract rights over collective-owned natural resources (land, fish ponds, forest, etc.) into shares for operating an enterprise
What do they get from industry?	Profit from market	Salary from enterprises and employers	Dividend from enterprises that is mediated through the village collective

their food needs from their own production is largely shaped by the ways that they are integrated within commodity relations.

Development-driven poverty alleviation in China has always focused on commodity production, with the endeavour of integrating the poor into the broader production and exchange system and enabling them to generate income through productive labour. Commercialization is not necessarily at odds with growth and the persistence of peasant economy, leading to differentiation and pauperization of peasants (van der Ploeg and Ye 2010). Philip C. Huang's work on family farming in the Yangzi Delta in Ming and Qing already explained their persistence through the vigorous commercialization that came with the age of imperialism and the formation of an integrated world economy (Huang 1990). Furthermore, they are still very much alive in modern economy. Among current Chinese family farms, while some (especially those of the rural elderly) still follow a method of mostly self-sufficient peasant farming, the majority have become market-oriented commercial farms seeking to be involved in high-value-added poultry–fruit–vegetable production, sometimes referred to as new farmers or the new Chinese peasant economy (Huang 2018). Therefore, PADI primarily targets the rural poor with moderate labour capacity to help them develop petty commodity production by providing them with technical and financial support such as training, micro-finance and technical knowledge.

For example, SC County in Jiangxi Province has a long history of white lotus cultivation and has developed the industrialization of white lotus seed from cultivation, processing, circulation, trading and all kinds of services. Many poor households have the capacity to participate via labour in the white lotus industry, with the help of financial support, technical guidance and business connections provided by the government. At present, the county's planting area is stable at around 80,000–100,000 mu, and with around 15,000 households involved in production. Poor households account for around 20,000–30,000 mu of this land. Wen, 32 years old, lives with his parents in JL Village, XS Town. He began to plant five mu of white lotus in 2017. In 2018, he purchased two sheller machines and a dryer to process dried lotus seed, using interest-free micro-loans for poor households. He is able to process dried lotus seed for farmers in the township, charging 1 yuan per kilogramme, or he can buy the seeds from farmers, process and sell them on his account and make twice as much. From June to August during the lotus seed harvest, he processed 12,000 kilogrammes of grass lotus from his own land, and purchased 17,300 kilogrammes of grass lotus for processing and sales. His net income from white lotus planting, processing and sales amounted to more than 50,000 yuan in 2018. By the end of 2018, he had already paid back the money he borrowed to buy the machinery.

5.2. The rural poor becoming wage workers

The reproduction of rural households usually combines both commercial farming and (seasonal) wage labour. Rural commodification implies that small farmers can no longer rely solely on production from their land to sustain their livelihoods. They are often obliged to migrate to work in urban areas while maintaining the farm in order to obtain a double-income, sometimes referred to as a 'hoe and wage' livelihood strategy (Cordell, Gregory, and Piché 1996, 1–3). The 'hoe and wage' strategy, based on a

generational division of labour, has been widely adopted by Chinese rural households combining the income of young adults working in cities as migrant workers and that of older parents working the farmland, which together constitute the income of rural households (He 2015). According to the 2014 National Migrant Workers Monitoring Survey Report of the National Bureau of Statistics, in 2014, nearly 80 percent of migrant workers had left their family members (usually their wife, older parents and children) in the countryside to maintain farming, establishing a generational–gender division of labour (National Bureau of Statistics 2015). Along with rapid industrialization and urbanization, especially in the coastal regions since the mid-1980s, migration opportunities have played an important role in escaping poverty and are estimated to have increased rural per capita household income by 8.5 to 13.1 percent from 1997 to 2001 (Du, Park, and Wang 2005).

