

# China's pathways towards poverty eradication: lessons from Brazil

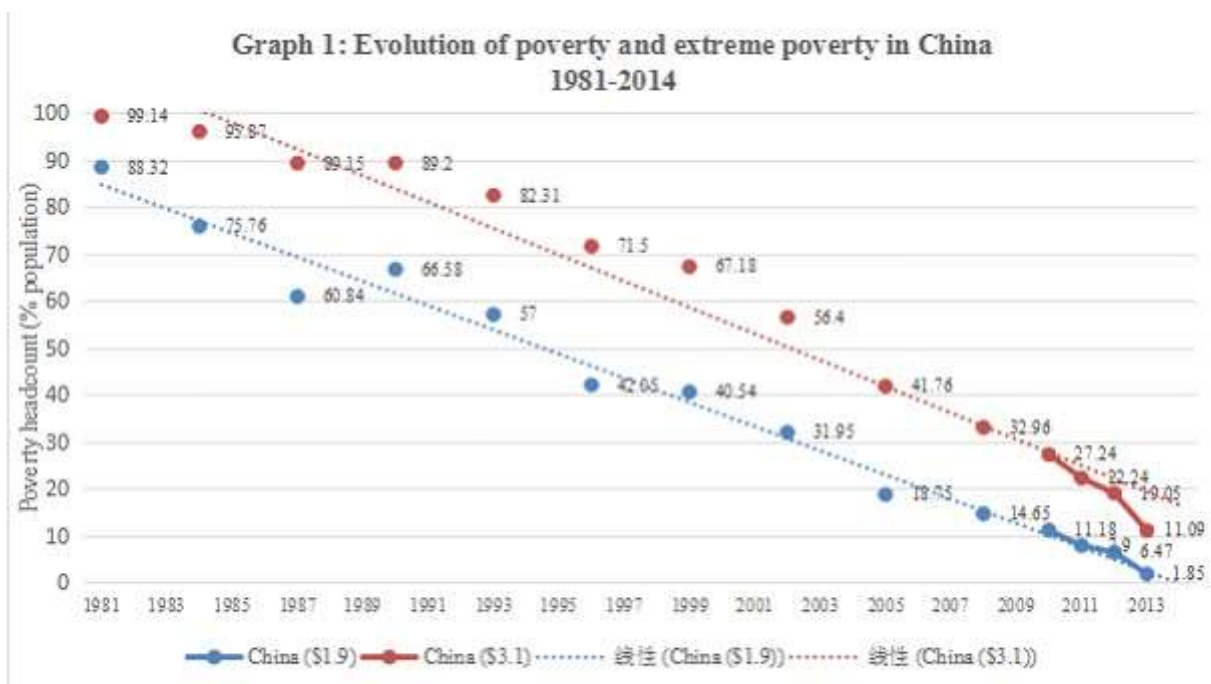
By Maya Takagi and Ana Paula de la O Campos

## I. Pathways of poverty reduction in China: from economic reforms to targeted strategies

China's poverty reduction has been achieved in an outstanding pace. According to the World Bank, in 1981, most of its population was poor: about 878 million people or 88% percent of its total population. But by 2013, the number of extreme poor was reduced to 25 million or 1.85% of the population. Today, all rural people in China have access to a minimum of food and clothing and it is highly probable that China will reach its goal of poverty eradication by 2020

China's experience in poverty reduction is of global interest. Countries from all regions have drawn several lessons from China. In this chapter, we describe the different stages of China's poverty reduction experience and highlight some of the challenges that remain. We then discuss some lessons from Brazil's decade of poverty reduction (2003-2014) and make a comparative analysis of the two countries, pointing to specific policy areas that could be relevant for China's way forward. While both countries differ in terms of historical, geographical, demographical and political aspects, we find that from a policy perspective, both countries have shared similar objectives and approaches in their poverty eradication strategies; therefore, we see great scope for these two countries to learn from each other.

To summarize the main policies and programmes that led to China's success, we use Liu et al.'s categorization of the different stages of poverty reduction policy in China. These stages go from macro-economic reforms, to territorial development approaches and targeting to poor areas, and more recently to targeting poor households.



Source: World Bank, 2017 (Poverty and Equity Data)

## **a) 1978-1985 - Poverty reduction through market-led economic reform**

This initial stage is characterized by the implementation of market-led economic reforms and the introduction of the household responsibility system (HRS). The most rapid pace of poverty reduction occurred during this initial stage. In only 6 years after the reforms took place, from 1981 to 1987, there was a reduction of about 31 percent of the population living in extreme poverty (see graph 1). This reduction is mostly explained by the introduction of pro-market reforms which allowed an accelerated economic growth annual rate of 10%.

The HRS gave an end to collectivization of farming, allowing farmers to be responsible for the losses and profits of their agricultural enterprise. With it also came a drastic reduction in production quotas and taxes imposed to farmers. These actions provided high incentives for farmers to increase production and sell their surplus in the market. During this time, the agricultural sector grew at a rate of 7.7 per year; growth was led mostly by small-scale producers. The role of the agricultural sector for reducing poverty was key. It's found that agricultural growth contributed to China's poverty reduction about 4 times more than other sectors.

In addition to more land use rights given to farmers, the reforms in the agricultural sector were comprehensive, including additional resources and services in the form of inputs and extension. This period also saw the proliferation of agricultural universities and research centers. The policies of the time geared to promote the production of basic food crops to ensure the food security of farmers, but also incentivized surpluses so that farmers could sell in the market and access cash. Increased production lowered food prices, benefiting the urban poor and reduced the cost of industrial and service sector development. Policies also promoted multiple harvests to ensure that farmers were employed all year round.

Following agricultural growth, industry growth followed, having its origins in the capital labor and raw materials that agricultural growth provided. Higher productivity in farming enabled farmers to engage in non-farm activities. Rural township enterprises contribution to total industrial production grew from 9.1 percent in 1979 to 20% in 1985. The growth of industries was based in rural areas to provide the rural population with additional non-farm income generating opportunities and increase their income level. This also enabled the system to maintain rural-urban migration restrictions through the household registration hukou, although farmers were able to migrate to other rural areas to found better income opportunities.

An important factor in the success of these policies was widespread literacy and basic education at the time of the reforms, which enabled farmers to learn faster and adopt new technologies, but also better engage in off-farm rural enterprises. For example, at the time reforms started in 1978, the national middle school enrollment rate was 95.9%.

