China's Anti-Poverty Strategy and Post-2020 Relative Poverty Line

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Abstract: *China is about to eliminate absolute poverty in 2020 in favor of relative poverty. The Gini coefficient reflects a distorted picture of relative poverty in China, which is prominent and overlaps with absolute poverty. This paper reviews China's moving poverty line and pro-poor policies in various stages. It then estimates the scale of rural relative poverty in the context of urban and rural divide, and lastly, it proposes that, beyond 2020, China should follow a two-region and two-stage approach in setting the relative poverty line. Coastal regions should adopt a relative poverty line based on household disposable income, interior regions should convert the absolute poverty line into relative poverty line. After 2035, China is expected to enter late-stage urbanization, and the relative poverty standard will be based on national disposable income. Future poverty governance should continue to focus on capacity training, regional transition, and multi-dimensional poverty identification.*

Keywords: *relative poverty line, transition of poverty type, potential poor populations, human capital development*

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Poverty plagues many developing countries and China is no exception. In September 2015, the United Nations Sustainable Development Summit adopted the *Transforming of the World: 2030 Agenda for Sustainable Development*. After eradicating absolute poverty in 2020, China's anti-poverty agenda will shift from specific groups and regions to regular and universal poverty reduction, from absolute poverty to relative poverty, from rural poverty to an integrated approach on urban and rural poverty, and from domestic poverty to international anti-poverty cooperation.

There are two types of poverty classification: absolute or relative poverty and single-dimensional or multi-dimensional poverty. Absolute poverty, measured by the monetization of food consumption, corresponds to the concept of "absolute deprivation." Relative poverty, which results from an uneven income distribution, corresponds to the concept of "relative deprivation." These measurement standards are not yet unified. Academic research on relative poverty, particularly the definition of the poverty line and poverty identification, is insufficient.

By elaborating the relationship between absolute, multi-dimensional and relative poverty, this paper seeks to investigate the management of relative poverty, and reveal the future outlook for China's

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implementation of anti-poverty strategies beyond 2020 using a case study on the incidence of relative poverty in the United States and countermeasures employed in the country. This paper's findings will support anti-poverty policymaking in China.

1. China's Poverty Reduction Strategies and Shifting Poverty Challenges

1.1 China's Poverty Line and Poverty Reduction Strategies

1.1.1 China's moving poverty line

The old China (before 1949) was a society of widespread poverty. After the founding of the People's Republic of China in 1949, household incomes in China were less than developed countries. When the reform and opening up program was unveiled in 1978, China's rural poverty incidence was 30.7% and China's poverty line was 100 yuan per person per year. By this standard (converted to current year price), China's rural poverty incidence had dropped to 3.5% in 2000. See Figure 1.

China has drafted a total of three poverty standards (1978, 2003, 2010) with minor adjustments in CPI in the year after each standard was published. As shown in Figure 1, the scale and incidence of poverty in China decreased the most rapidly based on the 2010 standard. Then poverty in China was no longer widespread, and became confined to specific and sporadic regions. The three poverty standards were drafted under different poverty reduction prioritization approaches in each historical stages with different characteristics of poverty types.

From 1978 to 2000, the average household monetary wage in China increased by 14.23 times the monetary wage in 1978, and its consumer price index (CPI) rose by 3.91 times the CPI in 1978. Given