The second form of rural poor's participation in PADI as wage labour mainly targets poor people who have certain labour ability but are unable to participate in labour migration or to work in local off-farm sectors. Poverty alleviation policies encourage enterprises or business entities to hire people from poor households to work on farms, agricultural enterprises and in manufacturing workshops, etc. Labour-intensive primary and secondary industries such as planting, manufacturing, and processing are usually favoured by local government in poverty alleviation given their advantage in absorbing rural labour. Wage labour is remunerated by wages but faces unstable employment and surplus value exploitation in the labour market. For this group, poverty alleviation policies stabilize employment opportunities by stipulating employment targets and the wage levels for enterprises and providing stable employment subsidies to employers, etc.

The rural population of MN Town in Ningxia Hui Autonomous Region mostly consists of ecological and spontaneous migrants from the semi-desert region. During the East–West collaboration, Fujian Province has helped MN Town attract modern enterprises, laying a foundation for the absorption of poor people into employment. For example, Xiaoming Agriculture and Husbandry Co. Ltd. invested 300 million RMB building an agriculture industrial park, providing working positions for more than 300 people. Qinghe Agriculture and Husbandry Tech. Development Ltd. invested 420 million RMB in MN town, acquiring 2700 mu of land and developing raspberry plantations, catering accommodation, and tourism facilities, which provides 200 regular jobs and over 5000 seasonal jobs for locals who are able to increase their annual income by 5000 RMB. These poor people also receive skills training from enterprises, giving them the opportunity to gradually transform themselves into professional workers or administrative staff. Lu, 42 years old, uneducated and originally from the neighbouring county, had two school-aged children and an 87-year-old elderly parent to support. In her third year of marriage, her husband contracted rheumatoid arthritis and was obliged to quit heavy work. The whole family made its living by growing grain and had an annual income of less than 1000 RMB. In 2012, with 6000 RMB borrowed from banks and private channels, Lu moved with her family to YL village, part of MN Town. In 2015, Qinghe Agricultural and Animal Husbandry Tech. Development Co. acquired land in YL village to plant raspberries and Lu started to work there as it was close to her home and she could still meet her domestic responsibilities. She started off at the bottom of the ladder but because of her enthusiastic personality and competence, she was transferred after a few months to a restaurant

to work as a waitress. She is now the vice general manager of the park, responsible for catering, accommodation, and other hospitality work, with annual income of 70,000 RMB.

5.3. The rural poor becoming shareholders based on community membership

The former two ways of participation apply to poor people who have moderate labour ability. However, many rural elderly and people who fall into poverty due to illness and disability are ill suited for productive activities. Notwithstanding this, as members of the collective rural economy, they still have a contract right to the collectively owned resources such as farmland, barren mountains and forest land. In addition, the development fund from the poverty alleviation programme for poor people can be used as financial capital. These are all means of production that can be put into production and generate income. In the practice of PADI, different levels of government have adopted methods that transform the poverty alleviation funds, collective assets, land management rights, and other forms of resources into stakes and infuse them into the operation of enterprises. The dividends yielded then go to the poor, according to their shareholding. The structure of property rights is a prerequisite for asset income distribution. This releases the potential of the institutional advantages of collective ownership of rural land in China, whilst emphasizing that assets built with poverty alleviation funds and rights of the income from the funds belong to the rural collective. For example, greenhouses, barns and workshops built with poverty alleviation funds are determined to be collective properties. This institutional arrangement guarantees that the poor can continuously benefit from collective ownership and further consolidates this collective ownership. Both these outcomes provide an institutional basis for achieving a more balanced income distribution.

