



# Filling the Knowledge Gap in South-South Cooperation:

▶▶▶ An Evaluation Framework and Its Application in China-Tanzania Cooperation



September 2018



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*An Evaluation Framework and Its Application  
in China-Tanzania Cooperation*

China Institute for South-South Cooperation in Agriculture/ College of  
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September 2018

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# Forward



The importance of South-South Cooperation (SSC) has been widely recognized within the global community as SSC has been providing enormous development resources through either trade, investment or development cooperation. However, the data and information on South-South cooperation are severely insufficient to inform multiple stakeholders about the lessons and experience of SSC. Against this backdrop,

the report drafted by my colleagues at China Institute for South-South Cooperation in Agriculture (CISSCA) presents a comprehensive evaluation framework for SSC through analyzing the cases of China-Tanzania cooperation, thus filling the knowledge gap in SSC, shedding lights on policy-makers, practitioners and researchers in this particular field.

By reviewing historical evolution of South-South cooperation, the report highlights a sheer fact that new South-South cooperation led by emerging economies like China, Brazil, India and South Africa are reshaping the established global development landscape by providing new resources, mechanisms and knowledge. The evaluation framework proposed in the report comes at a right time to provide reference and guidance for improving the effectiveness of SSC. By breaking down to five dimensions, i.e. political, economic, social, environmental and learning perspectives, readers could easily grasp a sense of the complex and intricate nature of new SSC from 9 detailed case studies in three different sectors of China-Tanzania cooperation: infrastructure, agriculture and health.

We have to admit, there are enormous challenges that lie ahead for South-South cooperation, things like fragmentation and inconsistency of information and data, lack of human resources and funding...knowledge and innovation may be the key to address these challenges. We appreciate the endeavour of the authors to search for the key.

And as always, China Agricultural University stands ready to continue partnerships with development organizations like the United Nations Development Programme and United Nations Office for South-South Cooperation, and other research institutions in strengthening joint response to challenges, especially in the field of agriculture and rural development, that rise in the way for building a global community with a shared future and realizing the 2030 agenda for sustainable development.

孙其信

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# Acknowledgements

The authors are grateful for the support provided by the United Nations Development Programme (UNDP), in the process of preparing this report, a special work dedicated to the 40th anniversary of the Buenos Aires Plan of Action for Promoting and Implementing Technical Cooperation among Developing Countries (BAPA+40) which provided a roadmap for developing countries to promote cooperation amongst themselves.

Special thanks go to Dr. Neissan Alessandro Besharati, a Senior Research Fellow at Institute for Global Dialogue, South Africa, and Dr. André de Mello e Souza, a Senior Research Fellow at Instituto de Pesquisa Econômica Aplicada (IPEA), Brazil, for their insightful comments on improving this report. We also would like to thank our colleagues in the China Institute for South-South Cooperation in Agriculture: Administration Director, Ms. MA Jiewen, and Research Assistant, Ms. YANG Chengxue, for their generosity in helping the report becoming a better one at different points of the whole process.





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## 1. Introduction

South-South cooperation (SSC) has attracted enormous attention in the last few years, particularly with regard to the emerging nations like Brazil, China, South Africa and India. It is playing an increasingly important role in international development cooperation. The models of development cooperation advocated by these new southern providers are not only reshaping the architecture of international development cooperation, but are also mobilizing more finance for development. The “aid for trade” and “aid for investment” approaches applied widely by the new southern providers like China, India and other BRICS countries have demonstrated their ability to mobilize more development resources, placing an emphasis on development sustainability rather than official development assistance

(ODA) which has been used by western countries for decades. These new emerging economies bring not only new resources, but also their own development experiences to developing countries, which takes this kind of cooperation beyond traditional limits of political solidarity and technical cooperation. Moreover, the new development frameworks initiated by these emerging economies, especially China, are starting to impact upon the global development community. For example, a series of new development mechanisms and platforms initiated by China, like the Belt and Road Initiative, the Asian Infrastructure Investment Bank, the New Development Bank and the South-South Cooperation Aid Fund not only provide unprecedented resources for development

cooperation among southern countries but also strengthen the new discourse of international development cooperation addressing the issues of “effectiveness and efficiency” which has been emphasized by the traditional donors since the Paris Declaration in 2005.

All of these new trends of SSC call for the acquisition of new knowledge to interpret the new discourse and practice, which can facilitate the accumulation of best practice and a mutual learning process in the global development community. So far, however, there has been no systematic data collection framework for SSC, which hinders the evidence-based knowledge generation and the mutual learning process of both providers and partner countries. The misalignment of SSC and North-South cooperation (NSC), due to a lack of information, often means partner countries struggle to make the best use

of development resources. Indeed, the fragmentation of SSC itself makes it difficult to illustrate its own strengths and weaknesses. Thus, a set of alternative frameworks should be developed to evaluate SSC to record and summarize the changing cooperation practices and to conduct international comparison and dialogue.

The current development assessment framework and the world’s development knowledge face new challenges. There has been a dualistic structure in the evaluation of NSC-based development with tension arising between the external customer-oriented evaluation, serving accountability, and the project improvement-oriented internal evaluation, catering for organizational learning (Xu & Xu, 2017). On one hand, such tensions relate to the nature of NSC. Donors need to be accountable for recipient countries





and responsible to their own domestic tax-payers. For many donor countries, development cooperation has developed into an industry, providing numerous job opportunities for both experts and ordinary employees in donor countries.. The appropriately balanced allocation of funds to domestic stakeholders is an important issue faced by many development agencies in donor countries. Therefore, the principal objective of monitoring and evaluating development aid for western donors is to make the allocation transparent, which is fundamental to the legitimacy/survival strategy of all development programs in the developing world. On the other hand, these tensions are also related to domestic governance patterns. For example, the degree to which a country's citizens demand accountability may affect the budget for development cooperation. Under the existing SSC, however, the cooperation modes guided

by principles like mutual benefit and equality (for example, development experience sharing, technical cooperation, and economic and trade relations) at the core make issues of accountability and transparency less pertinent to providers' domestic political and economic sphere. Approaches to improving development effectiveness and efficiency at present are more focused on the purpose of mutual learning. Can both provider countries and partner countries learn something from the process of cooperation? What kind of lessons and experiences should they learn from the previous or existing development cooperation projects? With the purpose of answering these two questions, this paper attempts to find some cases to verify the validity and relevance of the evaluation framework that we have proposed for SSC.



## 2. Evaluation Framework for SSC

Traditional international development mainly refers to development aid, especially ODA, but SSC has flexible forms, including various forces promoting developing countries' political, economic and social progress, among which development assistance is just one part. If the forms of economic cooperation such as investment, assistance and trade are regarded as important factors promoting the development of developing countries (Lin Yifu, Wang Yan, 2016), then the evaluation of SSC will inevitably need to exceed the aid-based assessment. Taking China's SSC with Tanzania as an example, this paper attempts to conduct an evaluation of SSC from the following five areas: investment cooperation; infrastructure construction; agricultural technology transfer; health cooperation;

and community-based poverty reduction. The selection of specific industrial sectors will be introduced in detail in subsequent sections of this paper.

As for the evaluation framework, this paper attempts to go beyond the five principles of aid effectiveness (ownership, alignment, harmonization, management for results, and mutual accountability), and instead analyzes China-Tanzania SSC from the following five dimensions: political, economic, social, environmental and learning (Table 1). It attempts, on the one hand, to test the effectiveness of the newly developed evaluation framework under the China-Tanzania SSC and, on the other hand, to reveal the nature of the new South-South development cooperation led by emerging economies like China

by providing an alternative framework for evaluating SSC projects.

The guiding principle of this evaluation framework is derived from the key principles outlined in the Nairobi Outcome Document (A/RES/64/222) as well as China's "Eight Principles for Economic Aid and Technical Assistance to Other Countries" put forward in the early 1960s and the foreign aid policy subsequently established. The eight principles are as follows: 1) equality and mutual benefit; 2) respecting the sovereignty of recipient countries, attaching no conditions and asking for no privileges; 3) providing economic aid and lightening the burden of partner countries as much as possible; 4) helping recipient countries to gradually achieve self-reliance and independent development; 5) striving to develop aid projects that require less investment but yield quicker results; 6) providing the best-quality equipment and materials of its own manufacture and setting the price according to the international market price; 7) while providing technical assistance, China shall see to it that the personnel of the partner country fully master such techniques; and 8) the Chinese experts are not allowed to make any special demands or enjoy any special amenities. The five basic features of foreign aid policy are:

- 1) helping partner countries to improve the ability of independent development;
- 2) attaching no political conditions;
- 3) adhering to the principles of equality, mutual benefit and common development;
- 4) doing our best within our ability; and
- 5) keeping pace with the times and carrying out reforms and innovations<sup>1</sup>.

This paper has developed a comprehensive alternative evaluation framework, broken down as follows: in the political dimension, paying attention to non-interference in each other's internal affairs, respecting sovereignty, paying attention to equality and mutual trust; in the economic dimension, paying attention to mutual benefit and win-win results, as well as efficiency; and in the social and environmental dimensions, paying attention to the impact on the local environment, the poor population and vulnerable groups, especially with regard to local employment and technology transfer. The most prominent and important thing in the latter dimension is that the SSC attaches importance to technology transfer and mutual learning, and adheres to both sides' mutual learning and practice improvement based on common cultural identity and historical memory, which forms the basis of political equality, mutual economic benefits and social environment improvement.