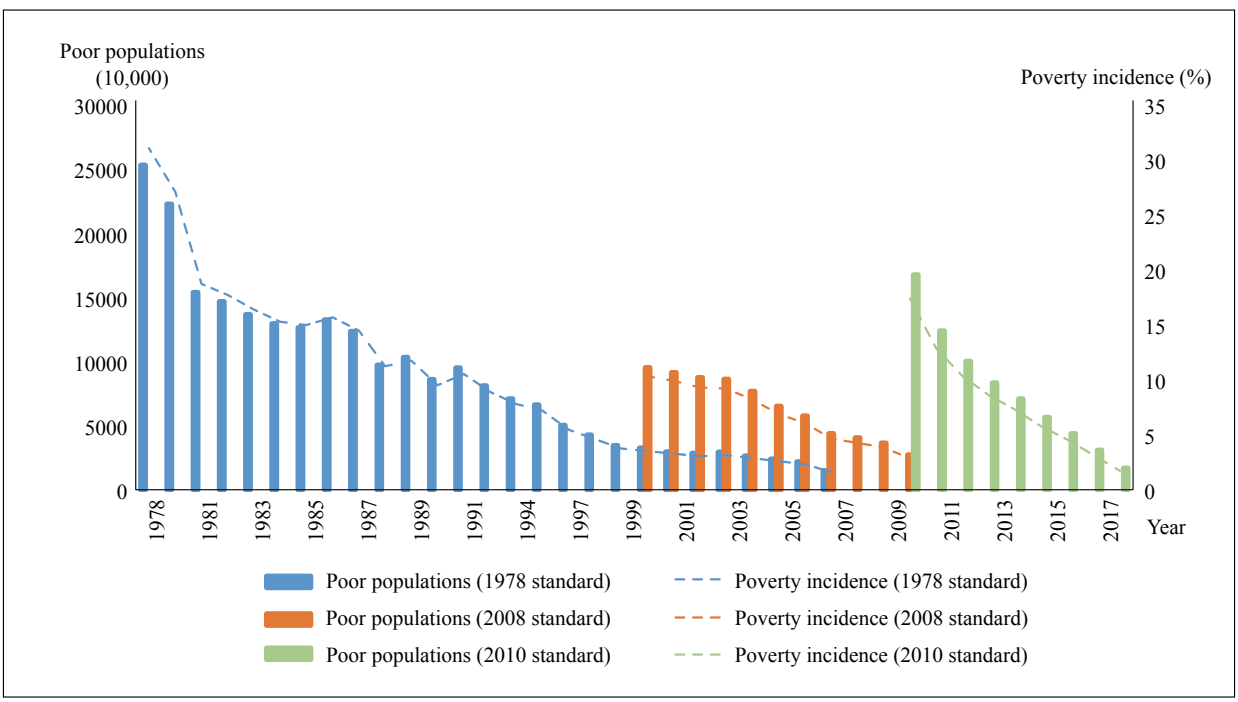

Figure 1: China's Poor Populations and Poverty Incidence from 1978 to 2018
Source: NBS, 2018: *China Statistical Yearbook 2018*, Beijing: China Statistics Press.

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the rising household incomes since reform and opening-up in 1978, the absolute poverty line of 100 yuan per person/year set in that year became obsolete. This absolute poverty line was based on subsistence nutrition standards and the consumption structure of people in the lowest 20% income bracket. From 1978 to 2000, however, the Engel's coefficient for China's urban households dropped by 18.1 percentage points (down from 57.5% to 39.4%), and that for rural residents fell by 18.6 percentage points (down from 67.7% to 49.1%). Services overtook staple foods as the greatest proportion of household consumption.

1.1.2 China's evolving anti-poverty policies

After the implementation of reform and opening-up policy in 1978, China's anti-poverty policies can be divided into four stages - regional development (1978-1985), poverty relief campaign (1986-2000), village-wide implementation (2001-2012), and targeted poverty reduction (2013-2020). China's poverty reduction endeavors began in the countryside. In 1978, China adopted a poverty reduction strategy to create jobs for the rural poor by implementing infrastructure projects. In the 1980s, China's countryside saw a dramatic reduction in poverty largely thanks to economic development. In 1986, the Chinese government implemented special rural anti-poverty programs in 331 state-level poor counties; in 1994, the government enacted the Seven-Year Priority Poverty Reduction Program to lift 80 million people (in 592 state-level poor counties) out of poverty. This marked a critical stage in China's poverty reduction efforts. With the designation of poor counties and villages, county-based development-oriented poverty reduction became the linchpin of China's anti-poverty strategy. The *Outline for Development-Oriented Poverty Reduction for China's Rural Areas (2001-2010)* enacted in 2000 identifies the goal for China's development-oriented poverty reduction in the 21st century as "two no worries and three guarantees" (no worries about food and clothing and guaranteed access to compulsory education, basic healthcare and housing security). The *Outline for Development-Oriented Poverty Reduction for China's Rural Areas (2010-2020),* enacted in 2010, identifies contiguous poor regions as the principal battlefield for development-oriented poverty reduction in the new decade. The combination of national anti-poverty policies and coordinated regional development further broadened the scope of China's integrated development-oriented poverty reduction strategies (Chen, *et al*., 2019).

During his inspection tour to western Hunan Province in November 2013, General Secretary Xi Jinping stated significantly that poverty reduction work should "be based in reality, be adapted to local conditions, follow expert guidance, and be targeted at poor groups in real need." Xi's statement marks the official announcement of the "targeted poverty reduction" principle. At the High-Level Forum on Poverty Reduction and Development held on October 16, 2015, Xi Jinping stressed that China's battle against poverty should follow a targeted approach to lift 70.17 million people and 592 poor counties out of absolute poverty and eradicate absolute poverty in contiguous poor regions by 2020.

1.2 Changing Types of Poverty

When the People's Republic of China was founded in 1949, most people in China lived in poverty. Since then, poverty in China has receded to the countryside and then contiguous poor regions. As widespread poverty decreased, the focus of China's anti-poverty agenda shifted to special groups, potential poverty and recurrent poverty . After 2020, multi-dimensional poverty (i.e. disadvantages in income, health, brain power and other personal abilities) and relative poverty will emerge as the dominant forms of poverty in China. From 1986 to 2000, China's anti-poverty policies were focused on subsistence needs such as food, clothing and housing, guided by "income poverty" as the sole criterion. This poverty standard was replaced by the "two no worries and three guarantees" principle for the 2010-2020 period, or, in other words, multi-dimensional poverty criteria replaced income poverty as the yardstick for measuring poverty in China.

During the previous four decades, the Chinese government has focused on reducing rural absolute

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poverty, using different approaches to achieve this goal. However, despite the large reductions in rural absolute poverty as an indicator of decreases in poverty (Chen *et al*., 2013), relative poverty – reflecting differences in urban and rural economies, uneven labor flow, and industrial layout – still exists and, as such, is a more realistic manifestation of poverty. Thus, as of 1978, relative policy now features prominently in China's policy discourse and, after 2020, a new priority will be to lift people from relative poverty. After reviewing poverty concepts, this paper estimates China's regional Gini coefficient to reveal the magnitude of relative poverty in the country as a basis for policy design in the subsequent chapter.

2. Poverty Definitions and Gini Coefficient Estimation

2.1 Shifting Poverty Definitions and Poverty Reduction Priorities

After two adjustments, China's current absolute poverty line is reasonably operational and comparable between 1978, 2008, 2010, but this measure does not capture the depth of and psychological traps associated with poverty. During the 11th Five-Year Plan (2006-2010), research into multi-dimensional poverty based on "capacity deprivation" was on the rise. Yet controversies regarding the weight and aggregation of multi-dimensional poverty indicators presented and remain barriers to the use of this method. As an alternative, the Watts method and the A-F Dual Cut-Off method provide valuable guidance for measuring poverty in terms of the focus, monotonicity monotony and transfer axioms (Li, Shen, 2007).