## **b) 1986-2000 - Development-oriented rural poverty reduction**

In the mid-eighties, with the realization that favorable macro-economic conditions would not be enough to reach the poorest areas, China opted for a strategy with a more territorial development focus, the poor area policy, consisting of three aspects: institutional development, increased investment, and targeting. Targeted investment included a subsidized loan

programme, the food for work programme (FFW) and a budgetary grant programme. The government initially selected 258 counties in 1986, gradually targeting more counties until reaching 592 in 1993. These counties accounted for the most impoverished regions where focused national support was needed.

In 1986, a poverty agency was established for the first time in China, the Leading Group for Economic Development in Poor Areas (LGOP). The LGOP was in charge of overseeing the disbursement of the subsidized loan programme, coordinate efforts across sectors and promote poverty reduction. The responsibility of poverty reduction was assigned to the local government leadership, guided by the LGOP. Poor area development offices were established at provincial and county levels to support the implementation of poverty reduction projects. The LGOP provided policy guidance and institutional strengthening from central to lower levels (provincial, local) and to village level (village teams).

China also established a pair-wise framework of East-West cooperation that included financial assistance, enterprise development and human resources from Eastern counties to Western (and poorer) counties. This included the positioning of qualified officials from more advanced counties in poverty-stricken areas in order to build institutional capacity for implementing poverty reduction projects.

Infrastructure and agricultural investments to poorer areas were facilitated as grants and later on as low-interest loans. FFW, which aimed at the construction of roads and establishment of clean water services, became the predominant source of funding for development projects during this time. Besides increasing funding for poverty reduction programmes, the government also encouraged the participation of international organizations and quasi-government non-profit organizations to support their task. The first poverty reduction programme was also established in 1994 for the first time - the Seventh-year Priority Poverty Alleviation Programme. As seen in graph 1, poverty reduction continued during this period. In a period of almost 20 years, from 1990 to 1999, China's overall poverty was reduced by 25%, and extreme poverty reduced by 39%.

### **c) 2001-2010 - Integrated poverty reduction through multi-sectoral efforts**

During this period of the National Programme for Rural Poverty (2001-2010), the focus continued to be the improvement of living conditions in poor counties through development-oriented poverty reduction. China started to adopt more sustainable practices in their development efforts, including in the management of natural resources and ecological environment protection. About 55 billion yuan were invested between 2001 and 2010 in water conservation (cisterns, reservoirs) and rural power grids. There is also a push to renovate houses in hazardous conditions. By this time, about 200 million rural workers had also moved to non-agricultural sectors.

The government called for multiple sectors to join the poverty reduction effort, and issued preferential policies to benefit the poor, including agriculture (allocation of farmland and irrigation systems); preferential investments in infrastructure (provision of roads, water, power, housing, gas); industrial development in poor counties; public housing, education and health care; the enrichment of cultural life and increase in forest coverage.

The implementation of multi-sectoral policies fed each other in a sustained way, generating employment opportunities in different sectors and eliminating barriers in economic growth. They also promoted inclusiveness through the specific targeted policies.

Overall, poverty during this period was reduced at a higher rate than extreme poverty reduction. In 9 years, between 2002 and 2011, overall poverty reduction was reduced by 61% while extreme poverty reduction was reduced by 25%. Rising inequalities start to become more concerning. Although growth in the rural-agricultural sector had helped to level inequalities between rural and urban areas, rural poverty reduction was not advancing at the same rate as that in urban areas.

#### **d) 2011-2020 - Towards poverty elimination: targeted poverty reduction**

This stage (the current one) follows the National Programme for Rural Poverty (2011-2020), which emphasizes “precision poverty reduction”. The target is to bring out of poverty 839 poor counties, 28,000 poor villages and 56.35 million rural people.

To target poor rural households, China introduced a new record system of poor households with information of their identity, place of residence and causes of poverty, as well as the different policies and interventions that households have access to. It also establishes the year when the household will be lifted out of poverty. Poor households can be assisted through five key interventions: industrial development, ecological compensation, relocation, education and social security.

Industrial development efforts can include the development of natural resource and labor intensive industries; agri-business development through inclusive value chains; and linking poor farmers to markets through different models. The 13th Five-year plan (2016-2020) highlights a dedicated effort to increase farmers’ returns from assets through land trusts and through supporting rural cooperatives and enterprises. The government also facilitates access of shares in rural cooperatives and enterprises by the poor in exchange for the contribution of their land-use rights to those cooperatives. E-Commerce, a booming national market in China, is also used to increase farmers’ access to markets through public-private partnerships with companies like Alibaba and JingDong.

#### **Lessons from China**

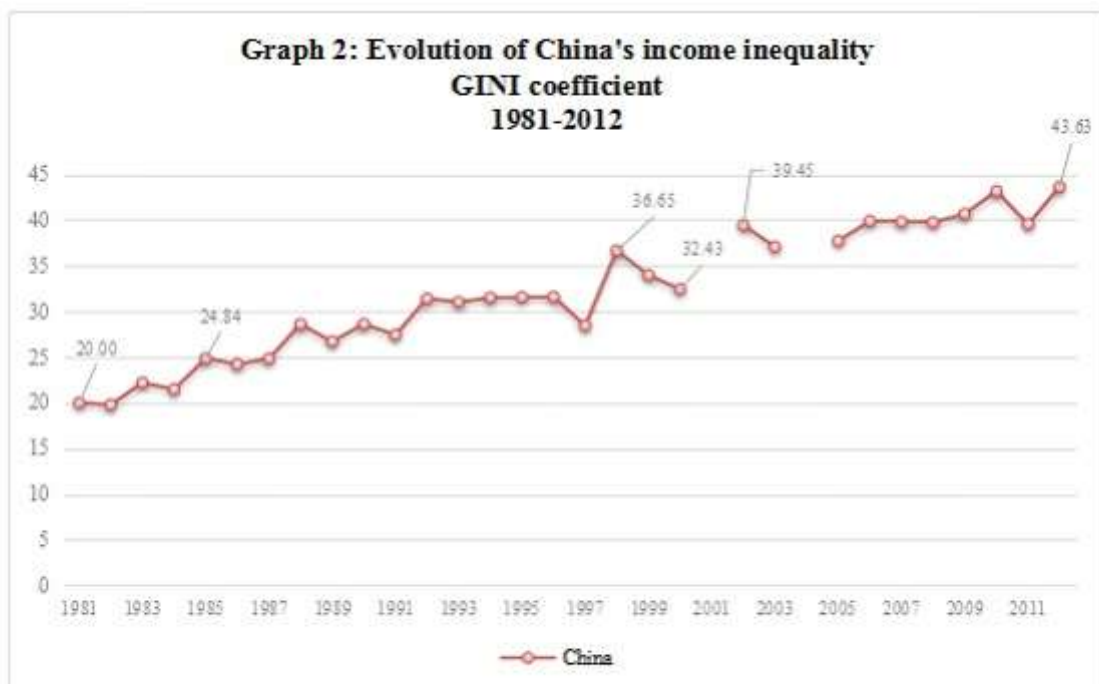
Beyond its rapid economic growth, China’s success in poverty reduction is due to the prioritization of poverty reduction at the highest level, strong political commitments which have guided investments and the establishment of strong institutions and innovative institutional design. China’s institutional innovation cover several key areas: (1) the sequencing of development-oriented and target-oriented policies – including the piloting and evaluation of those policies; (2) industrial development in the agricultural and non-agricultural sectors – including major investments in infrastructure; (3) the pair-wise policy cooperation framework; and (4) international cooperation.