1. *The principles and guidelines of China's foreign aid and foreign economic and trade cooperation are expressed in various forms. For example, the contents of the five policies derive from the White Paper "China's Foreign Aid (2011)". But the White Paper "China's Foreign Aid (2014)" provides that "China insists on providing foreign aid with no political conditions, non-interference in the internal affairs of the recipient countries, with full respect for the recipient countries to independently choose their own development path and model rights. Mutual respect, equality, keeping commitments, mutual benefit and win-win cooperation are the basic principles of China's foreign aid." The "White Paper on the economic and trade cooperation between China and Africa (2013)" does not use words such as economic and trade cooperation principles and norms, but it does mention "common development, sustainable development, community of destiny".*

**Table 1: SSC M&E Framework**

Dimensions	Principles	Measurable indicators	Data source	Evaluation methods
Political	<ul style="list-style-type: none"> <li>1. Mutual respect</li> <li>2. Equality</li> <li>3. Non-conditionality</li> <li>4. Non-interference</li> </ul>	<ul style="list-style-type: none"> <li>1. Percentage of SSC projects based on partner country's needs;</li> <li>2. Percentage of SSC projects based on mutual agreement;</li> <li>3. Number of projects based on joint decision-making and project implementation;</li> <li>4. Number of projects reflecting both sides' strategies</li> </ul>	Provider and partner countries	Process evaluation
Economic	<ul style="list-style-type: none"> <li>5. Mutual benefit</li> <li>6. Efficiency</li> </ul>	<ul style="list-style-type: none"> <li>5. Percentage of local procurement (including materials and service)</li> <li>6. Percentage of local human resources</li> <li>7. Percentage of local financing</li> <li>8. Proportion of the project income going to local stakeholders (dividends reinvestment, etc.)</li> <li>9. The gap between Southern/Northern funded projects in terms of time, cost and output</li> </ul>	Partner country	Process evaluation
Social	<ul style="list-style-type: none"> <li>7. Equality and justice</li> </ul>	<ul style="list-style-type: none"> <li>10. Project's contribution to poverty reduction, especially the enhancement of vocational skills of the occupational poor, such as the number of local trainees, the volume of technical transfer and the number of specialists from the provider country</li> <li>11. Number of vulnerable/marginalized people (those living under the poverty line, especially women and youth) benefiting from the project</li> </ul>	Partner country	Impact evaluation



Dimensions	Principles	Measurable indicators	Data source	Evaluation methods
Environmental	8. Sustainability	12. If the project feed into national policies and strategies for environmental sustainability of partner country?	Partner country	Process evaluation
Learning and sharing	9. Capacity development	13. Total budget for the technology transfer 14. Number of people trained by the project 15. Number of shared useful experiences	Provider and partner countries	Process evaluation

Source: Li Xiaoyun, *Monitoring and Evaluation Framework for SSC, UNDP Project Report*

SSC pays significant attention to the process of development cooperation, with a focus on mutual learning to accumulate the best practice in terms of project implementation and lessons. The independence of the political development path, the mutual benefit and internal spontaneity of economic development, as well as the flexibility and diversity of social culture itself, make the process of SSC relevant to partner (host) countries than the data showing results. More importantly, in developing countries, the development process is usually of gradual exploration and study. Indeed, Sabel (2004) called it “bootstrap development.”

Key to the value of the evaluation of new SSC lies in whether the cooperation is conducive to both sides and, in particular, whether the partner has built its own internal development system and gained momentum with foreign capital, laid a new development foundation based on the previous system through gradual exploration and study, and explored a new development direction, thus establishing an orderly development mechanism. In other words, the purpose of this evaluation work is to contribute to the knowledge base on SSC and provide an alternative evaluation framework for other partners to utilize.





### 3. Evaluation Approach and Methods

The assessment of SSC differs from the previous assessments of NSC in terms of concept and evaluation content. The evaluation of NSC attaches importance to project performance based on the project’s logistical framework, i.e. the overall design of the aid project, and checks whether the milestone output reaches the requirements for the relevant indicator, and whether the output, result and impact reach the targeted standards at all levels. Such an evaluation framework itself is based on a rational design and the hypothesis of implementation by the aid bureaucracy. For the SSC model, however, these assumptions are at times not relevant. In terms of the rational design, political and cultural factors in the design of SSC often play a greater role. The professional bureaucracy often does not play any role in the implementation.

Thus, SSC actually follows some other logics, which this paper attempts to reveal. SSC, unlike NSC especially for OECD DAC countries, at macro-level, faces the problem of fragmentation of information and data due to a lack of manpower, capital and materials. In particular, the China–Tanzania development cooperation is still in the initial stage, facing various uncertain factors, and mainly focusing on exploration and action. One Chinese entrepreneur operating a business in Africa said: “We are all feeling the stones while crossing the river. There is no ready-made theoretical guidance or a clear path for us to follow. We can only rely on ourselves.” Under the unguided circumstance, it is difficult to evaluate such dynamic and diversified cooperation activities using a predetermined rational framework.

Under the guidance of the above mentioned assessment framework, with case study as the core research method, focusing primarily on qualitative data analysis, supplemented by quantitative data, this paper aims to establish the best practice and share development experience. The reasons for focusing on a qualitative case study are twofold. On the one hand, it is almost impossible to obtain a complete dataset on SSC at present as most SSC countries do not have systematic data. On the other hand, a qualitative case study can put SSC against a macroscopic historical background and can help to better understand the cooperation process and impact.

This paper has chosen the cooperation between China and Tanzania as its case study. Among African countries, Tanzania is one of China's closest partners, receiving a significant amount of Chinese aid since the 1960s. The construction of the Tanzania-Zambia Railway in the 1970s was a milestone aid project making Tanzania an important partner country for China in its conducting of SSC. Moreover, Tanzania shares historical

similarities with China both politically and economically, and both China and Tanzania are heavily driven by agriculture. Therefore, China's development experience is highly relevant to Tanzania.

As the objective of the evaluation is to enhance mutual learning and experience sharing, all of the cases we selected for this case study are on-going development projects, which have fundamental features of SSC.

Nine cases, covering three sectors including infrastructure construction, agricultural technology transfer, and medical and public health service, were selected for monitoring and evaluation purposes. The assessment was conducted based on a category of cases in each sector to unpack the process of project implementation (Table 2). These three sectors selected are among five key areas advocated by the *White Paper on China-Africa Economic and Trade Cooperation (2013)*, which is representative in China-Tanzania SSC.



**Table 2: China-Tanzania cooperation case selection**

Sector	Characteristics / Why have we selected this sector?	Cases
Agriculture	<ol style="list-style-type: none"> <li>1. Investment project focusing on sunflower seeds processing and oil extract.</li> <li>2. The ATDC: a key element of China's cooperation.</li> <li>3. Poverty Reduction Learning Center: the core agenda of China's current international development activity and an important part of China's development experience to be shared.</li> </ol>	Sunshine Group Ltd., China-Tanzania Agricultural Technology Demonstration Center (ATDC), Village-based Poverty Reduction Learning Center
Infrastructure construction	<ol style="list-style-type: none"> <li>1. Aid project</li> <li>2. Preferential loan project</li> <li>3. BOT project</li> <li>4. Contracting projects: State-owned company</li> <li>5. Private company</li> </ol>	Dar es Salaam Library; National Information Communication Technology (ICT) Broadband Infrastructure Backbone Networks in Tanzania contracted by China International Telecommunication Construction Corporation (CITCC); Mwalimu Nyerere Foundation (MNF) Square Invested by CRJE; STECOL Corporation, Tanzania Branch; Group Six International Ltd.
Medical service and public health	<ol style="list-style-type: none"> <li>1. Aid project</li> </ol>	Jakaya Kikwete Cardiac Institute

A core concern of the assessment is whether the principles of SSC mentioned in the macro discourse are embodied in a micro case and, if so, what the logic behind this would be.

Specific questions about the assessment will be raised focusing on five dimensions: political, economic, social, environmental, and learning & sharing. Based on the actual situation of each case, adaptive

adjustment and application is made to the indicators of corresponding dimensions.

From political perspective, the questions will focus more on mutual equality during the process of project design and implementation. For example, do partner countries respect each other's sovereignty? Does the cooperation attach political conditions? Does the cooperation project is demand-driven?

From economic perspective, the assessment work concerns more about the economic contribution of the cooperation to both partners and the efficiency and effectiveness of the cooperation compared with North-South Cooperation.

From social and environmental dimensions, do the cooperation projects contribute to the improvement of local people's livelihoods, welfare? Do they cause environmental pollution or contribute to environmental sustainability? Do they follow the environmental policies and strategies of both partner countries?

Last but not the least, do project implementation process promote the mutual learning and experience sharing of both partner countries, especially in terms of technology transfer and capacity building? Have the interactions between the two sides constantly reshaped the partner's behavior and strategy? In SSC, the construction of a horizontal relationship, experience sharing and continuous study are always the core. This particular point will be summarized in the final part of this paper.

In the process of collecting data for assessment, we mainly collected secondary literature and carried out field research. Secondary literature helps us to better understand the relevant policies and to obtain macro data. In the field research, we mainly collected data through on-site observation, interviews with key figures,

focus group discussions, interviews with individuals, and analyses of organizational structures. In the analysis, this paper focuses not only on the formation process of the project, but also the micro effects of the project.





## 4. Mapping of China-Tanzania Cooperation

### 4.1 The profile of China-Tanzania Cooperation

Located in East Africa, the United Republic of Tanzania (hereinafter, Tanzania) is a country with a vast territory, complex culture and is classified as a least developed country (LDC).<sup>2</sup> In 2015, its human development index (HDI) was 0.531, ranking 151<sup>st</sup> among 188 countries. Like other African countries, Tanzania's economy relies heavily on agriculture. Among its

population of 42 million people, 80% are engaged in agricultural production, and agricultural output accounts for 25% of the country's GDP. Agriculture is also an important source of its export revenue, contributing more than 35% of its foreign exchange earnings through exports, providing raw materials for agriculture-related industries, guaranteeing food security for the nation, and serving as the foundation of the national economy of Tanzania. Moreover, agriculture is key with regard to reducing poverty

2. [https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2018\\_Full\\_Web-1.pdf](https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESP2018_Full_Web-1.pdf)

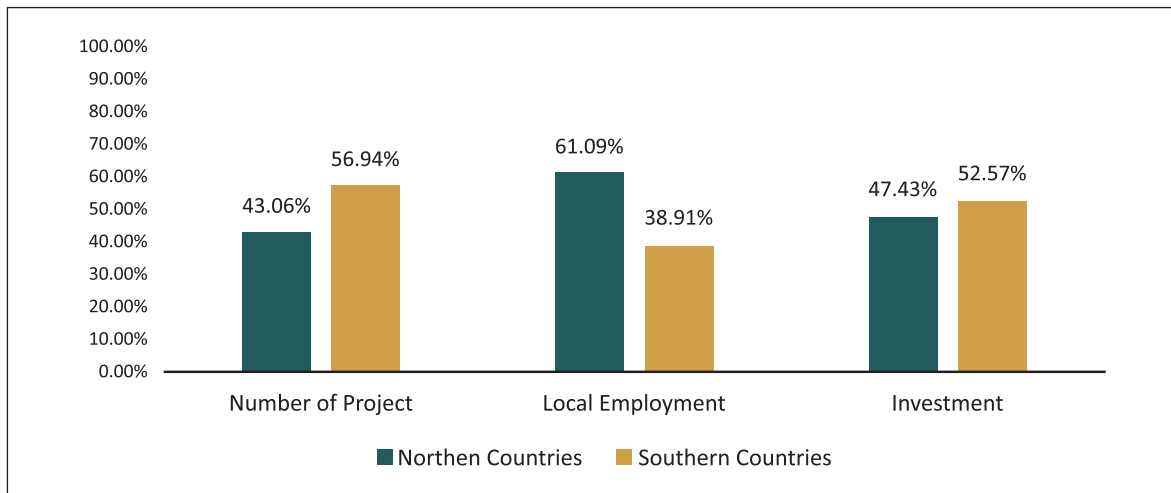
reduction, increasing industrialization and its urbanization and economic take-off. Tanzania has abundant natural and mineral resources, is an important exporter of gold and natural gas, and provides the international market with important resources such as cash crops<sup>3</sup> and industrial raw materials. Since the beginning of the 21st century, Tanzania's annual GDP growth rate has been consistent at around 7%, which is above the average level for African countries. China established diplomatic relations with Tanganyika and Zanzibar in 1961 and 1963 respectively. After the two independent countries merged in 1964 to become Tanzania, China has maintained good bilateral diplomatic relations and carried out in-depth cooperation with Tanzania in political, economic, and cultural fields. Therefore, China-Tanzania cooperation dates back more than half a century. In terms of economic and trade cooperation, in 2017, China became the second largest investor country in Tanzania and its largest trade partner. Of African countries, Tanzania is also one of the biggest recipients of aid from China. Since the establishment of diplomatic relations, Tanzania has hosted a total of more than 100 cooperation projects worth US\$2 billion from China. Tanzania is an important participant and partner of China's Belt and Road Initiative, its capacity cooperation strategy and the Sino-African Economic and Trade Cooperation Forum as well as other multilateral and bilateral cooperation mechanisms.