For the three target poor groups (see Table 1), absolute poverty uses only the standard of household disposable income to determine rural poor populations; the two adjustments were made to reflect the depth of poverty. The vast majority of people below the absolute poverty line in China have received various forms of support. In 2010, the size of poor populations and poverty incidence under the poverty standard converged at 30 million people and 5%, respectively. However, a closer look at "capacity poverty" suggests that the propensity to spend less and save more for future needs has crimped consumption among farmers, especially poor farmers. In the countryside, which frequently has poor public services, disease, disaster, disability and schooling often condemn households to poverty. Between 2000 and 2009, poverty recurred among as much as 10% to 20% of households who had been lifted out of poverty.[1] This, coupled with inter-generational transmission of poverty, weakens the long-term effectiveness of poverty reduction through transfer payment. In 2015, the National Development and Reform Commission (NDRC) unveiled a "five-pillar" policy to reduce poverty through development, resettlement, ecological compensation, education, and social protection, i.e. after the poor develop skills to earn a living free from poverty-inducing factors, relative poverty measured by gaps in relative income reflects a real picture of the change in poverty - a reduction in the deeply poor at the tail of the income distribution curve.

The measurement of multi-dimensional poverty remedies the deficits in absolute poverty's assessment of capacity. Relative poverty targets the potentially poor around the poverty line,[2] who will be the primary beneficiaries of future poverty reduction programs in China. Wang and Zeng (2018) suggest describing post-2020 poverty relief recipients as "low income" and "underprivileged" groups.

[1] Poverty recurrence ratio means the percentage of people slipping below the poverty line after lifted out of poverty. There is no official data on this ratio available. According to the *2018 Report on Rural Poverty Monitoring in China*, 11.5% of farmer households slipped back into poverty during 1998-1999. Other studies (Chen, et al., 2006; Ke, 2007) find that about 15% poor populations slipped below the poverty line after lifted out of poverty, and this ratio is above 20% in some provinces such as Gansu.

[2] "Potentially poor" is defined in this paper as "poor populations with disposable income around the poverty line who can be lifted out of poverty through relief but are over 50% likely to slip back into poverty." Chen et al. (2013) defines this reference as "populations lifted above the poverty line by a certain margin but extremely vulnerable to slipping back into poverty."

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Table 1: Poverty Concepts and Governance Schemes

Characteristic	Absolute poverty	Relative poverty	Multi-dimensional poverty
Target group	Existing rural poor	People with potential income poverty	People with potential capacity poverty
Criterion	Disposable income	Relative income gap	Welfare level in terms of consumption, health and education
Governance	Local economic development and transfer payment	Human capital development	Development-oriented poverty reduction
Case studies	China's three-stage poverty line: (1) 100 yuan/person/year in 1978 (2) 865 yuan/person/year in 2008 (3) 2,300 yuan/person/year in 2020[3]	In China and Africa, the lowest 20% income bracket after dividing the incomes of all households into five equal brackets; United States poverty line is monthly income calculated with cost of living index. Normally, about 10%-15% of populations live below this poverty line.	The UNDP's Multi-Dimensional Poverty Index (MPI), including income, health, education and quality of work.

Source: Compiled by authors based on *New Progress in Development-Oriented Poverty Reduction Program for Rural China* and *Ending Poverty in China: Lessons for other countries and the challenges still ahead*.

Some EU member states, the United States and Australia have attempted to identify the relatively poor and to offer them policy aid.

2.2 Gini Coefficient Estimation

In China, absolute poverty coexists with relative poverty. The income peak of poor populations has been shifted to above the poverty line. The tail of income distribution curve for poor populations has abated. The income distribution curve of poor populations is longer to the left of the peak, and is referred to as a "tail," i.e. most poor populations still live below the poverty line. As income sources diversify, property income has become chiefly responsible for yawning income gaps. A relative poverty line based on income distribution marks the beginning of the transition in poverty reduction practices.

As a yardstick for income distribution, China's Gini coefficient estimates as obtained from different data sources are inconsistent. The comparable Gini coefficient of 2010 was variously estimated to be 0.61, 0.545, 0.53, 0.48 and 0.44 by the Survey and Research Center for China Household Finance at the Southwest University of Finance and Economics, the China Survey and Data Center at the Renmin University of China, the Institute of Social Science Survey at Peking University, the National Bureau of Statistics (NBS), and the China Institute for Income Distribution at Beijing Normal University, respectively. The 0.44 was based on data from the China Health and Nutrition Survey (CHNS), the Economic Data Research Center of Hunan University estimated China's overall Gini coefficient in 2009 to be in the range of [0.48, 0.51]. (See: Li and Xue (2013)) The Gini coefficient is believed to experience an inverted U-shaped curve, increasing at first and then declining after reaching a peak. The author of this paper believes that economic development may influence the Gini coefficient in three ways: (1) by widening regional gaps and increasing differences in the interregional industrial structure; (ii) by promoting urbanization that benefits urban and rural residents unequally; (iii) by increasing the flow of people, including short-term and long-term migrant populations, whose Gini coefficient gaps keep expanding.

[3] China's 2010 poverty standard was actually adopted on November 29, 2011. The 2010 poverty line is 1,274 yuan/person.