## II. What can China learn from the experience of other countries

While China's poverty reduction achievements have been considerable, these have not been realized without trade-offs along the way. Although it is quite likely that China will eradicate poverty by 2020, it will continue to face several challenges in relation to rising income inequality, food security, the environment, and in building a national welfare system.

The extent of poverty reduction in China is still a paramount challenge. Transitional poverty - multidimensional poverty created by China's rapid social and economic transformation, means that efforts to eradicate poverty is quickly dissolved as important changes in transformation continue to occur. The extent of China's poverty challenge is clearly seen when using the Multidimensional Poverty Index (MPI). Using this method, about 5.5% of the total population is deprived; and in a high extent due to poor nutrition and lack of schooling. Today's poor in China live in destitute areas, many suffer from vulnerable ecological environments, poor living conditions, natural disasters, low education levels, and poor infrastructure. About 50% of the poor live in the Western part of the country, and a more than 40% live in the Central areas of the country.

Inequalities have been attributed to the urban-rural divide and regional variation in wellbeing. Graph 2 shows how income inequalities have risen in China from the economic reforms in 1978. Inequalities were generated in urban areas as a public-determined system of wage standards and scales transitioned to one where wages were determined by the free market and the new private service and industry sectors. In rural areas, the establishment of HRS and township and village enterprises created income inequalities between farmers and those engaging in non-farm income generation. A policy of "letting a few people get rich first" was promoted with a logic of allowing "the winners" generate employment opportunities, as well as to inspire those lagging behind to follow. Also, the government prioritized investment in regions that had more economic potential, particularly the coastal regions.



Source: World Bank, 2017 (Poverty and Equity Data)

Before the reform, urban bias was enforced through a “trinity of institutions” that deepened inequalities between urban and rural areas: the household registration system (hukou), the establishment of people’s communes in rural areas, and monopsony (unified procurement and sale of agricultural commodities). After the reforms, rural-urban income inequalities decreased but only for a short period. By the 1980s, suppression of agricultural prices and a rise in fiscal monetary transfers from rural to urban sectors reversed progress.

Linked to this process there was a deterioration of the social security system. First, it relied heavily on state-owned enterprises, and later on, reformed to transfer this responsibility to the government. However, the reform has not been efficiently implemented. In rural areas, the main social security system was the Five Guarantees (FG) – provision of food, clothing, fuel, medical care and burial expenses, which was established since the 1950s to support the childless elderly, the disabled and orphans with no source of income. Its implementation relied on the communes, therefore, with their dissolution and the creation of the HRS, the FG weakened. Access to health and education is linked to the HRS, therefore, it is denied to migrants. Health and education expenses constitute most of poor household income. Quality of these services is also lower in rural areas than in urban areas. The denial of these services to migrants poses a problem, particularly for women in their reproductive age, as well as to the elderly and children, in that they are obliged to stay in rural areas and denied from services of higher quality. This system also increases their work burden.

Di Bao (minimum allowance guarantee programme) is the main social protection programme in China, from 1999 initially covering urban areas, and expanded in 2007 to rural areas. Other programmes in China include medical care, housing, employment assistance, and temporary “shock-responsive” assistance. However, the effectiveness of these programmes vary as the financing, implementation and regulation are vested at the local governmental level. Additional challenges include the overlapping of coverage and benefits, insufficient level of benefits, low quality of services and large discrepancies in the quality and amount of assistance received by those registered in rural areas compared to those registered in urban areas, as well as the inability of migrants to access benefits.

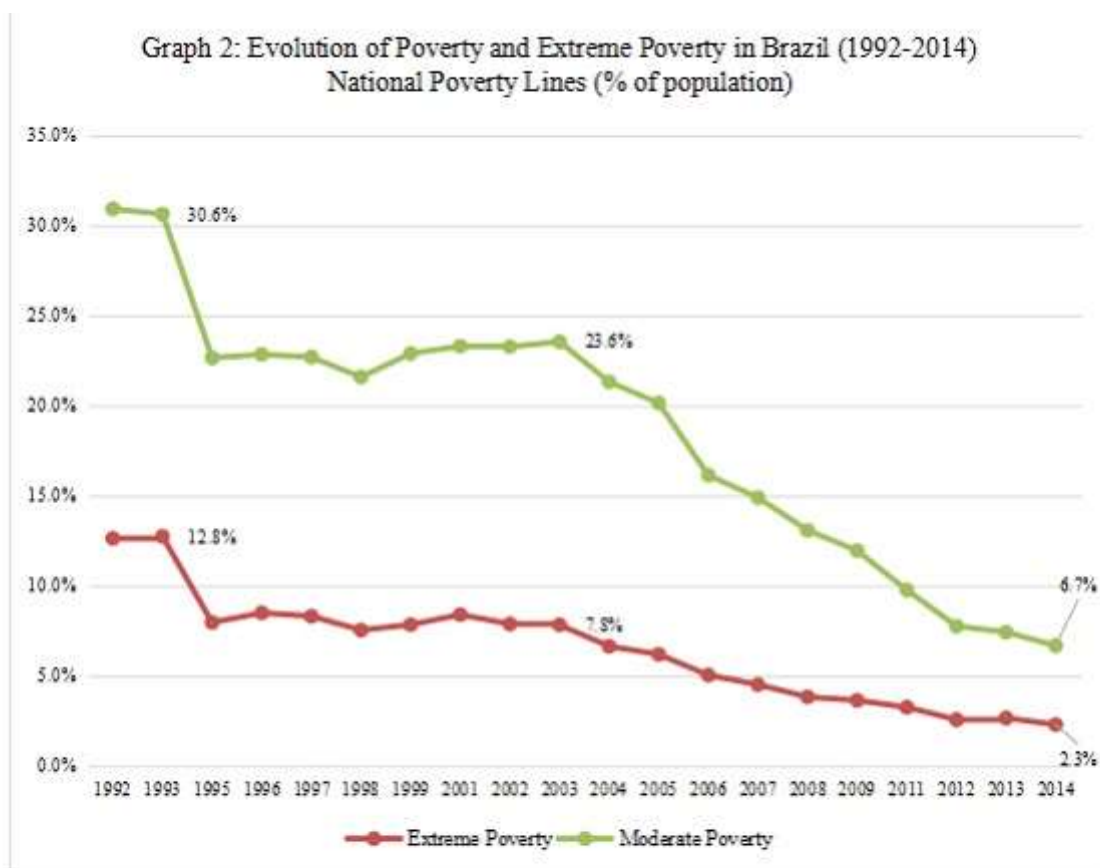
Another acute problem is the increasing number of landless people generated by compulsory land-taking by the state, as well as weak land and peasant rights. It’s calculated that about 3-4 million rural inhabitants lose their land every year. Rapid urbanization and demand of land for industrialization and infrastructure projects is forcing farmers to sell their lands. About four million hectares of agricultural land has been bought for industrialization and urbanization purposes in the past 20 years, and these processes have further weakened land use rights of Chinese peasantry. The current model set by the 13th Five-year plan of promoting agri-business cooperatives without strengthening the role of the peasantry in a “dragon-head model fashion” further weakens the formation of farmers’ organizations.