According to the data of the Tanzania Investment Center (TIC), from 1990 to 2016, the top five investor countries in Tanzania were the United Kingdom, the United States, Mauritius, China, and India. Additionally, in terms of the number of projects and the role in promoting local employment, China also ranks second. China's total investment in Tanzania is less than that of the United Kingdom and the United States, but China has been responsible for more aid projects. Second, in recent years, the investment of southern countries in Tanzania has exceeded that of northern countries, with the former now accounting for 52.57% of the total (Figure 1). In addition, southern countries now invest in a greater number of projects in Tanzania than northern countries (TIC, 2016).



3. A cash crop or profit crop is an agricultural crop which is grown to sell for profit. It is typically purchased by parties separate from a farm. The term is used to differentiate marketed crops from subsistence crops, which are those fed to the producer's own livestock or grown as food for the producer's family. Cotton, coffee are typical cash crops.

**Figure 1: The proportions of southern and northern countries in Tanzania's FDI (1990-2016)**



Data source: TIC internal report, 2017

As for the particular sectors in Tanzania to which FDI is allocated, there are distinct differences between southern and northern countries. Looking at the investment of British enterprises deeply rooted in Tanzania, nearly half (46.29%) is allocated to economic structures while the remainder is largely focused on engineering, construction and manufacturing sectors. For China, the main sectors to which it allocates FDI in Tanzania are manufacturing, construction, and communications, which together account for more than 80% of its total FDI in this country. The UK invests in human resources training, financial institutions, energy, petroleum and mining as well as economic structures in Tanzania (TIC,2016), but China has not launched any aid projects in any of these fields.

## 4.2 Main Areas of China-Tanzania Cooperation

### 4.2.1 Agriculture

In the field of agriculture, Tanzania is still a smallholder-dominated country with land per capita of 0.1 hectares and weak agricultural infrastructure. Despite its vast territory, arable land accounts for only 10.6% of its overall land, the proportion of irrigated areas is rather low, land productivity and labor productivity are both rather low, farmers generally lack education, the government has limited financial resources, and investment in agricultural infrastructure is relatively limited. Therefore, Tanzania's ability to attract FDI is rather weak. Since the mid-1990s, the proportion of agricultural investment in its total investment has been relatively low at 4.53% on average (TIC, 2017). In terms of proportion of agricultural





investment in total investment, South Africa ranks highest at 11%, followed by India. Netherland ranks third and China ranks seventh. In terms of FDI contributed to agricultural projects, China ranks fourth with an investment of more than US\$100 billion. However, China's investment in agricultural projects in Tanzania is still small relative to other industries. Since the beginning of the 1990s, its investment has mainly concentrated on state-owned enterprises, especially those engaged in land reclamation, such as the Sisal Farm which was invested in by China-Africa Agriculture Investment Co., Ltd. Since the turn of the century, private enterprises have gradually become involved, mainly engaging in the processing of sunflower

seeds, cashew nuts, and cotton. Currently, Tanzania is promoting the development of industrialization according to its Second Five-Year Development Plan (2015/2016-2020). Agricultural processing has become an important field in terms of attracting foreign investment.

Agricultural technology transfer has been an important part of SSC and is the core component of China-Tanzania agricultural cooperation. The problem of food security in Tanzania is the result of its "low input, low output" farming model of the small scale agricultural production system in Africa. The per unit food yield is about 22% of that in China, and is lower than that of some neighboring or nearby countries like Ethiopia, Zambia and Uganda. In 2014, for example, the corn yields in Ethiopia, Zambia and Uganda reached 34210 kg/ha, 27802 kg/ha and 25005 kg/ha respectively, but this figure in Tanzania was only 16250 kg/ha (Table 3). The low efficiency of agricultural production, especially the low yield, is one of the main reasons for Tanzania's food security problem.

**Table 3: Comparison of corn yields in Tanzania and neighboring or nearby countries (Unit: kg/ha)**

Year	2012	2013	2014
Ethiopia	30592	32542	34210
Kenya	17366	16922	16602
Malawi	21932	21708	16563
Uganda	24991	24959	25005
Zambia	26545	25382	27802
Zimbabwe	7799	7362	6375
Tanzania	12395	13000	16250

Source: FAO data



A serious shortage of investment in seeds, fertilizer and irrigation is a significant cause of low agricultural productivity in Tanzania. In Tanzania, rural households that use improved crop varieties account for no more than 20% of the total, while 70% of rural households have never used chemical fertilizer. Furthermore, arable land equipped with irrigation facilities accounts for only 1.69% of the total arable land. The most significant shortcoming though is that farmers lack farming technology and labor input is relatively low. Meanwhile, the Tanzanian government's fiscal expenditure on agriculture is relatively low. In the international community it is broadly believed that China's foreign aid projects focus primarily on hardware construction and government relations, with a relatively small number of micro projects at grassroots level. In recent years, with the release of two white papers on China's foreign aid in 2011 and 2014 respectively, both Chinese ordinary people and international community have been paying more attention to China's foreign aid. China has undergone reform on its foreign aid and now puts more emphasis on the implementation of community development and poverty reduction projects to improve people's livelihoods. In this context, the establishment of a village-level poverty reduction center in Tanzania served as a model for China to replicate elsewhere.

According to Tanzania's National Bureau of Statistics(NBS2001; 2007), although Tanzania has had an average annual GDP growth rate of 7% since the turn of the century, its economic growth has had little impact on reducing poverty within the country. Indeed, a high proportion of Tanzania's population remain poor. Nearly 38% of the Tanzanian population have an average daily consumption of less than US\$1, about 30% of the population live below the national poverty line, and at least 12 million people are at risk of hunger and poverty. The last figure has remained almost unchanged since 2001. In 2013, the Tanzanian government set the objective of lifting one million rural families out of poverty by 2015. According to the present situation, progress in this regard has not been significant, and the Tanzanian government still has a long way to go in terms of reducing poverty.

An important reason for the above mentioned phenomenon of economic growth is the slow development of the agricultural industry which has the most employees than any other industry in Tanzania. Moreover, 80% of local households rely on reserved seeds for planting, only 1.1% of the total cultivated area is irrigated, and the "slash-and-burn agriculture" model of production is used in some places while the level of mechanization is rather low. At the same time, and the agricultural investment budget accounts for only 6% of the total national budget, not reaching the target of 10% set by the Comprehensive Africa Agriculture Development Programme (CAADP).

## 4.2.2 Infrastructure construction

Undoubtedly, the development of infrastructure has contributed to economic development and poverty reduction in many parts of Africa. A serious shortage of infrastructure development in most African countries, especially in sub-Saharan countries, however, represents a significant bottleneck restricting economic and social development in Africa. According to an OECD-DAC report, of the official development financing in African, around 22% is allocated to infrastructure, with the majority of funding dedicated to capacity building, including the assignment of experts and the training of government officials (OECD, 2012)<sup>4</sup>. In recent years, with traditional donor countries allocating less resources, emerging countries such as China, India and Arab States have become active in investing in African infrastructure. It is estimated that China's investment in Africa is even greater than that of the World Bank. Chinese institutions have become the largest funding source for infrastructure development in Africa. According to relevant data revealed by the Infrastructure Consortium for Africa (ICA), in 2013, China invested a total of US\$13.4 billion in African infrastructure.



In the early 1970s, China helped Tanzania to build the 1860-kilometer Tanzania-Zambia Railway, which remains the most iconic aid project financed by China in terms of African infrastructure. The Tanzania-Zambia Railway, also known as the "Freedom Trail" in Africa, is one of the largest foreign aid projects funded by China and has played a significant role in the process of regional integration in Africa. The railway runs from Dar es Salaam to Kapiri Mposhi in Zambia, and was constructed by China Civil Engineering Construction Corporation (CCECC), and the Chinese government issued a 30-year interest-free loan of 988 million yuan (about US\$500 million) for the project. So far, freight trains on this railway have transported more than 30 million tons of goods. Meanwhile, regular and express trains are designed for the transportation of business travelers, and tourist trains are

4. OECD (2012), *Mapping Support for Africa's Infrastructure Investment*, Retrieved online from <http://unohrlls.org/custom-content/uploads/2013/09/Mapping-Support-for-Africas-Infrastructure-Investment.pdf>

designed for the transportation of tourists. China continues to provide funding and technical support for the maintenance and updating of the Tanzania-Zambia Railway's equipment to improve its transport capacity.

China and Tanzania have also founded a joint shipping company with three 10,000-ton ships. So far, China has undertaken more than 100 turn-key projects in Tanzania, including housing, infrastructure, drinking water and irrigation projects, as well as a number of technical cooperation projects, with the total investment amounting to more than US\$600 million. In addition, according to two policy documents, namely the Beijing Action Plan (2013-2015) and the White Paper on China-Africa Economic and Trade Cooperation (2013), and the 24th World Economic Forum on Africa in 2014, most of the Chinese government-funded projects are closely linked to the priority projects of the The Programme for Infrastructure Development in Africa (PIDA), and the flagship corridor projects of African regional economic communities. Financing instruments of these projects include aid funding, interest-free loans and preferential loans, mainly operated by the Export-Import Bank of China and the China Development Bank. The projects are mainly undertaken by Chinese state-owned enterprises, while some are sub-contracted by China-funded companies or their branches in African countries through international bidding competitions.

#### **4.2.3 Public Health Service**

China-Tanzania medical cooperation has been a core component of this example

of SSC. Since the beginning of the 1950s, China-Tanzania cooperation in the public health sector through the dispatch of medical teams, long-term and short-term trainings and Chinese government scholarships, as well as cooperation in infrastructure construction and medical technology including the construction of hospitals and clinics, as well as China's emergency humanitarian assistance for public health emergencies, have all been important parts of SSC between the countries.