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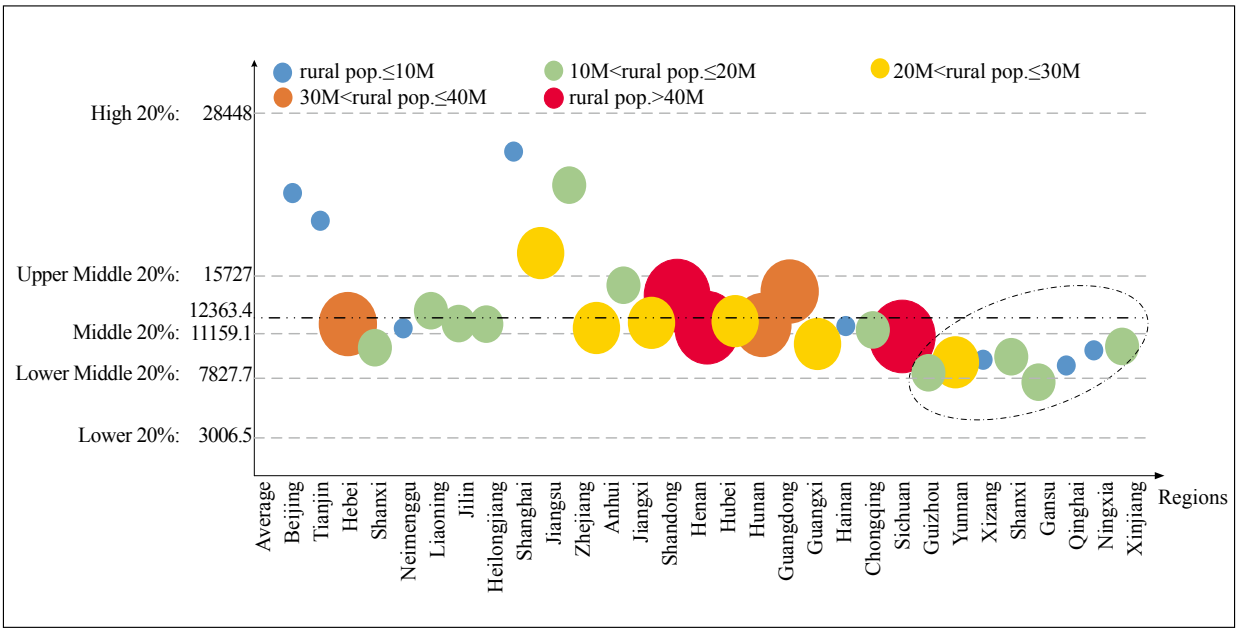

Figure 2: Income Distribution of Households in Various Provincial-Level Regions Divided into Five Equal Income Brackets in 2016

Source: Compiled by the NBS, 2017: *China Statistical Yearbook 2017*, China Statistics Press.

According to the NBS, China's Gini coefficient exceeded the international alert line of 0.4 in 2017. However, academics have been skeptical about the soundness of this criterion and the authenticity of the relevant data. Is the international alert line for Gini coefficient applicable to China? Does the absence of income data for high-income people distort the Gini coefficient? Answering these two questions is of great policy significance for designing income redistribution policies and offering aid to people in relative poverty.

Given the errors and omissions in its estimation basis and process, China's Gini coefficient is far from a perfect yardstick. With China's persistent urban-rural divide, the per capita disposable income of rural residents is below the national average, and agricultural provinces in the central and western parts of China will become mid- and low-income regions.

Judging by the income distribution of various provinces (see Figure 2), the following facts can be determined: (i) A total of 10 provincial-level regions, including Shanxi, Guangxi, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang are below the median disposable income for rural residents nationwide, i.e. mean income of the middle 20% of five equal divisions of national rural per capita disposable income. Among these regions, the per capita disposable income of rural residents in Gansu Province is below the national lower middle income line for rural residents. (ii) Henan, Shandong, Sichuan, Hebei, Hunan and Guangdong provinces have large rural populations with low per capita disposable incomes, suggesting that absolute poverty in China's countryside will morph into rural relative poverty in those provinces. In other words, Gansu, Guizhou and Yunnan are broadly and deeply poor, while Shaanxi, Shanxi and Xinjiang are broadly poor, and Qinghai and Ningxia are deeply poor. Guangxi, Tibet, Hebei and Sichuan also face potential risks of broadly poor.

Likely after 2020, the relative poverty line based on income distribution will become the norm for poverty identification. Yet, during the transition period, the poverty line should comprise a floating income range and diversified indicators given the variance in the types and depth of poverty across regions. Calculated with the non-urban populations data in the Statistical Communique on 2017 National

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Economic and Social Development for the seven provincial-level regions of Gansu, Guizhou, Yunnan, Tibet, Xinjiang, Qinghai and Sichuan. A reasonable approach for estimating the size of populations in relative poverty is to use the data of rural populations in relative poverty in Gansu, Guizhou, Yunnan, Tibet, Xinjiang, Qinghai and Sichuan, and the result is about 23.47 million people[4]; in other words, there is a significant overlap between absolute poverty and relative poverty in China.

Apparently, identifying relative poverty is elusive. To find an approach for reducing relative poverty, we should first attempt to determine the proper poverty line. In the next section, this paper will discuss potential poverty in China and the barriers to determining the urban poverty line, offering insights which may help to determine the relative poverty line.