Finally, amongst the most pressing challenges that China faces is food security. Its high reliability on food imports paired with the low track of preserving its natural resources. Pollution of soils and water will continue to put in jeopardy China’s ability to promote a more sustainable agricultural production and food system.

Similar challenges have been faced by other countries throughout their development pathways. While no country experience can be replicable, some positive experiences from other countries could be useful for China to develop its way forward. We review some aspects of the Brazilian experience that we think could be of interest to China.

### III. Brazil's experience

Similar to China, Brazil is a large country that has recently experienced significant progress in poverty reduction. Using the national poverty line, the prevalence of extreme poverty has dropped from 13.5% in 1992 to 8.2% in 2003, and has continued to drop to 2.5% in 2014, as shown in Graph 2. Around 5 million people moved out of poverty during this period. Moderate poverty has also fallen from a high level of 31% in 1992 to 24% in 2003, and down to 7% in 2014. In absolute terms, the reduction of poverty was from 45 million in 2003 to 14.1 million in 2014.

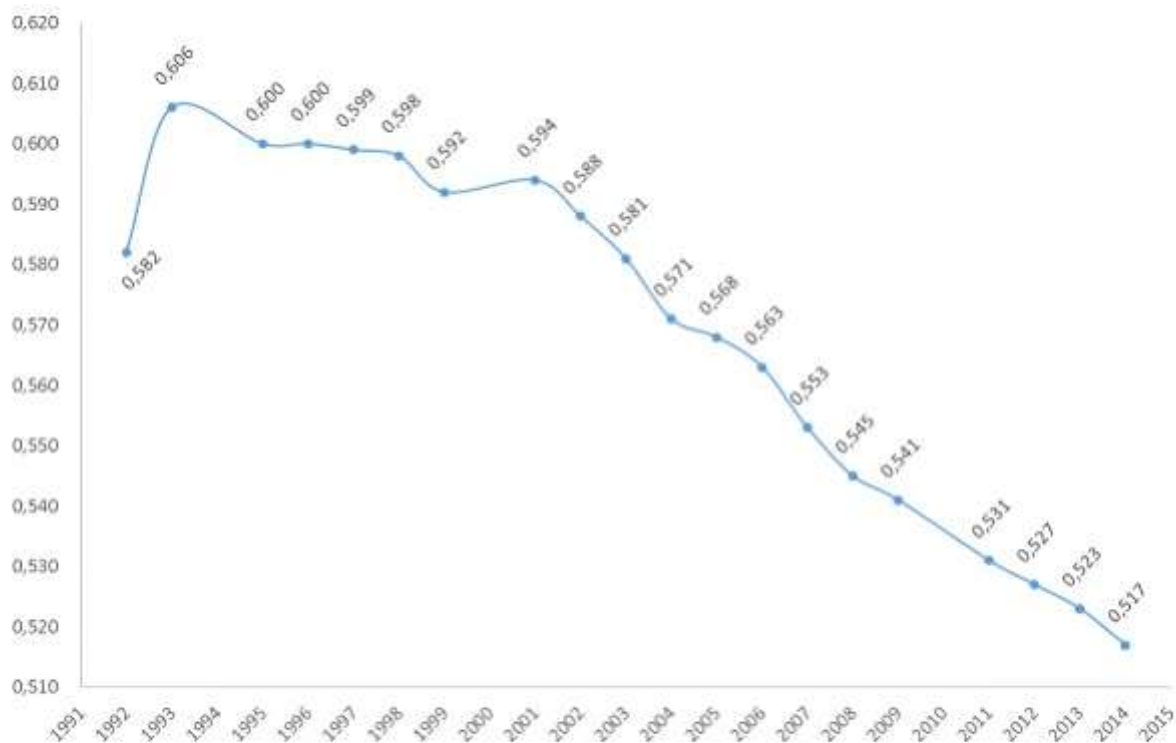


Source: IBGE, data prepared by Jannuzzi (2016). National poverty lines, extreme poverty at R\$ 70 per capita in June 2011. Moderate poverty at R\$ 140 in June 2011

Graph 2 also shows two main periods of poverty reduction: a short period from 1993 to 1995 and after 2003. However, the reduction observed in 1994 is due to the inflation control plan which resulted in an artificial poverty reduction due to appreciation of the currency. According to Hoffmann, real income growth between 1993 and 1995 may be exaggerated by the fact that the National Price Index did not correctly capture inflation in the period that preceded the creation of the new currency. After this period, it is noted that there is a period of stagnation of poverty levels between 1995 and 2002. The change in this stability started in a sustainable way from

2003. It is also important to note the sustained poverty reduction period was followed by a reduction in income inequality and a sustained increase in real income growth, as it can be seen in Graphs 2 and 3.