Despite economic difficulties, Tanzania initially established a complete set of medical services and a healthcare system across the country, which is divided into six levels. It has also established a diagnosis and referral system. According to the regulation of the Tanzanian healthcare system, doctors and patients need to strictly obey the referral system. When it is necessary to attend a higher-level hospital, a referral certificate from the lower-level hospital is required. At present, the healthcare services in the mainland of Tanzania faces various difficulties. First, there is a shortage of funds. Healthcare is now mainly a task for the Tanzanian government. Since 2013, however, the Tanzanian government has been working under a serious financial deficit and

a decreasing healthcare budget. The actual amount of funds disbursed by the government on healthcare is still less than half of the annual budget. Second, there are few adequately trained personnel. In the recovery and development of medical institutions, a large number of certified doctors, nurses and medical workers are needed. On the one hand, due to the low level of education locally, it is difficult for Tanzania to cultivate a sufficient number of qualified medical workers. At the same time, the level of remuneration in rural hospitals, especially in the public hospitals, is significantly lower than that of private hospitals in the major cities. Moreover, the remuneration offered by some hospitals in some other countries of East Africa is comparatively high, thus leading the problem of a brain drain. Third, much of the Tanzanian population are poor, especially in rural areas, where many people have no money to pay for a visit to a doctor. Fourth, the low level of national

economic development and the poor infrastructure means that many hospitals in the country do not meet health standards.

The training and establishment of heart disease specialists in Tanzania has been developing but slowly due to funding constraints. From 2005 to 2007, the Tanzanian Ministry of Health and Social Welfare issued special funds to send 24 doctors and nurses to be trained as heart specialists in India and South Africa. During the same period, the Beijing Summit of the Forum on China-Africa Cooperation was held in November 2006. In the Forum on China-Africa Cooperation - Beijing Action Plan (2007-2009) adopted at the summit, the Chinese government proposed building 30 hospitals in Africa, of which it supported the establishment of the cardiac surgery treatment and training center of Muhimbili National Hospital at the request of the Tanzania Ministry of Health and Social Welfare.





## 5. Case profiles

### 5.1 Agriculture

#### ***5.1.1 Aid Project: Agricultural Technology Demonstration Center***

In order to alleviate the various difficulties detailed above, Tanzania was keen to acquire China's agricultural technology, and the launch of China's aid project establishing an agricultural technology demonstration center in Africa was an encouraging step in this regard. In November 2006, at the Beijing Summit of the Forum on China-Africa Cooperation, China promised to take eight measures to support Africa, one of which was to construct a "distinctive agricultural

technology demonstration center" in 14 African countries, including Tanzania. In order to strengthen Tanzania's agricultural production capacity and increase its crop yields, China's agricultural technology demonstration center in Tanzania strived to introduce China's agricultural technology to Tanzania. This was to be achieved through tests, demonstrations and training.

Proposed by the Chongqing municipal government and approved by the Ministry of Commerce of China, the agricultural technology demonstration center in Tanzania was finally contracted to Chongqing Zhongyi Seed Industry Ltd., which is affiliated to the Chongqing Academy of Agricultural Sciences, and constructed by Chongqing Sino-Tanzania

Agricultural Development Co., Ltd. After being approved by the Ministry of Commerce in 2007, the project was launched on October 16, 2009. The main project passed the interim acceptance of the Ministry of Commerce in May 2010, passed the final acceptance of the Ministry of Commerce in October of the same year, and passed the final acceptance of the Tanzanian Department of Agriculture in November of the same year. In December 2010, the contracting company began to dispatch technical experts to the demonstration center for testing, demonstration and training work. In March 2012, 11 agricultural technology experts were dispatched to the center, including three rice experts, three corn experts, two vegetable experts, two experts in tissue culture and one expert in chicken breeding. In April 2011, a formal transfer and technological cooperation ceremony was held, and the project was officially transferred to the Tanzanian government and entered the stage of technical cooperation. After the technical cooperation stage, in May 2015 the project entered the stage of sustainable development (business operation) as Chinese government stopped the direct financial support to the project. The operator of the project had to find its own way to be self-sustained

This Agricultural Technology Demonstration Center (ATDC), funded by China, in

Tanzania is located in the main agricultural production area in Morogoro. The site is 225 km from Dar es Salaam, the capital of Tanzania, and is easily accessible to the road. The ATDC covers a total area of 62 hectares, comprising 12 hectares of core demonstration area and 50 hectares of production exhibition area<sup>5</sup>. The core demonstration area is composed of three parts: the office and training area; the test and exhibition area; and the production and demonstration area, including the experts' residential area, offices, conference rooms, dining room, and trainees' dormitory. The ATDC has three main functions: testing and research; technical training; and demonstration, including field crop testing and demonstration, tissue culture technology training, breeding demonstration, processing demonstration and agricultural machinery display.



5. Some of the area is for vegetable growing test and demonstration. The Tanzania government once promised to construction supporting water conservancy facilities but has not launched the work, so not all the area outside the yard of the center is well used.

### **5.1.2 Investment Project: Sunshine Group**

An investor, Sunshine Group launched its field research in 2011 and was officially founded in Tanzania in 2012. From 2013 to 2014, Sunshine Group was very active, including the establishment of Sunshine Industrial Ltd in 2013. From 2015 to 2016, Sunshine Group began to make good use of its advantages in terms of business innovation and transfer, and agricultural processing, especially cashew nut processing and oil sunflower processing which became an important part of its business. After three years, Sunshine Group had grown into a corporation providing investment and wide business activities, covering mining, exploration, smelting, processing, sales and export of bulk agricultural and sideline products, high-tech business card printing, building materials and equipment manufacturing, warehousing and logistics services.

From a geographical point of view, Sunshine Group’s business covers all provinces and counties of Tanzania. So far, its total investment in Tanzania exceeds US\$100 million, and it has nearly 2000 employees. Sunshine Group plans to create an agricultural product processing and clean energy recycling industry chain with Dodoma as the main market, with the aim of growing into a demonstrative corporation for sustainable development in Tanzania.

### **5.1.3 Community-based poverty reduction project: Village-Level Learning Center for Poverty Reduction**

In summary, the low level of productivity of smallholder farmers in Africa is considered to be the key obstacle to reducing poverty and accelerating agricultural development in Tanzania. Thus, for China-Tanzania cooperation in the future it would be wise





to directly and effectively improve the level of agricultural development in Tanzania by sharing China's labor-intensive technology. Once agricultural production accelerates, it will help towards addressing problems regarding the market, agricultural processing, farmers' organizations, government's mobilization ability, the comprehensive construction of villages, and even towards the achievement of the overall goals related to the improvement of the management ability of Tanzania's central and local governments. In this context, the Village-level Learning Center for Poverty Reduction was launched in 2011, aimed at demonstrating China's basic experience in reducing poverty through agricultural development through smallhold farmers at village level, especially demonstrating how Chinese peasants improved their agricultural production capacity and improved villages' agricultural production conditions through self-reliance. Such an example is deemed relevant for Tanzania and Africa as a whole to learn from China's experience in poverty reduction.



Located in Peapea Village, Kilosa District, Morogoro Region, the project is 120 km from the provincial capital and 18km away from the Msimba Seed Farm. It is composed of four sub-villages and has 454 households and 1996 people. The villagers have received 5.26 years of education on average, only 42% of the farmers have their own arable land, and the arable land per household is 2.6 acres. Without proper irrigation, the villages' agricultural production depends on rain (known as rainfed agriculture). Under the leadership of the International Poverty Reduction Center in China (IPRCC) and the Tanzania President's Office Planning Commission (POPC), the project has been implemented by the Peapea Village Committee. The Research Center of International Development at China Agricultural University, the Tanzania Branch of China-Africa Agriculture Investment Co., Ltd. and the local agricultural extensionists together have been providing technical support for the project. Based on the prophase participatory assessment survey, combined with accumulated knowledge of the actual local situation, main contents of the project were formulated, including: (1) agricultural technology demonstration, including corn planting and chicken breeding technology. With local conditions in mind, choose technologies requiring low capital investment and high labor input, and introduce microfinance, the issuance of grants, competition and recognition of outstanding people in production all of which will help to motivate farmers' involvement; (2) infrastructure construction: set up a village-level poverty reduction center (which is also used as the village committee's office) build sanitary latrines,



provide drinking water pipelines and water supply points, and repair local village roads; and (3) system construction and capacity building: strengthen the leading role of the village committee, promote interaction between the government and the villagers, and carry out activities in various forms such as investigations, trainings and field guidance.

Thanks to the successful experience of the Peapea Village Poverty Reduction Center, in February 2014, as part of an agreement on China-Tanzania cooperation in science and technology, the Chinese Ministry of Science and Technology launched a technical aid project for developing countries and China Agricultural University undertook the task of constructing the China-Tanzania Joint Research Center for Agricultural Development. The project is designed to motivate local people, explore the establishment of mechanisms for endogenous development and poverty reduction, and establish a mechanism linking universities and governments with farmers, especially smallholder farmers. The project includes: (1) set up the cooperation center and a small scientific park that displays China's agricultural technology in Sokoine University of Agriculture (SUA), Tanzania; (2) China Agricultural University, SUA and Morogoro provincial government form a joint research

team, use Mtego wa Simba Village of Mikese Town (20 km from Morogoro) as the demonstration village and select four surrounding villages as diffusion villages to carry out the construction of village-level poverty reduction centers, the demonstration and promotion of agricultural production technology and capacity-building activities. By far, Peapea village project has gone through seven years and the project in Mtego wa Simba has been undertaking for 3 years. Both projects have achieved successful outcomes and become well known in Tanzania. After 7 years and 3 years of project intervention respectively, they have both become star villages well known in Tanzania.

## 5.2 Infrastructure construction

In the field of infrastructure construction, we have mainly evaluated five different projects based on the study of a number of cases, covering an aid project, a preferential loan project, build-operate-transfer (BOT) project, as well as one state-owned construction company and one private construction company focusing on contracting local projects. The five selected cases are as follows: the library project of the University of Dar es Salaam; the National ICT Broadband Backbone (NICTBB) projects contracted with China International Telecommunication Construction Corporation (CITCC); the Mwalimu Nyerere Foundation (MNF) Square invested in by China Railway Jiangong Engineering Ltd (CRJE) East Africa Ltd.; the STECOL Corporation Tanzania Branch; and Group Six International Ltd.