3. Relative Poverty: Concepts and Criteria

Over the past four decades, China's poverty reduction policies have focused on rural residents, while urban poverty has been addressed through employment assistance, *Dibao* (minimum subsistence allowance) and other forms of social protection. In cities, no official assistance has been offered to poor migrant workers (Chen *et al*., 2019). After 2020, poverty reduction in China should focus on the urban poor, those vulnerable to slipping back into poverty, and other social groups in the bottom income brackets. As there is an overlap between these three groups, the size of the entire population in relative poverty estimated using provincial and agricultural populations should be smaller than the population remaining in absolute poverty at the end of 2017. There is, however, a targeting error in such a regional identification criterion, especially when economic growth slows in prosperous provinces.

This chapter will offer an approach (similar to that of the United States for relative poverty identification) for determining the poverty line that takes into account potential poor populations, emerging urban poor populations and low-income populations after income growth.

3.1 Potential Poor Populations and the Poverty-Reducing Effect of Economic Growth

3.1.1 Potentially poor populations and urban poverty line

China currently follows the "five-pillar" policy to reduce poverty through development, resettlement, ecological compensation, education, and social protection. Yet relative poverty may not shrink even if absolute poverty does. Social capital (Zhou and Sun, 2017), health capital (Wang, 2012) and education capital (Zou and Zheng, 2014) are replacing traditional capital to become primary factors in poverty reduction. In the past, China's poverty reduction programs focused on absolute poverty, and policies for fostering social and human capital were inadequate and fragmented,[5] which resulted in a high reoccurrence of poverty and unabated relative poverty. The existing system for poverty identification therefore has failed to reveal potentially poor populations.

China has yet to launch more targeted and market-based poverty reduction policies, such as transfer payments to households, village-wide pro-poor projects, and training for farmers to develop the skills needed in large cities. When migrant workers seek jobs in cities, they become potentially poor populations due to the urban-rural divide in income and the household registration, or *hukou*, system. Their children and parents, who remain in the countryside, are more likely to struggle with poverty. Academics have grappled with the question of how to identify poverty among migrant workers and their

[4] Source: *Statistical Communique of the People's Republic of China on 2017 National Economic and Social Development*, http://www.stats.gov.cn/tjsj/zxfb/201802/t20180228_ 1585631.html.

[5] Specifically, poverty relief funds only ensure that beneficiaries find jobs, but the jobs may not match their skills and maximize productivity; deteriorating informal social systems take a toll on the fairness of poverty reduction systems.

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dependents. Chen and Yu (2017) have suggested a method for determining the urban poverty line with reference to the rural poverty reduction standard. Market-based poverty reduction, therefore, requires resetting the urban poverty line.

An urban poverty line should take into account rural migrant workers, urban migrant populations, and local low-income people. Such a poverty line would address the gap of urban poverty, especially the gap of migrant populations. The ideal urban poverty line should consider the number, source and urbanization rate of migrant populations in cities of different sizes. For instance, there are more migrant populations in Shanghai (9,726,800 people in 2017) than in Nanjing (1,528,300 people in 2017). Shanghai's urbanization rate is 7.3 percentage points higher than Nanjing's, reaching a turning point on the Northam Curve. In addition, Shanghai's per capita income is higher (in 2017, Shanghai's per capita disposable income was 58,988 yuan, and Nanjing's was 48,104 yuan). Obviously, it takes greater fiscal resources for Shanghai to offer public services to its migrant populations.

Urbanization may not always improve the relative income of poor populations. Sometimes, it will merely add to urban poverty. In 2013, migrant populations in China were 1.6 times more likely to be living with poverty compared with local residents. City governments struggle to fund the minimum subsistence security scheme for their local populations (Wei and Su, 2016),[6] and likely do not have enough to cope with an influx of migrant workers. Under the *hukou* system, poverty relief funds cannot be allocated to migrant populations without local *hukou*. Thus, urban poverty is a blind spot in previous poverty research and anti-poverty practice, and will also be a principal form of poverty after China shifts towards an integrated urban and rural poverty reduction approach. In setting the urban poverty line, policymakers must also take into account the *Dibao* (minimum subsistence security) criteria.

3.1.2 Poverty-reducing effect of economic growth

China's Gini coefficient has been rising in sync with its rapid economic development largely for two reasons: First, the poverty reduction policy has lost sight of deeply and potentially poor populations both rural and urban; second, economic growth alone hardly benefits all poverty-stricken populations. In 2017, China's eastern region was home to 156 million migrant workers, or 56.7% of the total number. Large swathes of migrant workers have turned China's prosperous eastern region into a hotspot of potential poverty.

In theory at least, economic growth helps to variably reduce poverty in three ways. First, the poverty-reducing effects of industries vary by stage. In the initial stage of development, agriculture plays a more important role in reducing poverty (Montalvo and Ravallion, 2010). In a later stage, the role of services comes into play (Shan, *et al*., 2017). Poverty-reducing effects also hinge upon the nature, diversity and types of industries. Second, the effects of development-oriented poverty reduction vary with the urbanization modes in relation to city size (Christiaensen and Todo, 2014); although small towns contribute to poverty reduction more significantly (Christiaensen and Todo, 2017; Christiaensen *et al*., 2013), the role of large cities is essential for poverty reduction in ethnic regions (Huang and Han, 2015). Lastly, the flow of rural labor can effectively reduce the rural poverty rate (Fan and Jiang, 2016), but such effect diminishes with the rural neighborhood effect.[7]

China's rapid urbanization has indeed helped reduce poverty. Yet given the urban-rural divide, rural

[6] In 2017, the average income of urban households in the highest 20% income bracket was 5.62 times that of those in the lowest 20% income bracket (77,097.2/13,723.1). In the same year, the average *Dibao* eligibility threshold in cities was 6,408 yuan per person/year, and only around 5% of urban low-income persons were eligible. See the Ministry of Civil Affairs of the People's Republic of China: *China's Civil Affairs Statistical Yearbook (2018)*, Beijing: China Statistics Press.