Graph 3: Evolution of Gini Coefficient in Brazil



Source: IBGE. Developed by Jannuzzi (2016).

What explains the unprecedented decade of sustained poverty reduction, between 2003 and 2014, is closely related to China's success. Brazil also placed poverty reduction (and hunger eradication) at the highest level. A set of multi-sectoral policies were geared to achieve these goals, using both structural and targeted mechanisms. While the strategy has been similar, we explore how both differed in practice further below.

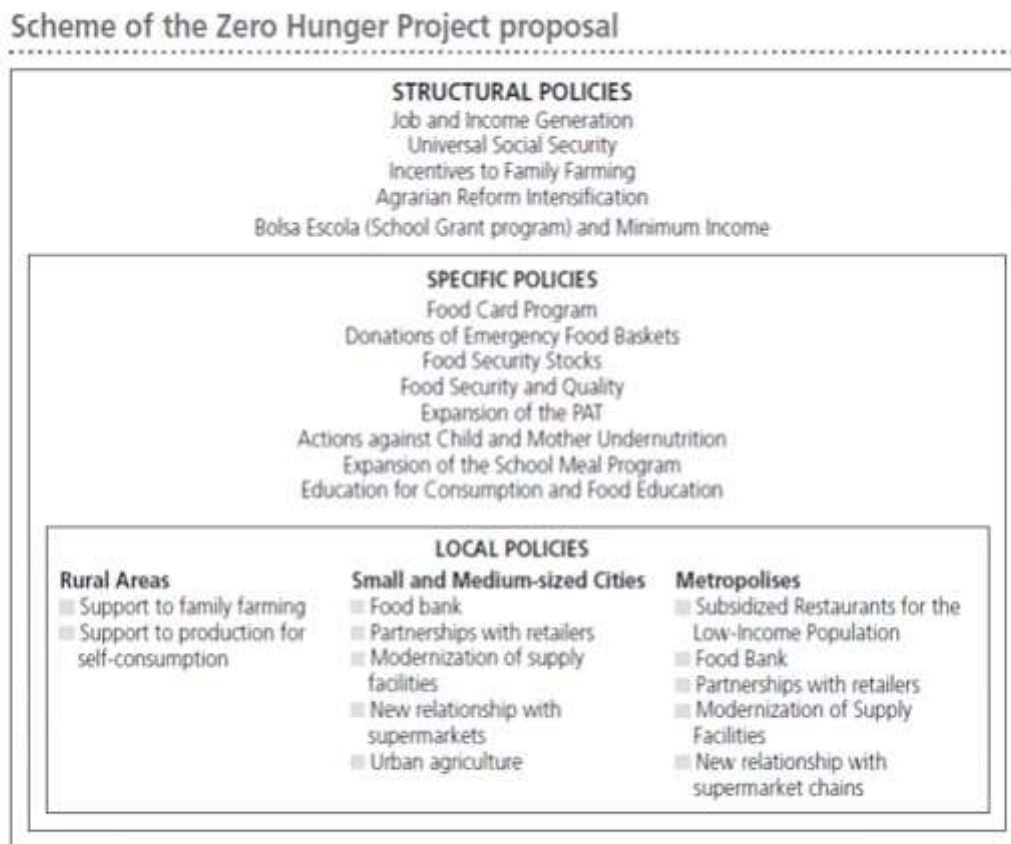
Since 2003, Brazil adopted an overarching policy to eradicate hunger and poverty, becoming the government's main objective and focus. The new government did not conceive hunger as a natural part of development, but as result of structural inequality in society. Thus, the model adopted was that of promoting economic growth with inclusion by distributing income, controlling inflation, increasing the supply of credit and investment in disadvantaged areas, and establishing social policies.

The Zero Hunger Programme was the basis of this strategy. It started with the analysis of the causality of hunger in Brazil at the beginning of the 19th century, stating that there was a situation of insufficient demand that inhibited greater food production by the farming and agroindustry sectors in the country. The lack of demand, in turn, was due to excessive income concentration, low wages, high levels of unemployment and low growth rates, especially in those sectors that could expand employment. The situation was considered endogenous to the pattern of growth and therefore inseparable from the economic model. According to Jannuzzi,



the real per capita household income was stabilized between 1992 and 2002, with decreasing trends in regions like Southeast and North.

Figure 1: Original proposal of the Zero Hunger Project



Source: Instituto Cidadania, 2001.

The Zero Hunger Programme (ZH) was set in place. It proposed a new model of economic development that favored growth with income distribution to expand the country's internal market, by generating more jobs, improving wages and recovering the purchasing power of poor people through the minimum wage. The rationale behind ZH was that only with the State intervention, income inequality could decrease. Three interlinked set of policies were introduced: structural, targeted and local development policies (Figure 1).

The structural policies set in place aimed to increase households' income and reduce income inequalities by re-establishing the minimum wage, increasing consumption through microcredit schemes, increasing public credit for investments, and guaranteeing universal social rights through universal social insurance, public education (including scholarships at the university levels), housing, and access to quality food. In rural areas, there was also the intensification of the agrarian reform and the establishment of the Family Farming policy. Some of these policies are explained further below.

Targeted policies comprised policies intended to promote food security and directly eradicate hunger and undernutrition among the poor. These policies included a cash transfer programme for families vulnerable to food insecurity; distribution of emergency basic food baskets for

populations affected by natural disasters; an broad agrarian reform program for land distribution, due to the existence of thousands of families camped in irregular areas waiting for land redistribution; prevention of mother-child undernutrition; maintenance of food security stocks; promotion of local public procurement of food produced by family farming; and adaptation of school meals according to regional food habits.

Local development policies were also introduced and designed according to different areas (metropolitan urban areas, non-metropolitan urban areas and rural areas). Similar to China's experience, these were led and implemented by states and municipalities, and partnerships with civil society was also promoted. More specifically, these included different subsidies such as in restaurants for the poor and low-income households; food banks to collect food by the poor, and to reduce food loss and waste; modernization of food supply facilities; different partnerships with supermarkets for food security; promotion of urban agriculture; institutionalization of local public procurement in schools; and the establishment of day-care centers, clinics, among others.