### 5.2.1 Aid project: University of Dar es Salaam Library

The library project of the University of Dar es Salaam is a newly built turn-key project funded by the Chinese government in Tanzania, composed of the construction of library, the Confucius Institute, the China-Tanzania Cultural Park, diesel generators, and other ancillary landscape. Located on the campus of the University of Dar es Salaam in a western suburb of the city, the project is located 13 kilometers from downtown. The project was designed by China Zhongyuan International Engineering Co. Ltd. and constructed by Jiangsu Jiangdu Construction Group Co., Ltd., and the local docking unit is the University of Dar es Salaam.



Outstanding Contribution Award for infrastructure industry issued by former President of Tanzania, Jakaya Kikwete. Phase III of the ITCC Tanzania ICT Project has continued to optimize the built-up backbone network.

### 5.2.2 Preferential loan project: the NICTBB Projects

The CITCC NICTBB projects in Tanzania were financed by preferential loans from the Chinese government, and the contract value of the first three phases is US\$573 million (author's interview, Feb. 2017). Since its implementation in 2009, the Phase I and Phase II projects used the latest dense wavelength division multiplexing (DWDM) for networking, bringing the standards and technical specifications of China's communication industry as well as the advanced management concept, operation and maintenance experience of China Telecom, to Tanzania. The Project at one time employed more than 8000 local people. It entails the establishment of an "information superhighway" following the Tanzania-Zambia Railway to strengthen China-Tanzania cooperation. It won the

### 5.2.3 BOT project: Tanzania's MNF Square

The MNF Square is a commercial project jointly developed by CRJE (East Africa) and the MNF through the build-operate-transfer (BOT) model. The project is located in the center of Dar es Salaam, and includes retail businesses, office buildings and high-end hotels. The total investment in the project so far has amounted to US\$77.7 million, of which US\$20 million came from International Finance Corporation (IFC), a member of World Bank Group. CRJE is responsible for infrastructure investment and construction.



After the construction stage of the project has been completed, a third party (Rotana Hotel Management Company) will be entrusted with taking charge of the hotel business component of the project, and Knight Frank, an estate agency, will be responsible for the retail and property management component. Six decades later, the project will be wholly owned by the MNF, and CRJE will completely withdraw from the project. The project's groundbreaking ceremony was held on June 23, 2015.

**5.2.4 Contracting projects: State-owned company**

STECOL Corporation, under the brand "Sinohydro", has successively contracted to 34 projects of various types including highways, hydropower and airports with a total contract value of US\$1.01 billion since entering Tanzania's market. So far, a contract value of US\$820 million has been completed by this company's branch, covering nine highway projects, seven water supply projects, two municipal public projects and two airport repair projects. By the end of 2016, this state-owned company had a total of 230 Chinese managers and more than 1200 local employees.



**5.2.5 Joint-venture company: Group Six International**

Group Six International Ltd is a private joint-venture company registered in Tanzania since 2006. It has grown into one of the largest Chinese private-funded engineering groups in Tanzania. Headquartered in Dar es Salaam, the company now has more than 170 Chinese managers and more than 4000 local employees, and is a qualified Grade I building contractor and civil engineering contractor. Its business activities include construction, surveying, supply of construction equipment and materials, and real estate development. Projects it has undertaken include the construction of comprehensive business buildings, office buildings, apartment buildings, schools, supermarkets, hotels as well as some government projects e.g. the University of Dodoma, police dormitory, social security building.

## 5.3 Health

### 5.3.1 Jakaya Kikwete Cardiac Institute

Built upon the request of the Tanzanian Ministry of Health and Welfare, the cardiac surgery treatment and training center in Muhimbili National Hospital is one of 30 aid projects involving the construction of hospitals.

On May 25, 2009, China Shandong International Economic and Technical Cooperation Corporation (SIETC) won the bidding competition to build the hospital. On July 18, 2009, the contract signing ceremony was held at the Tanzania Ministry of Health and Social Welfare, and SIETC undertook the task of constructing the facility. On March 31, 2010, the project was officially launched. On February 6, 2012, it was completed and handed over to Tanzanian government. On April 27, 2014,

the facility was officially put into operation. In April 2015, the cardiac surgery treatment and training center was separated from the Muhimbili National Hospital and renamed the Jakaya Kikwete Cardiac Institute.

At present, the Jakaya Kikwete Cardiac Institute is the only specialist hospital for cardiac diseases in the whole territory of Tanzania and has become the largest and best specialist hospital for cardiac diseases in East Africa. As well as many Tanzanian citizens, patients also attend this hospital from other countries in East Africa.





## 6. Evaluation result of China-Tanzania Cooperation

Based on the M & E framework outlined in table 1, five dimensions under the “Eight Principles for Economic Aid and Technical Assistance to Other Countries” were evaluated. A total of 15 indicators were designed to measure the outcomes and impacts of this SSC. Nine cases from three sectors of China-Tanzania cooperation, namely agriculture, infrastructure construction and health, were selected for evaluation at project level to ascertain the process made by the cooperation and its impact.

### 6.1 Political Dimension: Non-Intervention, Mutual Respect and Equality

Seen from the nine cases, in the political dimension, China-Tanzania SSC reflects the characteristics of equality, mutual respect for sovereignty, non-interference, and demand-driven cooperation, with a particular emphasis on national sovereignty and capacity building of nation-states.

In the case of medical services and public health, at the design stage, a four-member delegation composed of the relevant officials of the Tanzanian Ministry of Health, the management personnel

of the Muhimbili National Hospital and the representative of the JKCI met with representatives of the Chinese design team in Beijing and Dar es Salaam. The Chinese team advised their counterparts on the draft design, including increasing the number of operation rooms and adjusting the administrative office layout. Both changes were adopted in the final design of the project. In addition, the Chinese and Tanzanian expert teams jointly developed a medical equipment procurement list, increased the quantity of some important equipment not included in the initial list and made comments on the medical equipment's local applicability in Tanzania. In the process of the hospital's construction, a decision-making committee composed of nine Chinese engineers and five representatives of Tanzanian engineers, architects and doctors was set up for purposes of cooperative work and joint decision making. The Chinese side was responsible for technical details and project management, while the Tanzanian side was responsible for the amendment of elements of the design that were not compatible with the actual situation, as well as communication and coordination with the local governments. On the other hand, Chinese medical experts, in their daily work, toned to respect the local healthcare system and culture to work more

efficiently with their Tanzanian peers at the technical level. Thus, the principle of respect and equality is respected at all stages and in all aspects of the project.

### **6.1.1 Demand-driven investment and collaborative interaction**

It is often stressed that SSC should be demand-driven, reflecting the recipient or host country's ownership of assistance or investment and interventions tend to be aligned with the host country's national strategies and policies. In reality, the principle of being "demand-driven" has a wider meaning and can be interpreted differently. It can be seen, for example, from the investment case of Sunshine Industrial that China's current system for governance of overseas companies takes into consideration domestic laws, regulations and initiatives, international or regional rules and regulations, the host country's rules and regulations, as well as the agreements and rules of various industries and regions. On the whole, however, restricted by domestic talent reserves, knowledge limitations, stage of development and the existing international investment system, China's current overseas company governance system is loose rather than systematic, guiding rather than strategic, and marginal rather than core. In other words, the daily operation of Chinese overseas companies mainly depends on the host country's macro policy and management technology. In the case of Sunshine Industrial, the Chinese manager often raise the concern on the key impact of local government and bureaucracy as well as tax policies



on the operation of foreign businesses. The manager emphasizes thereafter that "lawful operation and respecting local laws and regulations" is the first principle of their business operation. So they strived to obtain the relevant certificates and showed these certificates at the most obvious place of the factory to show the importance of the certificates in their daily operations, and used the certificates as a kind of guarantee for their business operations in the host country. In addition, in both its Dodoma office and its headquarters in China, there is a photo of a handshake between Tanzania's former prime minister Mizengo Pinda and the General Manager of Sunshine Industrial. This photo is a symbol of the friendship and commitment to the partnership between Sunshine Industrial and the leadership of Tanzania and vice versa. In doing so, this also symbolizes its commitment to the host country and its development.

At the same time, Sunshine Industrial also takes into account the cost of a "host country dominating." According to the estimates of the Chinese manager of Sunshine Industrial, the ratio of expenses arising from the inefficiency and corruption of the local government agency to the operating expenses is nearly 1:1. If 300,000 Tanzanian shillings (equivalent to US\$150) is required for a certificate, for example, the hidden cost including for public relations and transportation, due to the slow process of bureaucracy, would also reach the same amount. It was stated by one of the Chinese managers that, due to the invisible costs, "we are often asked why the cost is so high at the shareholders' meeting. We have to explain. That is really different from the situation



in China." At the same time, in order to adapt to Tanzania's policy environment, Sunshine Industrial established a formal public relations department. A special work position was created, appointing local professionals from human resources management and consulting departments and public relations departments to provide technical support for the day-to-day operation.

In the case of infrastructure construction, the demand-driven principle is mainly embodied in Tanzania's participation through establishing mechanism in the selection, approval and execution of projects. The Chinese Library Project of the University of Dar es Salaam, for example, is itself a project proposed by the Tanzanian government, which is in line with the local needs for training professional technical personnel, enhancing local



development capacity, and promoting the implementation of the national strategy of industrialization.

In addition, many Chinese infrastructure projects in Africa are implemented with the support of loans from the Export-Import Bank of China (EIBC). The EIBC is the only bank undertaking two types of preferential loan. The two types of preferential loans are preferential loans for foreign aid and preferential buyer's credit. These represent the Chinese government's concessional funds given to developing countries. The borrowers of both types of preferential loans are usually government departments of the borrowing country. Before applying for a project, the contracting company is required to present the loan application(s) of the borrowing country's government. One of the basic conditions for application is that the projects for which the preferential loans are intended should be consistent with the borrowing country's economic development and industrial planning, and should be conducive to the borrowing country's economic and social development as well as the development of its economic and trade cooperation with China. Furthermore, economic and technical feasibility is also required so that the projects will not have a negative impact on the local environment. As for the execution of a project, the project contractor is required to pay the supporting project funds in advance. After the project's acceptance, the EIBC gradually issues the loans to the Chinese enterprises according to a project's progress and the arrangement of the borrowing country. In other words, without the approval of the borrowing country, Chinese enterprises cannot obtain loans from the

EIBC. Therefore, Chinese enterprises have to take into account the demands of the local area during the process of project implementation. For example, the responsible personnel of China Communication Services Corporation noted: "for the implementation of this project, Tanzania's Ministry of Work, Transport and Communication have set up a special project office to communicate with us. We have to meet them every week to talk about project progress and relevant details in the project construction'. The project cannot be launched until we reach consensus because without their approval, we'll not get the project funds."