[7] Rural neighborhood effect, namely, is that the characteristics of local social environment can affect the way people think and behave. Here it means neighbors' behaviors of labor migration will be imitated, which can improve rural poor people's income.

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migrants in large cities are highly likely to become potential poor populations. Urbanization's poverty-reducing effect is waning. When it comes to identifying poverty, no task is more important than unifying the urban *Dibao* threshold and rural poverty line into a consistent relative poverty line.

3.2 US Experience in Defining and Tackling Relative Poverty

3.2.1 Poverty occurrence and anti-poverty policies in the United States

There are four categories of relative poverty standards: (i) The European Union defines their relative poverty line as 60% of the median income of all households; (ii) in the United States, relative poverty is based on absolute income, adjusted for different types of households; (iii) Japan sets the relative poverty criterion as 60% of middle-income households out of ten income brackets, adjusted by age, family size, family structure (such as pregnant or childbearing woman, seriously handicapped, child-raising) and regional price index; (iv) Latin American countries such as Mexico, Brazil and Colombia use a combination of income and multi-dimensional poverty indicators such as income, employment, education, healthcare, and living standards.

In the 1930s, the United States set out to cope with relative poverty. In the 1960s, the United States government introduced an absolute poverty line based on minimum spending on daily necessities and food. The federal poverty line of the 1930s was the earliest concept of relative poverty in the United States. During the Great Depression, government investment created jobs for the poor, and relative poverty was based on monetary income (including income adjusted for the price index), family size, and age of family members. During the 1930s-1960s, close to 50 million people were lifted out of poverty in the United States, and the poverty incidence by monetary income for all households dropped by 12.3 percentage points.[8] During this period, poverty reduction programs in the United States included the Old Age, Survivors, Disability and Health Insurance Act (OASDHI), food stamps, and Aid to Families with Dependent Children (AFDC) based on Medicaid. Subsequently, the poverty rate of all United States citizens based on cash income lingered in the range of 10%-15%. The United States poverty line was modified in 1977-1978 with little impact on the estimation of poor populations and poverty rate.

The United States experienced two rounds of deepening poverty during 1979-1982 and 1989-1992 as stagflation and welfare dependency left the government with fewer resources to assist the poor. The federal government played a lesser role in social relief with less welfare spending under the doctrine of Reagan's supply-side economics. In the 1970s and 1980s, poverty relief policies in the United States mostly included the Supplemental Security Income (SSI) program and Earned Income Tax Credit (EITC). The Clinton administration (1993-2000) cancelled the AFDC program, as in 1995 only 4% of recipients had full-time jobs, 5% of recipients had part-time jobs, and other recipients were neither employed nor in training. After a follow-up survey was conducted of the recipients' children, the United States Congressional Fiscal Budget Committee found that 58% of recipients' children also became recipients of various social welfare programs. In 1996, the United States Congress enacted the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) and the Temporary Assistance for Needy Families (TANF) to replace AFDC. The Federal Homeownership Assistance Program (FHAP) also became part of the United States pro-poor policies. Instead of offering cash benefits, the Clinton administration supported the creation of jobs to ease pressures from stagflation and fiscal deficits, which significantly eased poverty in the United States. After the turn of the century and particularly since the 2008 global financial crisis, the United States has seen an uptick in the poverty rate as Democrats and Republicans alternatively held sway in politics. Drawing upon historical countermeasures for relative poverty, current pro-poor policies in the United States put a premium on all-round protection, job

[8] Data source: *Income and Poverty in the US, 2017*, https://www.census.gov/library/publications/2018/demo/p60-263.html.

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creation, child protection, and tax cuts.

In the early 1970s, the United States developed a complete social safety net, and enacted regulations for children's welfare, employment and tax cuts. Yet the United States poverty relief policies have still left unresolved a coexistence of "labor poverty" and "welfare dependency." While drawing upon the United States experience of a complete social safety net, China should put a premium on skills training for the poor to avoid welfare dependency.

3.2.2 Relative poverty line and the estimation of poor populations

After 2020, relative poverty will become the main form of poverty in China. Based on international experience and China's national conditions, this paper puts forward two approaches for determining the relative poverty line.

The first approach is to convert the absolute poverty line into a relative poverty line according to income distribution and set a floating range (adopting Martin Ravallion's method[9]). A simple and practical approach, this method is consistent with the absolute poverty line in terms of target groups and pro-poor policies. However, the assumption of this approach that income welfare is equal among all members of a household does not account for heterogeneity. For instance, it does not take into account migrant populations whose dependents are left behind in the countryside. For this reason, this approach is suitable for developing countries in their transition from absolute to relative poverty, especially when their urban-rural divide still exists. For China, it takes significant fiscal resources, industrial competitiveness and urbanization quality to achieve urban and rural integration.