According to FAO, the largest programs of the Zero Hunger Programme in terms of investment, number of beneficiaries and visibility were the following:

- Bolsa Família, a cash transfer program targeted at poor families, conditioned on children's school attendance and health check-ups.
- The National School Feeding Program (PNAE) which guaranteed school feeding in day-care centers and public schools.
- The National Program for Strengthening Family Agriculture (Pronaf) which provided subsidized credit and extension and rural advisory services to family farmers.
- The Food Acquisition Program (PAA) which promoted the purchase of food from family farming for local public procurement.
- Cisterns Construction Program to collect rainwater for domestic use in the semi-arid northeast of the country.

Apart from those key interventions, one key element in the success of Brazil's poverty reduction strategy was the introduction of a policy for a stable and real appreciation of the minimum wage. The policy was the result of a tripartite social agreement to guarantee the progressive appreciation of the legal minimum wage floor according to the economic conditions and the evolution of the GDP. This measure provides predictability of annual readjustments to the public and private sectors, stimulated growth, and slowly distributed GDP growth to the poorest workers, which were more dependent on the minimum wage.

Following the achievements of Zero Hunger programme, the government launched a plan in 2011 for the eradication of extreme poverty, the Brazil sem Miséria (Brazil without Extreme Poverty). The plan comprised three components: (1) strengthening cash transfer Bolsa Família towards ending the poverty gap, and prioritizing families with children; (2) providing access to services – education, health, social assistance, energy and water for all the poor; and (3) promoting productive inclusion, favoring the creation of employment in urban and rural areas.

## Comparing China and Brazil's experiences

Although we have highlighted the similarities between Brazil and China, here we want to emphasize the following aspects: the difference between a State based poverty reduction strategy (China) and a Government led strategy (Brazil), and the difference in the role of income inequality in both cases.

While in China the process of poverty reduction has run for much longer, going through different policy strategies, in recent history Brazil's steady poverty reduction has only occurred during around one decade or more. While China made poverty reduction a policy of the State, in Brazil this progress has relied on the strong commitment of one political party. A second aspect that differs is inequality. Similar to many countries in the Latin American region, Brazil has high levels of income and social inequalities that were ingrained from colonial times and have continued to this day – although we have seen that the decade of poverty reduction in Brazil came with reduction in inequality. The formation of Latin American countries through the colonization model led to large concentrations of resources and political power, and the creation of weak institutions.

It's argued that the colonization pattern of tropical countries, like Brazil and several Latin American and African countries differed from that of temperate countries in that the former created a structure of exploration for tropical products, based on large properties, monoculture of profitable commodities (sugarcane, coffee, cotton and others), and slavery (and later precarious labor). This originated a dual society and economic structure of wealthy landowners and asset owners with a large number of poor workers. In Brazil, this structure evolved with time, particularly from independence, to a more development-oriented system, with establishment of national industries and services; however, economic and political institutions in Brazil remain weak and the concentration of wealth remains.

For Brazil, during the time of highest poverty reduction, reversing inequalities was conceived as part of the overall poverty reduction efforts, and necessary to sustain development in the long term. Poverty reduction required a national income redistribution process, addressing the aforementioned historical unbalances with all parts of society and all economic drivers involved, rather than limiting these efforts to targeted interventions. For example, internal regional inequalities continue to be pervasive. The poorest populations are mostly concentrated in the northeast region (which is the most affected by drought) and in the north region (where most of forest dependent communities and indigenous populations live). But the south and southeast regions are where technology and high profit industry are concentrated.

Urban poverty is also a concern in Brazil, driven by the lack of basic services, housing and urban transportation, and aggravated by violence. This creates an environment of permanent social struggle for human rights and justice. According to Rolnik, poverty is in the basis of Brazil's "incomplete" urbanization and the utopia of modernity has not been attained. In some neighbourhoods in cities like Rio de Janeiro and São Paulo, the level of violence can be comparable to civil war in the Middle East. The fight for territorial dominance between drug cartels and the police is aggravated by the lack of basic services and employment in cities. Progress in China has worked in the opposite direction. Communism provided a leveled playing field for most sectors for the population to benefit. Income and social equality was the rule

before the economic reforms in 1978, and they still determine the overall process after the reform. In more recent years, inequalities in China has nevertheless increased and continues to be high.

Below we discuss three successful aspects of the Brazilian experience that may be of interest to China in its path to eradicate extreme poverty. This is related to Brazil's key factors of success identified: unified registry to reach the poorest, a broad family farming policy led by a specific Ministry of Agrarian Development, and the food security governance structure, which encompassed 19 ministries and civil society organization through a National Council and a National Food and Nutrition Security System implemented from ZH.

### **Reaching the poorest: the role of social protection and the registry systems**

The main drivers of poverty reduction in China and Brazil were the increase in household real incomes, generated by a set of factors that include economic growth, employment generation, access to additional income-generating opportunities, and social protection.

The most recent National Rural Poverty Reduction Strategy (2011-2020) in China emphasizes the role of social protection and the gradual scale-up of a social security system. The current social protection system in China includes social insurance, social assistance and social welfare. In Brazil, the role of social protection was also a key element for its hunger and poverty reduction strategy. Social security and the welfare system were universal and emphasized the establishment of basic floors aligned to minimum wage for all workers, including informal family farmers, with differential treatment for rural workers and the institution of the Unified Health System.

Two targeted social assistance programmes were of extreme importance: Continuous Benefit for families with disabled and elderly people (established by the National Constitution of 1988), whose benefits were attached to the minimum wage, and the conditional cash transfer programme Bolsa Família for all poor households, created in 2003. As a result of this set of policies, the labor income and pensions on the average household in the country increased by 38% between 2004 and 2014, and social programs increased in real terms by 96%, from R\$39 to R\$77 on average in the same period. Most importantly, among the lowest quintile in the income distribution (bottom 10%), the share of household income from retirement doubled, while that of social programs tripled in the same period.

A sophisticated information system was put in place to identify eligible families for targeted social programmes and to unify identification criteria from different states and municipalities (which used different criteria and overlapping benefits). The system included a single registry (cadastro único) of households that was decentralized and open for making amendments, updating the data, or including more households as needed. The single registry provided a wealth of information about the situation of poverty in Brazil. Beyond income data, the registry collected information of more than 60 different variables in relation to family and individual characteristics, and specific socio-economic and demographic groups of families (levels of vulnerability, ethnicity, and community location among others). Active search of poor households in the most remote places also helped to increase the number of families in the registry.