Whether it be the Chinese ATDC in Tanzania, or cooperation in the construction of the JKCI, or a village-level poverty reduction center, before a project is launched, Tanzanian central and local governments always play an active part. This activeness generally takes on two forms. First, Tanzanian government takes the initiative by identifying its priorities and needs. According to an agreement between Chinese government and the Tanzanian Ministry of Health and Social Welfare, for example, the project content for the Jakaya Kikwete Cardiac Institute includes the Chinese government agreeing to send three medical experts to the hospital to provide technical assistance. Here, the process of selection goes as follows. The cardiac hospital presents the job requirements for the technical experts based on the actual situation. The Chinese Ministry of Health (now renamed as the National Health and Family Planning Commission) transfers the information to Shandong Provincial Department of Health, which then delivers the information

to the Shandong municipal governments who will further undertake the task of dispatching medical teams in the same year according to its procedures. The Shandong municipal governments will select medical technical experts who meet the conditions from relevant departments in the Grade A Tertiary hospitals, and dispatches the experts according to the unified procedure. Although the village-level poverty reduction center program was designed by relevant Chinese experts, it was first proposed by local Tanzanian farmers whose demands and needs are reflected in the project's design and implementation. Second, the Chinese side has a preliminary plan, and then designs a complete implementation plan in consultation with the Tanzanian side.

In other words, whether it be in the project proposal, program design or down-stream partner selection, Tanzania is actively involved in through institutionalized participation. Unlike NSC, this engagement is not necessarily reflected in project design or playing a lone role, but it can be improved in the process of project implementation and appear various forms of participation and contribution. However, it must be acknowledged that, for different types of projects, Tanzanian government demonstrates differing levels of initiative and engagement.

### ***6.1.2 Focusing on government capacity building and helping the country to build influence and have a variety of options***

NSC tends to focus heavily on good governance but, although SSC also pays

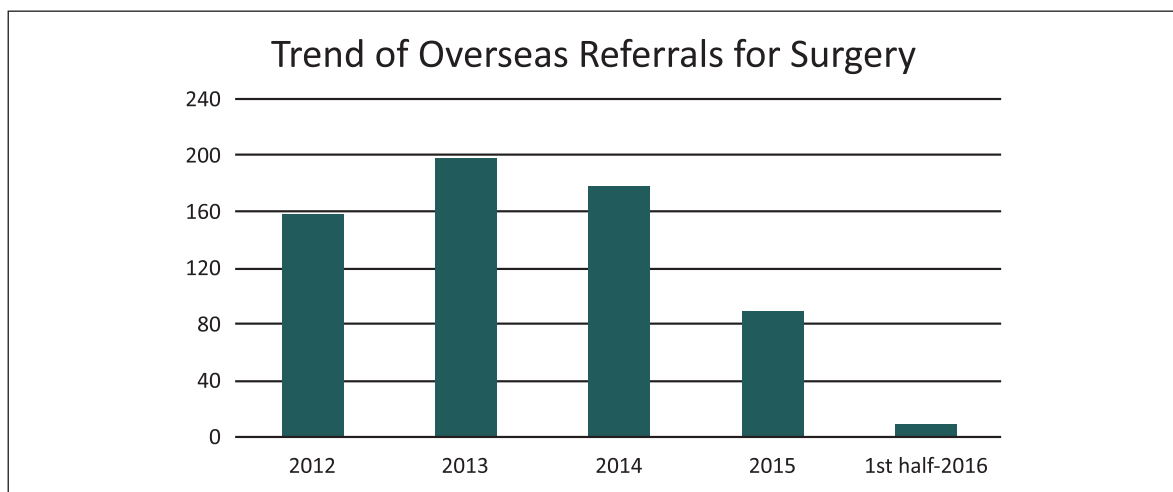
attention to a government's management ability and business environment, it puts more emphasis on national capacity building, helping the partner countries to build influence rather than measuring and evaluating countries according to the principle of promoting democracy and then providing corresponding financial support on this basis. In terms of investment, for example, in addition to increasing national revenue and promoting employment, Sunshine Group's business of agricultural processing is a priority area of Tanzania's industrialization strategy, in line with the country's second five-year development plan. At the same time, through its local branch, Sunshine Group has vigorously promoted the establishment of local brands in Tanzania, and has supported the new presidential initiatives of "manufacturing in Tanzania" and "buying local goods of Tanzania to enhance people's confidence in local brands" in the media regularly, which has enhanced Tanzanian people's confidence in local brands and products to a large extent. This trend is conducive to the national construction. In the case of infrastructure construction, the library project and its supporting technical personnel training program have promoted the implementation of the country's second five-year development plan. Specifically, this has entailed the training of personnel needed for industrialization and the infrastructure construction.

In the public health industry, the establishment of JKCI has not only reduced the financial burden on Tanzanian healthcare budget, but this has also enhanced Tanzania's status in the East African region in the field of public health. Specifically, before the establishment of

this hospital, patients in need of heart surgery could only be transferred to other countries such as India and South Africa for medical treatment. Of all Tanzanian patients transferred abroad, about 40% (the highest proportion) are heart patients. High medical costs represent a heavy burden on the Tanzanian government and this hospital has alleviated many such costs. As shown in Figure 2, from 2012 to 2016, many patients were transferred abroad with the number reaching 198 in 2013. After the establishment of the JKCI, this figure has gradually decreased.

Indeed, by the first half of 2016, this number dropped to nine. According to statistics of the research unit at JKCI, in 2015, the total medical expenditure of patients receiving cardiac surgery in the Jakaya Kikwete Cardiac Institute was 1.66 billion shillings (equivalent to US\$730,000), a decrease of 65% compared to the costs incurred by patients transferred to India, saving Tanzania about 3.06 billion shillings (equivalent to 1.35 million USD). In the first half of 2016, the saved costs amounted to 2.39 billion shillings (equivalent to 1.05 million USD).

**Figure 2: Overseas referrals for cardiac surgery**



More importantly, with the establishment of JKCI, Tanzania has gone from being a heart disease patient outflow country to an inflow one, significantly enhancing its medical status in the region. In July 2016, the Second East African Heart Disease Conference was held in Dar es Salaam. This was a grand meeting of professional heart disease doctors in Tanzania and other East African countries, promoting exchanges and learning between medical

workers providing heart disease treatment across the whole of East Africa. This hospital is the best and biggest for heart disease treatment in East Africa. Many heart disease patients from other East African countries have begun to travel to Tanzania for medical treatment, increasing local revenue and related income.

Compared to the healthcare project where the focus is on reducing the fiscal

burden, increasing fiscal revenue and enhancing Tanzania's influence in East Africa, the village-level poverty reduction center pays more attention to building the capacity of government. In particular, one of this project's objectives is to enhance the leadership of local government, especially the village committees in the development process. In the process of project implementation, for example, Chinese experts are in close contact with the Morogoro provincial government and the regional government, especially government officials in the field of agriculture. In order to help their Tanzanian counterparts to better understand China's agricultural technology, the project has organized for provincial and regional government officials, as well as agricultural technical personnel, to receive trainings and carry out field research in China for purposes of capacity building. It has also organized various activities in Tanzania and has invited government officials and agricultural personnel to participate to increase their knowledge of China's agricultural technology and strengthen their capacity, with the aim of cultivating a high-quality, efficient management team for the economic and agricultural development of Morogoro. Such activities significantly promote the endogenous development and long-term sustainable development of the host country.

In summary, the principles of non-interference, respect for sovereignty and equality in the political dimension are abstract, but when they are implemented in specific cases of five industrial sectors, they become diverse. First, whether the recipient's dominance is guaranteed over the agenda in the interaction between

the two sides, and whether there is any space for participation, contribution and adjustment. Second, whether the government's capacity building is promoted and the competitiveness of the partner country's government is enhanced. As seen from the case study, the partner country's demands and negotiation between the two sides are necessary parts of every project. In addition, the assessment may also focus on certain guiding principles, with the following questions of particular relevance: is there any mechanism (such as cost calculation, contract signing and adjustment) to guarantee the recipient's participation and voice in the cooperative negotiations, design and implementation? Are there any modules focusing on the government's capacity building to improve governance efficiency in the cooperation? Has the project effectively enhanced the efficiency and willingness of local governments to formulate and implement self-development policy? Qualitative data on these questions will be of significance to both sides.

On the whole, non-interference in politics is an important principle of SSC. Under this principle, in SSC, cooperation is usually developed with the government of the partner country placing an emphasis on its endogenous development. Believing that only after creating a development-oriented government and making local government the main body to promote local development can the sustainable development of the partner country be guaranteed.. However, non-intervention entails the use of a variety of platforms for constructive exchanges and cooperation. One representative of the Chinese Economic and Commercial Office in

Tanzania said "the government's attitude towards business investment is an internal issue of Tanzania. Little changes have taken place over the years and we'll not take a hand in it. What we can do is to make exchanges in some conferences, but it depends on the Tanzanian government whether or not to adopt our suggestions." On a similar note, the President of the

Chinese General Chamber of Commerce in Tanzania Lin Zhiyong said, " We'll take the initiative to communicate with them and carry out activities in a variety of forms to establish the mechanism for the dialogues between the Chinese side and the local government, enterprises and labor. We always focus on one theme: China-Tanzania friendship and relationship."

**Table 4: Specific performance of the five cases in the political dimension**

Political dimension	Demand-driven, collaborative interaction	Enhancement of the government ability and the national influence
Agricultural	<p>The host country-dominated system of China's foreign investment</p> <ul style="list-style-type: none"> <li>- Complete formalities, respect local laws and regulations</li> <li>- Create a full-time work position to communicate with the partner country</li> <li>- Hire a local HR consulting firm</li> </ul> <p>The Tanzanian side participates in the project design</p> <ul style="list-style-type: none"> <li>- After the launch of the project, the Tanzanian side takes the initiative to implement it</li> <li>- Tanzania makes clear its demands, and the Chinese side helps to develop the design plan; both sides are involved in project implementation</li> </ul>	<ul style="list-style-type: none"> <li>- Built a development-oriented relationship between the government and businesses</li> <li>- The field itself is a priority of Tanzania's national development strategy</li> <li>- Announce in the media support for Tanzania's manufacturing and purchasing local goods as proposed by the government to enhance local people's confidence in local industrial products</li> <li>- Enhanced the technological ability of local agricultural technology extension personnel</li> <li>- The local government's willingness and capacity to manage the development process, especially the capacity of village-level government, was enhanced</li> </ul>
Infrastructure construction	<p>Tanzanian partners participated in the process of the selection, approval and implementation of the project.</p>	<p>The improved infrastructure is not only convenient for local people to gain access to internet, bridges, and conference centers, but it has also enhanced the governance capacity of local government</p>
Public healthcare	<p>In the whole process of the project design, construction, handover and operation, fully respect the Tanzanian side; make adjustments according to Tanzania's demands and suggestions</p>	<p>Not only reduced the financial expenditures on Tanzania's health budget and increased local fiscal revenue, but also enhanced Tanzania's regional status in the field of public health</p>

## 6.2 Economic Dimension: Mutual Benefits and efficiency

One of the most frequently mentioned principles of SSC in the economic dimension is mutual benefit. We measure this by designing indicators showing to what extent the cooperation projects benefit partner countries. The most typical indicators here are the proportion of local procurement of goods and services, the proportion of local human resources, the proportion of local financing, the proportion of local projects' earnings, and the difference in cost and output with the local projects. In the processing of data in specific cases, however, the following elements stand out: localization and efficiency of the project.