The second approach is to take the median value or a fixed ratio of the mode of all household incomes, following the approach of the United States. Based on the national income distribution pattern and family structure, an income threshold should be determined for different types of households. As it accounts for poverty transmission within households and family size, this approach is easy to implement in developed countries with complete social protection, housing, employment and other public services. In 2017, the United States federal and state governments spent a total of 959 billion US dollars in fiscal budgets, or 4.9% of GDP, assisting the poor, which is over five times the cost of lifting poor populations in the country out of poverty (178 billion US dollars). Some state and local governments spent as much as 230.2 billion US dollars on poverty relief, or one fourth of total anti-poverty government spending in the United States.[10] The US per capita welfare is 18,369 US dollars per person/year, including 893 US dollars per person/year for medical expenses. This approach is suitable for implementation in China's coastal provinces with sufficient local fiscal resources. Specifically, the relative poverty line should be implemented in cities and the countryside before convergence adjustment.

The *China Household Wealth Survey Report (2018)* indicates that housing comprised the greatest share of China's household net wealth (66.35%) in 2017. Net housing value accounted for 69.7% and 51.34% of net household wealth in the cities and the countryside, respectively. Obviously, net property value plays a hefty role in China's income distribution.[11]

Apart from housing, the structure of household financial assets lacks diversity. There is a significant difference in property value between the cities and the countryside. Chinese households have a propensity to save for future needs. These attributes are evident in Table 2. Decomposition of wealth distribution gaps indicates that housing net worth contributes as much as 70.4% to wealth inequality in

[9] Martin Ravallion's method: The upper limit of poverty line is household income level that guarantees basic spending on food, and the lower limit is the sum between food and non-food spending, i.e. $2b_f - f(b_f) \leq z_a \leq f^{-1}(b_f)$. Where, b_f is basic food spending, and f is the function of spending on daily necessities.

[10] US government spending on poverty relief here only refers to spending on health, housing and basic household expenses. Source: *Income and Poverty in the United States: 2017*, https://www.census.gov/library/publications/2018/demo/p60-263.html.

[11] Source: the Institute of Research on China's Economic Trends, Economic Daily, 2018: *China Household Wealth Survey Report (2018)*, http://www.gov.cn/xinwen/2018-12/28/content_5352858.htm.

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Table 2: Per Capita Wealth in China, 2017 (Yuan, %)

Wealth type	Personal total wealth		Net housing value			Financial assets			Properties and others		
	Per capita	Growth	Per capita	Growth	Ratio	Per capita	Growth	Ratio	Per capita	Growth	Ratio
Urban	274,724	14.46	191,483	16.2	69.7	41,428	-	15.08	41,813	-	15.22
Rural	84,099	9.56	43,176	2.1	51.34	18,106	-	21.53	22,817	-	27.13

Source: the Institute of Research on China's Economic Trends, *Economic Daily*, 2017: *China Household Wealth Survey Report (2017)*, http://www.ce.cn/xwzx/gnsz/gdxw/201705/24/t20170524_23147241.shtml; the Institute of Research on China's Economic Trends, Economic Daily, 2018: *China Household Wealth Survey Report (2018)*, http://www.gov.cn/xinwen/2018-12/28/content_5352858.htm.

China. Decomposition of urban-rural net wealth gaps reveals that net wealth gaps between the cities and the countryside contribute 82.4%,[12] or 44.6% within cities and 37.8% within the countryside. Regional decomposition of net wealth gaps suggests that wealth gaps in China mainly derive from within regions (contribution rate of 87.9%), with the eastern, central and western regions contributing 39.9%, 29.4% and 18.6%, respectively. Regional and urban-rural gaps exist in the property incomes of Chinese households. Dynamic monitoring of relative poverty is extremely likely to have targeted the same group of people.

Of course, some academics have objected to the definition of relative poverty line based on fixed proportions of median income and mean income (e.g. Li and Shen, 2007). Such a definition, they argue, must satisfy the assumption of continuous and uniform household income distribution and a definition that does not do this overlooks the depth of poverty. Hence, they have created a relative poverty index encompassing relative poverty incidence and relative poverty depth.[13]

Following the first approach, we first divide the absolute poverty line of 2010 by the economic development factor (current-year farmers' net income of 5,919 yuan per person/year) into the relative poverty line of 0.39, and then determine the floating range of relative poverty using Martin Ravallion's method to be [2,432.7, 2,861.8][14]. Since the poverty line is not within this range, we extend the range to [2,300, 2,862], and those within this income bracket are considered as potentially poor populations. According to the income grouping for rural populations in 2010, there were about 112 million people living in relative poverty and over 49.50 million people in potential poverty, and the relative poverty incidence was 8.37%. In the nine provinces of Sichuan, Henan, Anhui, Hebei, Yunnan, Guizhou,

[12] Contribution of urban-rural net wealth gaps refer to urban-rural net wealth gap as a share of national net wealth gap. The following two concepts mean the net wealth gap among urban residents as a share of national wealth gap and the net wealth gap among rural residents as a share of national wealth gap, respectively.

[13] Relative poverty incidence: $rpr=\frac{1}{n}\sum_{i=1}^{n} y_i \times 60\%$(60% is *a priori ratio*); n is total populations; y is the income of the lowest-income member of the highest 40% income bracket; relative poverty depth: $rpe=\left(\frac{1}{n-m+1}\sum_{i=m}^{n} y_i\right)/\left(\frac{1}{m-1}\sum_{i=1}^{m-1} y_i\right)$, n is total populations; m is the ranking of the lowest-income member of the highest 40% income bracket, and y is the income of the lowest-income member of the highest 40% income bracket; relative poverty index: $rpi=rpr\times rpe$, where $n>m>1$. In addition, Amartya Sen created a poverty index: $P=H[I+(1-I)G]$, where H is poverty incidence (poverty rate); I is average poverty gap (difference between the income of the poor and the poverty line); G is the Gini coefficient of the poor. Later, Xu and Osberg (1999) improved Sen's index and put forward the SST index: $SST=HI(1+G)$, where variables have the same definitions as in the above equation.