The single registry was also used to identify the beneficiaries of Bolsa Família and of other complementary programmes. As a result, the number of families in the registry increased from less than 13 million families in 2004 to 21 million in 2011, reaching 27 million in 2014 which surpassed the number of poor families. In the same period, the number of beneficiaries of Bolsa Família increased from 6.6 million families in 2004 to 13 million in 2011, and 14 million in 2014. The other social assistance programmes for families with disabled and elderly poor members increased from 2.0 million in 2004 to 4.1 million by 2014. Other social programmes targeting poor families – access to water in semiarid regions through water harvesting, and the universalization of energy in rural areas – also contributed to increasing the number of families registered in the cadastro único. Overall, the system has also helped determine beneficiaries of about 20 federal programs, in addition to other state and municipal programs.

### **Family farming agriculture as the catalyst of poverty and hunger eradication**

The Chinese experience in agriculture development in the early period of economic reforms was quite different from the green revolutions in Latin America. In Brazil, the green revolution occurred during the same period and achieved a productive structure in the 1960s, with a rudimentary agricultural technology in much of the country at that time. The social and economic structure of the agricultural sector, based on a highly concentrated land structure, along with the introduction of technologies without alleviating the negative impacts of the labour saving technologies and their higher cost, was to the detriment of farmers.

Another negative contributing factor was that at that period, Brazil was facing a boost in its demographic transition caused by declining mortality rates and stable fertility rates with impacts in both rural and urban areas. The increment in population was not addressed accordingly with policies to absorb labor capacity.

This technological dependency was counterbalanced by the establishment of a national agricultural research system combined with the national rural extension system from the 1960s, with the creation of Embrapa (National Organization for Agricultural Research) and Embrater (National Organization for Technical Assistance and Rural Extension), institutions which aimed to modernize the agricultural sector, promote growth and increase exports to developed countries.

However, concentration of benefits to larger farmers remained high due to weak social organizations and also in a situation of international economic and financial dependence, with a lack of autonomous capacity of the country to develop and implement public policies to develop more equally the rural areas. These contexts deepened the character of the technological dependence of this overall process which led to higher levels of migration and deepened the inequalities in rural areas. While the green revolution put Brazil as one of the top five countries with the highest crop exports, it also expelled nearly 30 million people out of the countryside in a period of 20 years, increasing poverty levels in the cities.

As the family farming sector was one of the most vulnerable to poverty and hunger, the Zero Hunger Programme put a special emphasis on their development. The project identified that, in 2001, 46% of the poor families was living in rural areas, thus, a rural development strategy was at the core of ZH.

According to Del Grossi and Marques, in Brazil rural areas are formally viewed as backward and impoverished and as an obstacle for development, instead of places for dynamic and sustainable growth. This focus on family farmers and the creation of differentiated policies for them were possible by defining and recognizing their social identity in law. Some examples of targeted policies to support family farming were (a) subsidized rural credit for family farmers (Pronaf), which was once restricted to the south region and then expanded nationwide, including weather and income insurance; (b) reinvigoration of land reform and land regularization programs; (c) affirmative actions within the rural development plans, in relation to gender, race and ethnicity, and rural youth; (d) access to markets through public food procurement of family farming produce.

The first steps to implement such targeted policies are the definition, identification and registry. The Brazilian definition was set by Law. The article 3 of Law 11.326 of 2006, established the definition of the family farmer and the directives for the formulation of the National Policy for Family Farming and Rural Families. With the definition, those farmers could be quantified nationwide. According to the Agricultural and Livestock Census in 2006, the family farming sector was made up of 4.3 million agricultural and livestock establishments which had access to 80 million hectares of land and occupied more than 12 million people. This represented 84% of the farming entities; they provided employment for 74% of the rural work force, and, in spite of comprising only 24% of the total agricultural area, they accounted for 33% of total production value.

The following important element for the targeted policies is the identification of family farmers through a registry mechanism: the Declaration of Aptitude to Pronaf (DAP) is used to identify and qualify the family farming units and their forms of association into legal entities. In August 2014, there were more than 5 million active DAPs and 2,900 legal entities. The DAP is used as a reference database for identification of the beneficiaries of 12 rural credit lines associated to Pronaf and to the following policies and programmes:

- the Family Farming Insurance (SEAF);
- the Program of Price Guarantee for Family Farming (PGPAF);
- the Food Purchase Programme (PAA);
- the National Program for School Meals (PNAE);
- the National Program for Rural Housing / My House-My Life Program;
- the Program for Sustainable Development of Rural Territories (Pronat);
- the National Program for the Production and Use of Biodiesel (Social Fuel Seal);
- the Social Biodiversity Programme; and
- to gain access to social security benefits, among others. The government exchanges data between the DAP and the Single Registry to target rural poor population in specific interventions.

It is remarkable that this experience of identification and registry inspired many Latin American countries. Mercosur's Specialized Meeting for Family Farming (REAF) and its executive body,

the Common Market Group (GMC), approved a Resolution that established directives for the recognition and identification of family farming in the Mercosur region and established the implementation of voluntary national register systems for farming families based on common minimum criteria for defining this sector.

The simultaneous combination of various policies, initially focused on the fight against hunger and food insecurity, and more recently, on the eradication of extreme poverty, created a “permanent network” of public actions in a coordinated manner.

Another important feature of the family farming policy is the access to market through public purchase. In the elaboration of the Zero Hunger, in 2001, there was a diagnostic that the existing mechanisms, as the price guarantee tools, were not appropriately adjusted to the reality of family farmers due to the smaller scale of these producers and the distance from the operation of public supply markets. The government then, created the Family Farming Food Acquisition Program (PAA) with the following objectives: (a) encouraging poor family farmers to grow food, thus contributing to their food security; (b) generating income for poor family farmers by selling their surplus food production to the federal government; (c) encouraging the creation or development of marketing channels for family farming products in communities where they were weak or non-existent; (d) increasing stocks of food items to distribute to food programs with the aim benefitting populations facing food and nutrition insecurity; and (e) fostering social inclusion in rural areas by strengthening family farming.

The PAA was institutionalized by Law n. 10,696 of 2003, through the inclusion of a single article in a bill which provided legal basis for the direct procurement of food products from family farmers without the need of tenders, based on local market prices. This made it possible to buy directly food from smallholder farmers to institutional markets from Federal Government (stocks and direct distribution) and State policies.