### 6.2.1 Localization process of the project

The localization processes encompass a variety of forms, including the localization of design, R&D, manufacturing and marketing, employees, management and capital as well as cultural adaptation. We elaborate this point from the perspective of employment, manufacturing process and R&D input using the case studies in this session.

In the case of Sunshine Group's investment, 50 Chinese people were employed. Although adjustments were made through the development stages, the enterprise overall hired more than 2000 local workers, and the ratio of Chinese employees to Tanzanian employees was 1:40. As a locally registered brand, Sunshine Group has

regarded itself as made in Tanzania, and used local HR consulting firms for its daily operations as much as possible. At the same time, through its sales team of 50 people across the country, the company also undertook the task of selling products via local small brands. This allows local people to know about the Sunshine brand and provides an impetus for the company's long-term development. At the same time, this is conducive to the development of local brands, fully reflecting the win-win situation often realized by SSC.

More importantly, in addition to providing job opportunities for local people as ordinary employees or management, Sunshine Group regards its local business operations as an important mission creating enterprises for sustainable development in the context of China-Tanzania cooperation. According to Sunshine Industrial's manager and the general sales manager: in the selection of the first project, the company considered how to better integrate into the local economic environment and provide a better platform for local employment in order to get rid of the label of resource plunder of Chinese enterprises and win a better reputation for China. To achieve this goal, they must vigorously develop the manufacturing industry, especially the local agricultural products processing industry. The company finally selected an edible oil processing plant and cashew processing factory in 2014. The edible oil processing plant is located in a suburb of Dodoma with a land area of 160,000 square meters, in the center of the main producing area of sunflower oil in Tanzania, where also locates ZUZU Industrial Area, the largest development zone in central Tanzania. The plant's built-up area is 27,000 square

meters and the total investment for Phase I is US\$25 million. Advanced pressing technology was adopted in this project. The company believes that: the significance of this project is that it not only filled the blank of Tanzania's annual import of 500,000 tons of high-grade edible oil, but also helps expand the planting area, improve the planting level and raising the purchase price of local cash crops, and helps promote the employment of the whole industry chain and reduce the price of edible oil necessary for local living. The company has employed over 800 Tanzanian staff and 150 Chinese members so far in comparison to 3-5 staff five years ago. The overall investment has approached 100million USD. Almost 9 million USD of tax has been paid to Tannizan government, and 88 thousands USD of donation for local schools. At present, the local price of edible oil which is much higher than that in China and the prices of raw materials which are only half of that in China have brought considerable profits for the company, feeding back local economy and boosting the export of domestic machinery equipment. According to the plans of Sunshine Industrial, the company seeks to become a long-term economic development partner in China-Africa cooperation rather than a short-term interest winner. On this basis, the company is going to incubate the sunflower oil processing as a core industry in five East African countries. This will greatly contribute to the industrial development plan of Tanzania.

In fact, positive results have been achieved in its pursuit of creating a community with a common goal to reduce poverty and improve their livelihood. Due to the tax increase under the new tax policy, for example, Sunshine Group is facing a new set

of challenge as costs increase significantly. Speaking about this dilemma, a Tanzanian employee in charge of government public relations said: "I work hard and hope the company will be profitable so that I will benefit from it. Now the company has encountered new problems. I'm thinking how to help the company address the dilemma. The company does not have a box to collect suggestions, so I discussed about it with my friends. Nine of them are from the agricultural industry, 22 from industrial manufacturing and 18 from governmental departments, including the Ministry of Labour, the Investment Promotion Center, the environmental protection department and the municipal government. We sat down and exchanged ideas on the new situation. Finally, we found some ways to solve the problem, such as increasing the varieties of products for sale, strengthening brand construction and abstracting other fast moving consumer goods. In such a way, we can make good use of our sales team to enhance our reputation, increase goods supply and reduce the cost. Later, I put these suggestions in the suggestion box, attracting the general manager's attention". Thus, a relationship of mutual benefit and need has been built between China and Tanzania, exceeding labor relations, and the two sides have gradually become a community. As a Tanzanian employee said: "We are working together, like a family".

In the infrastructure industry, China's infrastructure projects in Tanzania have greatly promoted local employment. In the five cases (Table 5), Chinese companies have created jobs for more than 14,490 local people and the ratio of Chinese employees to local employees is 1:26. The specific breakdown for each project is as follows:

in the CRJE's MNF Square Project, 53 Chinese workers and 990 local workers were employed; in the library project, 90 Chinese workers and more than 300 local workers were employed; Group Six International Ltd. has a total of 170 Chinese employees and more than 4000 local employees; in the backbone optical cable project of China Comservice, more than 8000 local people were employed during high season, and the number of Chinese employees is less than 100 (Author's interview, Feb, 2017). Moreover, as the salary of construction workers within China is increasing, the number of Chinese workers willing to work in Africa is decreasing. The project manager of the library project said: "At present, the wage gap between overseas and domestic construction workers is being narrowed. Due to the various hardships associated with working in Africa, such as disease and political instability, many Chinese construction workers are unwilling to work in Africa. In addition, being far away from family also puts off many Chinese

workers. It is increasingly difficult to find Chinese technicians willing to work in Africa. More importantly, the development of Chinese companies in Tanzanian construction industry also provides many choices for the technical workers. Some people will turn to other companies when they are not satisfied with the wages. And to ensure the timely completion of the project, we have to rely on the local workers to accomplish the task. Therefore, during the process of project implementation, we trained many young Tanzania workers, including the college students from Dar University. Anyway, the library will be theirs and it is up to them to use and maintain it in the future."

At present, in the construction industry, the number of Chinese employees, most of whom are skilled workers, is decreasing. The ratio of Chinese technicians to local workers is about 1:30-80. The variance is due to different types of works during the different stages of construction.





**Table 5: The number of Chinese and local employees in the five selected infrastructure construction projects**

Project name	Number of Chinese employees	Number of local employees
MNF Square	53	990
Dar es Salaam Library	90	More than 300
CITCC Tanzania ICT Project	About 100	More than 8000 in high season
STECOL Corporation Tanzania Branch	230	More than 1200
Group Six International Ltd.	170	More than 4000

Source: Author's interview, Feb 2017

In the procurement of goods, the principle of mutual benefit is explicitly written in the relevant project documents signed by both parties. The selection criteria of the EIBC for two types of preferential loan, for example, provide, "The Chinese enterprise serves as the general contractor / exporter, give priority to the Chinese market in the procurement of relevant equipment, technologies, materials and services. In principle, the procurement from Chinese market shall be less than 50% of the total (this proportion may be a little bit higher for engineering projects)." Most of the building materials are purchased from China, which is a common characteristic of projects contracted by Chinese state-owned construction companies. For projects supported by loans from the EIBC, about 60% of the raw materials are purchased from the Chinese market, and this proportion increases to 90% for pure aid projects. Comparatively speaking, private companies use a lower proportion of Chinese building materials. Group Six International Ltd. imports about 40% of its raw materials from China. The reason behind buying a higher proportion of Chinese building materials is that many industrial and building materials cannot

be purchased in Tanzania due to their inavailability in the country or they do not meet the required standards, thus it is more efficient to import raw materials from China.

In the agricultural technology transfer project, the healthare project and the community-based poverty reduction project, in terms of quantity, most of the raw materials and personnel are sourced from the local market, but some key technical workers are brought in from China engaging in training of the local employees, which embodies the global production value chain.

### **6.2.2 Efficiency**

The Chinese side is characterized by high efficiency and the output productions,. For example, in only two years, the agricultural processing business of Sunshine Group witnessed rapid development. Its sunflower oil accounts for half of the local supermarket sales and 20% of the wholesale market, and Sunshine Group has set up an outstanding sales team composed of more than 50 people, one of the company's biggest assets.

The Tanzanian economy has long been dominated by agriculture, and industrial production technology is at a low level. So many foods and daily consumer goods need to be imported. For example, Tanzania has abundant sunflower seeds and cashew nuts, but the sunflower oil sold in the Tanzanian market is all imported. For the production of cashew nuts, all raw materials are exported. Due to a lack of funds and technology, cashew nuts are, in the form of raw materials, mainly exported to India and Myanmar for processing. At present, through the establishment of the Sunshine Dodoma Sunflower Oil Processing Plant and Lynndie Cashew Processing Factory, since August 2015, the Tanzanian people have been able to buy and eat locally made high-quality sunflower oil. Indeed, the annual production capacity of sunflower seeds (oil refining) reached 50,000 tons. Since 2013, the cashew nuts factory has achieved an annual output of 500 tons and an annual output value of more than US\$3 million. All of these developments have resulted from Sunshine Group's abundant capital and sophisticated technologies. By using advanced fully automatic pressing equipment introduced from China and Tanzania's only refining equipment for dephosphorization, deacidification, decolorization, deodorization, dehydration and dewaxing, Sunshine Group has a designed daily processing capacity of 300 tons of oil sunflower, an annual cold pressing of 30,000 tons of finished sunflower oil in line with the most popular international concept, and an annual output of 60,000 tons of seedcake. Such technology has, on the one hand, strengthened the export of China's advanced capacity and, combined with the rich natural resources in Tanzania,

created benefits for both sides and promoted the development of the Fast-Moving Consumer Goods (FMCG) industry. The general manager of Sunshine Group said: *"we have long-term planning for 10-20 years in Tanzania. Through training and cooperation provided, we will leave Tanzania with sophisticated technologies and equipment."*

At the same time, the development of the processing and manufacturing industry has promoted the planting of cash crops and research and development of high-yield technology. In a local newspaper in 2016, the General Manager of Sunshine Group said: "Our company purchases more than 30 tons of palm oil and legumes for edible oil production every day, but it still cannot meet the production needs", "local farmers engaged in vegetable oil crop growing should seize the opportunity and plant more such plants to increase their income", he encourages. The rising business interest led Sunshine Group to demand more raw materials—sunflower seeds from local farmers. At the same time, the company also encouraged the procurement of locally produced sunflower oil rather than imported products. Moreover, the company also sent out a signal to the relevant domestic departments: "The oil yield rate of local oil sunflower in Tanzania is 10% lower than that of China, and the yield per mu in China is twice that in Tanzania, which is the bottleneck for local farmers and sunflower oil enterprises to increase income. We hope that the Chinese expert group will give more guidance and help to the local farmers and introduce domestic high-quality oil sunflower seeds to win good reputation and strong support in the process of

boosting local economic development, which will significantly promote further cooperation between China and Tanzania." Through the processing and manufacturing industry, Sunshine Group has found a local need for agricultural technology, which has become a new priority of China-Tanzania cooperation in the agricultural industry. Work in this regard is timely, effective and sensitive to the market demand.