The inclusive growth approach asserts that productive employment rather than direct income redistribution is the essential means of increasing the incomes of excluded groups (Ianchovichina and Lundstrom 2009). Although poor people can directly obtain dividends from industries that are infused with collectively owned assets and resources, PADI always prioritizes the significance of poor people's participation as labourers to shake off poverty. Although the returns belong to the village collective, it is still emphasized that the return should be used to support productive activities by poor households and provide public welfare jobs, rather than being used for 'pan-welfare' redistribution. The PV revenue in TZ County, Shanxi Province, for example, has a dual-line distribution. The first-time distribution is made by the county-level PV poverty alleviation office to each village according to the capacity of the power stations, and the second round is made by each village according to their specific situation. With the profits from industrial operation, villages can create public welfare jobs to encourage poor people to gain an income with their labour input, so as to boost their sense of accomplishment, rather than handing out the money directly. YPZ village from GQB town not only provided labour positions for poor households with the ability to work, such as cleaners and stokers, but also created special positions, such as sanitation supervisors, for weak labourers over 70 years old. These public welfare positions have brought a stable income to the poor and the elderly and enhanced their participation in community development.

An important prerequisite for poor people to obtain income in this way is the stable income distribution mechanism that exists between the enterprises and villages. This

mechanism is essential to ensure that poor people benefit consistently. In the operation of PADI, governments put forward clear requirements for enterprises in terms of social responsibility, the operation period, service provision, and the distribution of equity and dividends to rural people, and regulate these enterprises for compliance with these requirements. For example, in QC County, Sichuan Province, 9361 poor households, accounting for 99 percent of the whole poor population, have benefitted from the poverty alleviation approach of asset income distribution. The asset income of the villages in the county mainly takes the form of fixed guaranteed dividends, and the government, village collectives and poor people are not directly involved in the operation and management of the entities. To avoid enterprises defaulting, the government requires them to use fixed assets as collateral. This requirement increases the operating pressure on the enterprises to a certain extent but ensures a stable income for poor villages and poor households.

6. Conclusion and discussion

Eliminating poverty is an ongoing struggle. In spite of China's remarkable achievements in eliminating absolute poverty, it is far too early to claim 'the end of poverty'. Instead of drawing generalized conclusions about the practice of poverty alleviation through industrial development in China, we would like to raise some questions for discussion and broaden the scope of conclusions that can be drawn from China's case.

6.1. *What lessons can be drawn from China's experience?*

Among the mainstream poverty alleviation theories we can identify two polar opposites: welfarist theories, which focus on the utilitarian social relief and redistribution of the type 'supporting the very bottom', but ignore the fundamental production problems that cause poverty; and developmentalist theories of poverty alleviation, which accentuate macroeconomic growth, but lack a distributional perspective, and fail to address the issue of the growing gap between rich and poor associated with growth. China's experiences of PADI transcend the limitations of these two frameworks and demonstrate what can be done for a state to target the poor and improve their situation through economic development. The practice of PADI in China could provide a reference point for other developing countries and contribute experiences to the cause of human poverty alleviation, among which the following implications are crucial.

The first implication is the fundamental role of the state in regulating the market. The importance of the role of the state cannot be overemphasized in poverty alleviation. This is particularly true in the era of neo-liberalism, which has come to be a hegemonic ideology since the end of the twentieth century. The proponents of laissez-faire neo-liberalism believe that the best policy and the role of state is to allow markets to operate with as few impediments as possible, shifting as many costs as possible from the state onto individuals (Gamble 2006). By the beginning of the 1990s the doctrine of neoclassical market liberalism had become an established paradigm in the international development assistance community (Hayami and Godo 2005, 282). Following this presumption, the fate of the individual would be left to the market and the poor would be deemed 'wasted lives' (Bauman 2013) in the eyes of capital. However, the experience of PADI shows what a

state should do, and how, to address the market failures to fulfill its promises of poverty alleviation. The core of PADI lies in the coordination and organization of the government from the central to the local levels to regulate the market in order to adjust production relations biased towards the poor, disciplining capital to serve the social, egalitarian cause.