[14] In 2010, rural per capita spending in China was 4,382 yuan per person/year with an Engel's coefficient of 41.1. The function of spending on daily necessities is assumed to be a first-order linear function. The lower limit of the range is (4,382×0.411) × 5,919 / 4,382=2,432.7, and the upper limit is 2 × (4,382×0.411) - (4,382×0.411×0.411) = 2,861.8

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Hunan, Hubei and Shandong, there were more than 15 million people living in relative poverty and over 76.35 million people in potential poverty with a relative poverty incidence of about 23.3%. Under the assumption of a uniform household income distribution, a large number of populations are estimated to live in relative poverty. This result suggests a strong overlap between absolute poverty and relative poverty in China.

After 2020, Chinese policymakers should follow an integrated approach for urban and rural poverty governance after a long-term mechanism for rural poverty reduction is put into place (Wei, 2018). Coastal provinces may experiment with the management of relative poverty. For instance, Zhejiang Province has enacted relative poverty standards, i.e. around 45% of farmers' per capita net income in the previous year and no less than 10% of registered rural populations. The province has also introduced a plan to double the income of the poor. This approach permits promoting urban-rural integration as well as improving the relative poverty line based on total household income with a smaller fiscal burden.

After 2035, China should adopt a unified standard on relative poverty. We suggest that after 2020, a certain percentage of median urban and rural household income should be identified as the threshold for urban and rural relative poverty subject to adjustment for a certain cycle such as five or 10 years. This approach is consistent with domestic and international experience as well as the *National Population Development Planning (2016-2030)*. Specifically, the relative poverty line for 2021 should be 40% of median rural household income in 2020,[15] which is subject to adjustment every five years. From 2021 to 2025, the 40% ratio should continue to be followed, and the absolute value of the poverty line will be adjusted according to the consumer price index only. With rising national strength, China's relative poverty line can be raised to 45% of the median rural household income in 2025 for the 2026-2030 period, 50% for the 2031-2035 period, and closer to 60% thereafter. Over time, China's relative income poverty line will gradually meet the standard for high-income countries. With the equalization of basic public services, steps should be taken to integrate urban and rural poverty lines.

4. Conclusions and Outlook

4.1 Conclusions

First, relative poverty is long-term in nature. Similar to absolute poverty, relative poverty is also largely influenced by the urban-rural divide, and shares common early-stage characteristics such as specific regional distribution, multi-dimensionality and income poverty. Anti-poverty systems should be put into place to address the regional disparities and the urban-rural divide. To this end, China should follow an integrated approach for addressing relative poverty in the cities and the countryside.

Second, as the poverty-reducing effect of China's economic development diminishes and income gaps barely narrow, relative poverty should dominate the anti-poverty agenda. In this stage, relative poverty is highly regional, multi-dimensional and likely to induce a recurrence of poverty, and property-related income has become a decisive factor in wealth gaps. Before achieving integrated urban and rural development, China should convert the absolute poverty standard into a relative poverty standard with a reasonable floating range to eradicate the "poverty trap." Subsequently, the floating range should be adjusted upwards by 5% for every five years to identify and address relative poverty in both the countryside and the cities.

Third, China's post-2020 poverty reduction programs can be conducted in two stages. During 2020-2035 (urbanization rate of 70%), while the coastal regions adopt relative urban and rural income poverty standards, less developed interior regions may convert the absolute poverty line into a relative poverty

[15] Referencing the standards of developing countries like China and Africa.

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standard, and encourage poor populations to find jobs in coastal regions. During 2035-2050 (urbanization rate of 76%), steps should be taken to enact integrated urban and rural poverty standards with income as the principal criterion.

4.2 Future Outlook

As relative poverty begins to dominate China's anti-poverty agenda, the following priorities warrant our attention:

(i) Transition from entitlement security to capacity training: In fighting poverty, China should put a premium on human capital and social services. After 2020, the deeply poor regions and poor populations should be freed from external constraints on development, and development-oriented poverty relief policies should be employed to enhance the upward mobility of ordinary poor people.

(ii) With regional economic transition comes change in poor groups. Achieving the goal of eradicating absolute poverty by 2020 does not put an end to all forms of poverty. Poverty is not confined to the countryside, and is increasingly a relative rather than absolute concept. Poverty relief institutions should continue to follow the sectoral and spatial distribution of poor populations after the transition of traditionally poor regions to less poor regions.

(iii) Fragmentation in anti-poverty policies must be avoided. China's current social protection system is differentiated across recipients and regions with inconsistent target groups, protection standards, benefits, management systems and funding sources.

(iv) China should identify and support poor populations more precisely in the future. Relative poverty means that poverty relief is a dynamic process with changing target groups, standards and measures. Before 2020, the phrase "people in absolute poverty" still refers to the rural poor. After 2020, people in relative poverty will include the rural poor, people slipping back into poverty, and the urban poor.

Given the significant percentage of people in potential and deep poverty, the depth and severity of poverty in China cannot be overlooked. After eradicating absolute poverty in 2020, China will continue to target the same poor groups in tackling relative poverty. Anti-poverty achievements must be consolidated in order for further progress to be made.

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