As an evolution of this strategy, the government expanded that purchase capacity, by releasing a Law in 2009 (Law n. 11,947, of June 16), stating that a minimum percentage of 30% of the funds of the National Education Development Fund (FNDE) transferred to municipalities under the National School Meal Program (Pnae) were to be earmarked for procuring food products directly from family farmers, which significantly expanded the PAA's institutional market. Later, this strategy was also expanded to other institutional markets, like universities, prisons, public enterprises for food procurement modalities.

This experience also inspired other Latin American countries and was developed in African countries through South-South Cooperation on the PAA – Purchase from Africans to Africa – in a collaborative structure of Brazil, FAO, WFP and financing from DFID.

As many African countries are keen to learn from both Chinese and Brazilian process of green revolution, and the majority of employment relies on agriculture, these are important lessons to be considered, mainly related to the prioritization of family farming and small-scale agriculture for rural development.

## **The National System of Food and Nutrition Security (SISAN)**

The National System of Food and Nutrition Security implemented in Brazil since 2003 puts all these strategies together towards the concept of food and nutrition security and the right to food approach. According to Leao and Maluf, the systemic approach was adopted to facilitate the regulation of the interfederative articulation – federal, state and municipal – and intersectoral management, in which one can clearly define the roles and responsibilities of each one, with the preservation of autonomy of each federated entity. The adoption of a “national system” for the provision of public policies also addressed the need to make the various sectors of society work in an interdependent and indivisible manner.

The following assumptions were adopted for the creation of SISAN: a) formulation of a concept of “food and nutritional security” that is comprehensive and specific to the Brazilian reality; b) recognition of food as a human right and, therefore, an obligation of the State; c) establishment of a public food and nutrition security system (SISAN); d) participation and social control in the management of this system; and e) establishment of a specific budget for the management of the system, increasing the financing of public policies on food and nutritional security.

The Losan – Organic Law for Food and Nutrition Security – was elaborated in a participatory way and was approved in 2006. It is the main instrument that legislates on the subject and defines the creation of SISAN with a view to ensure the human right to adequate food, and establish the principles of the system: universality, equity, autonomy, social participation and transparency.

SISAN is a public system that brings together the various sectors of government for the coordination of policies (19 ministries) that have the common goal of promoting food and nutritional security and decent access to food for the whole population, with participation of civil society entities. The SISAN management bodies are:

- the National Conference on Food and Nutrition Security – a meeting that meets every four years to indicate to the National Council (CONSEA) the guidelines and priorities of the FSN Policy and National Plan, as well as to evaluate SISAN;
- CONSEA – the immediate advisory body of the President of the Republic presided by civil society representative, with representation of civil society and the 19 ministries;
- the Interministerial Chamber of Food and Nutrition Security (CAISAN) – composed of Ministers of State and Special Secretaries responsible for achieving FSN;
- the Federal, State, Federal and Municipal FSN bodies and entities; and
- private, profit-making and non-profit institutions that express an interest in adherence and that respect the criteria, principles and guidelines of SISAN.

This structure led to the organization of 4 national Conferences, formulating and monitoring the progress of key intersectoral policies and plans that contribute to FSN and foster policy dialogue between civil society and government at all levels. Some important themes were discussed and approved in the governance structure: the Family Farming Harvesting Plan; the Plan for Overweight and Obesity Reduction; the Policy and Strategy for Indigenous Populations; the Policy and Plan for Agroecology; the Plan for Sociobiodiversity; the elaboration and monitoring of the National FSN Plan; and the Policy for Coexistence with Semiarid and drought and many



others. This structure can be an interesting coordination mechanism for countries that face need for better coordination when dealing with cross sectoral goals, such as hunger, malnutrition and poverty eradication.

As it was also highlighted, the private sector is a key partner for the economic development and a contributor for government poverty reduction strategies. In China, the State has a central role in planning the private sector activities and also in proposing how they can contribute to the government's priorities, and establish incentives. In China, many enterprises contributed and are contributing to the goal of the government. There are two main strategies for this: poverty reduction through industrial development and pair-wise aid policy.

#### **IV. Discussion**

Although good progress has been seen in the last decades, poverty reduction, and its eradication, is at stake, mainly in least developed countries. Conflicts, climate change and climate-related disasters, economic crises and policy changes are preventing progress towards a more equal global society.

China's economic growth is also creating income inequality, mainly between urban and rural areas. Brazil's progress over more than one decade is reversing due to economic crisis and policy changes, showing the nature of vulnerability of its poverty reduction process. Much more needs to be done to achieve the Sustainable Development Goals by 2030. Several lessons can be drawn from the experiences of China and Brazil which can inspire other developing countries committed to ending poverty and hunger.

Probably, a common feature of both countries is that poverty reduction was not only achieved through economic growth. China's and Brazil's success have been also explained by the very high prioritization that they have given to hunger and poverty reduction. This determination has guided public policies, public and private investments, and the combination of a set of multi-sectoral policies geared to poverty reduction and targeted interventions.

The role of agriculture in poverty reduction is another common feature, particularly in its focus of smallholder family farming for rural poverty reduction, although China has emphasized interventions to enable transition of small-scale producers to the non-farm economy, while promoting agri-business and large cooperatives. In Brazil this has been the opposite as family farming has been conceived as a major force for rural growth as well as for ensuring food security and nutrition.

Both countries have also used the role of multi-sectoral coordination mechanisms for poverty reduction (China), hunger eradication, food security and nutrition (Brazil). Finally, in their strategies for poverty reduction, China and Brazil have used a combination of different instruments, from changing the structure of the economy, to implementing more targeted policies at different levels (national, regional, and local).

There is a key differentiating factor between the two countries. In China, it is clear that poverty reduction is a State level priority and ingrained the country's vision of development, which has

led to long-lasting government commitment and results. In Brazil, poverty reduction has been mainly a government priority, and its sustainability is fragile to electoral results. Changes in government, similar to other Latin American countries, result in changes in priorities and important policy changes that can lead to discontinuity and loss of progress.

Another important difference between the two countries is that in Brazil, food security and nutrition was given a higher priority, and conceived as part of their theory of change for reducing poverty. Both quantity and quality of food was given a high priority, with the aim of providing access to good and healthy food for the poor and the population as a whole. This was reflected in the creation of a national system for the articulation of policies from the relevant ministries, through social justice and sophisticated systems for identifying beneficiaries and monitoring progress.

In the future, both countries, along with others, could use South-South Cooperation (SSC) with the goal of sharing their experiences, the successes as well as the failures. SSC for poverty reduction is still underutilised in the developing world and can be a good way forward to work together in the achievement of the SDGs.

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