The second point is to bring industries (back) to the rural. Industrialization had an important impact on economic development and poverty alleviation, particularly in countries such as China, India, and South Korea where this policy has been more aggressively pursued (von Tunzelmann, Bogdanowicz, and Bianchi 2014; Alvarez, Barney, and Newman 2015; Nair, Ahlstrom, and Filer 2007). However, the poverty alleviation success story of industrialization in China in the 1980s–1990s seems difficult to continue in more recent decades as urbanization has drawn more resources (natural, physical and human) from rural areas than it has fed back. Urban-based industrial sectors would not respond to livelihood demands of the poor in the rural areas, and the latter could not find economic opportunities in the urban areas as well. Such a paradox calls for industrial organization focusing on the special characteristics of poor regions and poor people, i.e. a more agrarian-based industrialization that is located in the rural areas and serves the rural population. Construing ‘industry’ in a broad sense, PADI started from what those poor regions have and what poor people can do in developing different industries and approaches. It shows how industries can be organized to accelerate regional economic development while supporting the poor to participate inclusively. For the four organizational approaches of PADI analysed in the paper, it is difficult to compare their merits in an absolute sense. Rather, these approaches usually co-exist as a multi-dimensional system in local practice to involve poor people as much as possible.

6.2. Are the Chinese experiences theoretically unique?

Developments in China since its reform and opening up in 1978 have been garnering increasing attention from scholars, governments and the general public around the world. Many scholars have tried to form a series of poverty alleviation theories with Chinese characteristics (e.g. Cai 2018; Yan 2016; Gu and Wang 2017; Brown 2021; Li 2021). Some of the topics in current China studies have referred to ‘the Chinese miracle’, the Chinese phenomenon, the Chinese experience, the Chinese path and the Chinese model (Xie 2016). Among various theoretical generalizations, the superiority of the socialist system and the leadership of the Communist Party of China have been commonly recognized as contributory factors. But, given the ideological and institutional specificity of China, are China’s experiences of PADI likely to remain unique?

The issue of rural poverty in developing countries is essentially about peasant poverty as the epitome of the epochal crisis of capitalism at this time of transition (Arizmendi 2016, 141). The dominant competing approaches to the peasant question in societies undergoing transformation – the Marxist approach, Neoclassical/neo-institutional approach and Chayanovian approach – all shed light on peasants’ position in, and ways to integrate them into, national development and the global economy. The classical Marxist approach emphasises the role played by social classes as a means of understanding the roots of rural poverty and how such conditions can be changed for the better. According to this approach, small-scale peasant agriculture will be replaced by large-

scale agriculture equipped with machinery and modern technologies which are required in order to develop productivity, leaving peasants differentiated as either middle-sized farmers or proletarianized farm workers. The rural poor who are excluded from agriculture will be absorbed through industrialization, thereby forging a proletarian class (Lenin [1899] 2004; Kautsky [1899] 1988).

Neoclassical economics believes that the process of maximizing individuals' utility can lead to the optimal equilibrium of society. The well-known *homo economicus* has had a powerful and lasting influence, especially in economics and political sciences (e.g. Schultz 1964; Becker 1978; Popkin 1979). To rectify neoclassical economics' flawed assumptions about rationality, perfect information, etc., new institutionalism economics emphasized the formal norms and institutions that facilitate market transactions (Brinton and Nee 1998). In addition, the clear definition of property rights is a prerequisite for market transactions (Cheung 2008). Incentives for political actors to establish formal institutional arrangements that support efficient property rights thus become a critical factor for economic development (North 1981).

The Chayanovian approach is based on the observation that although the peasant unit of production is conditioned and affected by the capitalist context in which it is operating, it is not directly governed by it. By providing an alternative explanation for the Russian reality after 1917 and proposing a vertically integrated approach of peasant-based modernization, Chayanov's insights are still relevant for contemporary societies with large numbers of small-scale family farms (van der Ploeg 2008).

This brief overview of the classical theories in peasant studies shows the theoretical hybridity of China's practices in PADI, especially when it comes to its standpoints towards the rural poor and the rural economy. Guided by Marx's historical materialism, the Communist Party of China adopts industrialization and scaled-up modernized agriculture as the driving force of productivity and poverty alleviation. While recognizing the reality of vast numbers of smallholders in China, the CPC has been persisting in its pursuit of modern agriculture since 1949. At a practical level, neoclassical and neo-institutional economics provide a toolkit for integrating smallholders into the market economy. One assumption underneath the poverty alleviation programme is that the search for improved livelihoods in the market is the precondition for poor people pulling themselves out of poverty. The industrial poverty alleviation programmes support the rural poor to become commercial farmers and petty commodity producers, fully involved in competitive markets. With the governments' preference for scaled-up farming and agribusiness, the main part of Chinese agriculture is still small-scale family farms but now typically involved in capital- and labour-intensive 'new agriculture'. This scenario runs counter to the expectations of both orthodox neo-liberal and Marxist theory, and is closer to Chayanovian and substantivist theories, which foresaw the problems facing small peasants operating in big modern markets (Huang 2018). In industrial poverty alleviation programmes, intermediary organizations, especially village and community-based entities, are encouraged to connect with small-scale family farms to promote vertical integration. Community membership and its values of cooperation, mutual help and social care are advocated and practised for the well-being of rural poor and smallholders.

So, are China's experiences of PADI theoretically unique? In terms of its theoretical hypothesis towards peasants and the rural sector, China has not created new theoretical

models, but integrated different components of different theories to work for its development. China's experience of industrial poverty alleviation cannot be explained, and has not been led, by any single theory. Rather, a hybrid Marxist/neo-classical/neo-institutional/Chayanovian theory has coordinated the country's multiple objectives of overall social development and justice, brisk market growth and stable livelihoods for the rural population (Ye, Zhang, and Dou 2019). The Chinese experience shows the possibility, as well as the necessity, of theoretical integration around the issue of rural poverty in modern society, which at the end of the day is the most important experience that can be transferred to other countries in the Global South.

6.3. Is PADI a panacea for the rural poor?

PADI has been considered the most effective strategy of poverty alleviation in China. Growth and economic development have laid the foundation for regional development and poverty reduction. However, such an institutional design still faces challenges in steadily sustaining the benefits to poor people. For peasants and the rural poor, precarious livelihoods and the risk of sliding back into poverty still exist.

The challenge and risk come firstly from the precarious nature of job opportunities in rural industries. The gap between labour demand and the demographic features of the rural poor is also growing in some industries. As traditional industries (including agriculture) are upgraded and modernized, industrial development requires either younger labourers or labourers with a higher level of education and technical skills. Machinery is increasingly used in agriculture and greenhouses. When mechanically based technology takes over from skill-based technology, the rural poor (especially the aged, disabled, and chronically ill) feel ill equipped for the job. Some secondary industries, such as manufacturing, require fixed working hours, which conflicts with rural people's flexible rhythms for attending to family care, their smallholdings or ritual activities in the community.

Another risk lies in the limited benefits that flow from industrial development. The rural poor who lack the labour capacity and/or human capital to operate their own family business participate in rural industries mainly as seasonal wage workers or shareholders of collective assets. However, the connection between the economic entities involved in poverty alleviation and the rural poor is not strong enough. If the benefit and risk sharing mechanism were not regulated by a third party, the economic entities would have an incentive to break the deal and pursue their own interests, thereby squeezing the benefits that do accrue to the rural poor. If the economic entities follow an economic logic rather than their obligation to be pro-poor, the interests of the poor cannot be guaranteed.

There are far more challenges than those discussed above. These include the uncertain provision of policy and fiscal support from the government following the completion of the fight against absolute poverty, the uncertain circumstances of the agricultural products market and the uncertain business conditions facing many small to medium-sized rural industries, especially in the context of Covid-19. All of those challenges remind us to remain critical about industrial poverty alleviation and to be reflective about the dynamics of peasants and poverty in an ever-changing world of domestic politics and the global economy.

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