In the infrastructure industry, compared with construction projects overseen by other countries in Tanzania, Chinese projects have obvious advantages in terms of pace of progress, project quality and price. These are the main reasons why Chinese companies are favored in terms of construction project contracting in Tanzania. Chinese companies have not only valuable work experience and a high quality of engineering but, more importantly, they make the quickest progress compared to other projects implemented by other partner countries. In order to make quick progress in project construction, they work long hours, including at weekends. The responsible person of the Dar es Salaam Library said: "According to the contract, we have to hand over the project in July 2018. According to the project progress, however, we're sure that we can complete the project two months ahead of schedule. It is a result of the workers' hard work. In China, it is quite normal for workers to work overtime, and the workers also want to complete the project and return to their homeland as soon as possible."

In the case of agricultural technology transfer, Chinese technology's advantage largely concerns yield. Whether it be in rice planting or hen breeding, there

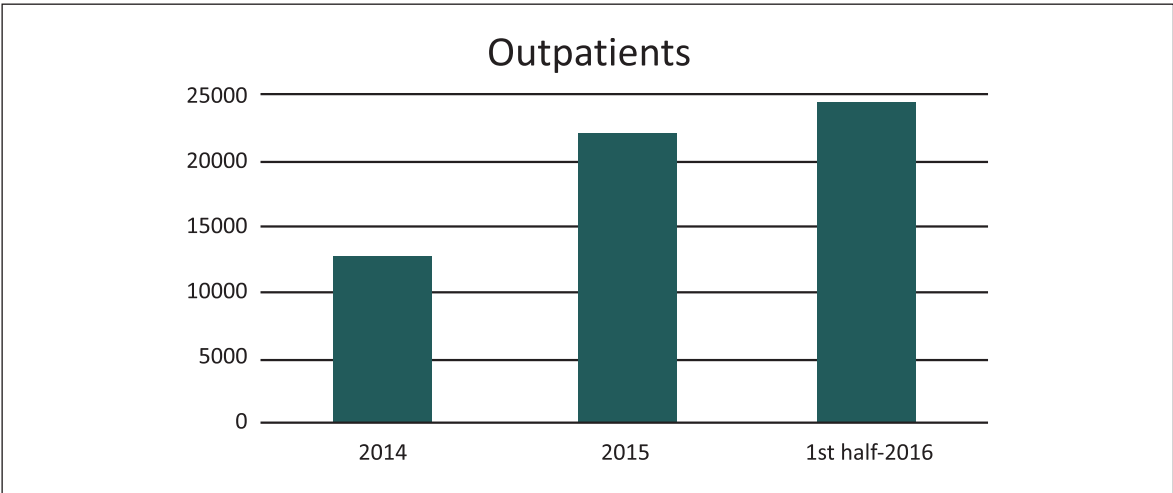
are obvious comparative advantages. Taking rice planting as an example, most Tanzanian rural households still use a traditional mode of production, so the crop yield is relatively low: the average rice yield per hectare is only 2 tons per year. After adopting sophisticated Chinese planting technology, however, the rice yield per hectare increased to more than 6 tons. In July 2016, the rice yield of a 4.8-mu field in the demonstration center was 660 660 kg / mu (10 tons / hectare). In practice, if the Tanzanian farmers use Chinese rice varieties and adopt Chinese planting technology, the output will reach 9-12 tons / hectare. An employee of the ATDC said: "if the water conservancy facilities are improved, the rice planting area in Tanzania will increase to one million hectares and the annual output will reach 6 million tons. According to this figure, Tanzania will become an exporter of rice and the African granary."

In terms of the public healthcare, the Tanzanian side has been deeply impressed by the assigned Chinese construction company's efficiency and orderly management. The Tanzanian responsible personnel said that the Chinese contractor is very strict in the management of personnel and project construction, can competently control the daily and even hourly progress of work, and can complete daily work as scheduled. Local workers have learned a lot from this working style. At the same time, he was also surprised to see that Chinese workers work hard and long.. After the JKCI was put into operation, the positive effects were immediate. According to the hospital's statistics, the annual outpatient visits increased from 12729 in 2014 to 22056 in 2015, and

this figure for the period from January to June 2016 reached 24,408 (Figure 3), exceeding the figure for the whole of 2015. At the same time, the outpatients of the Department of Cardiology (catheter therapy) also witnessed rapid growth in the number of outpatients from 2014 to 2016, increasing from 56 in 2014 to 330 in 2015, a near fivefold increase. The number of outpatients of Coronary angiography (CAG), for example, increased from 27 in 2014 to 242 in 2015, a near tenfold

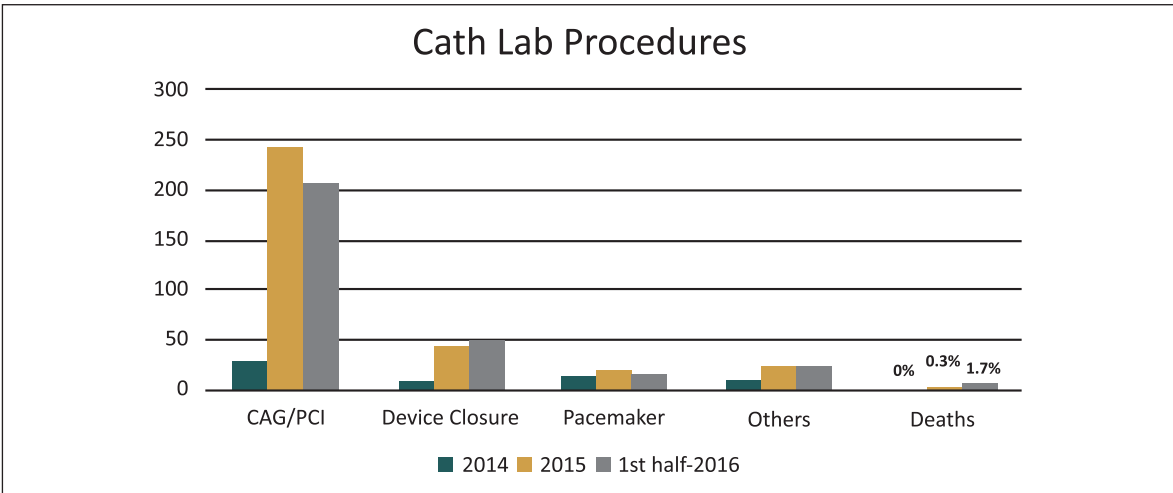
increase, and reached 206 for the first half of 2016. The total outpatient visits in 2016 are expected to be 15 times the total for 2014. Over the same period of time, the number of cardiac surgery patients increased from 48 in 2014 to 204 in 2015, and reached 148 for the first half of 2016. It is estimated that the number of surgery patients in 2016 will be six times the corresponding figure for 2014. Meanwhile, the mortality rate decreased from 22.9% to 6.8% (Figure 4).

**Figure 3: Annual outpatient visits in Tanzania (2014-2016)**



Data Source: Training and Consultancy of Jakaya Kikwete Cardiac Institute in Tanzania

**Figure 4: CAG outpatients (2014-2016)**



Data Source: Training and Consultancy of Jakaya Kikwete Cardiac Institute in Tanzania

In the community-based poverty reduction project, the main effect is local farmers' voluntary promotion of China's labor-intensive technologies. Among both local government officials and local farmers, many said that even if no Chinese project had been launched, they would have invited Chinese experts to promote their agricultural technologies in Tanzania after

witnessing the advantages that Chinese technology has brought to them. The number of rural households to adopt new technologies (China's corn planting technology) increased from nine in 2012 to 207 in 2017, accounting for 45.59% of the total number of households. As the fund for the project ceased from 2016, this is a nevertheless a promising figure.

**Table 6: Specific performance in the economic dimension**

Economic dimension	Practice	Impact
Agriculture	<p>In the stage of infrastructure construction, the local government and technical personnel took part to guarantee the project's adaptation to local conditions.</p> <p>The problem of irrigation has not been solved. This problem is attributable to the general Tanzanian approach to agricultural technology, with an emphasis placed on infrastructure construction for small farmers.</p> <p>A community of common interests and destiny shared with Tanzania was created through the following:</p> <ul style="list-style-type: none"> <li>- Ensuring that the ratio of Chinese workers to Tanzanian workers is 1:40.</li> <li>- Having Chinese companies and brands registered in Tanzania</li> <li>- The company employing local workers in its sales department</li> <li>- Promoting the development of the local FMCG industry</li> <li>- Inviting a local HR consulting firm to help handle the relationship with local government agencies</li> </ul> <p>From the Peapea village project in 2011 to the Mtego wa Simba Village project in 2014, village heads, provincial and county governments, ordinary farmers and government workers all played an important role in the projects' launch, implementation and promotion.</p> <ul style="list-style-type: none"> <li>- Even without project funding, the relevant technology could also be continuously used and promoted, providing endogenous motivation for development.</li> </ul>	<ul style="list-style-type: none"> <li>- Chinese technology has obvious advantages in rice planting or in hen breeding. In particular, the rice yield using Chinese technology is 3-5 times higher than the yield using local technology.</li> <li>- the demonstration and extension work was completed on schedule.</li> </ul> <p>Within two years, the Sunshine Group's sunflower oil already accounted for half of the local supermarket sales and 20% of the wholesale market share, and a sales team composed of more than 50 people was set up for this part of its business activity.</p> <ul style="list-style-type: none"> <li>- Since August 2015, Tanzanians had increased access to locally produced high-quality sunflower oil, and the company's annual production capacity has increased to 50,000 tons of sunflower seeds (refining). Since 2013, the Sunshine Group cashew nuts factory's annual production capacity has increased to 500 tons and its annual output value has surpassed US\$3 million.</li> <li>- Sensitivity to the upstream and downstream production, market and R&amp;D demands, giving timely signals.</li> <li>- The maize yield increased 2-3 times after updating the production mode.</li> <li>- An increase in both household income and assets owned by villagers, while the development of various consumer goods markets has been promoted.</li> <li>- The number of rural households to have adopted the Chinese corn planting technology increased from nine in 2012 to 207 in 2017, accounting for 45.59% of the total number of households.</li> </ul>

Economic dimension	Practice	Impact
Infrastructure construction	<ul style="list-style-type: none"> <li>- Ratio of Chinese to Tanzanian workers: 1:30-80</li> <li>- Procurement: Give priority to the Chinese market in the purchase of equipment, technology, raw materials and services; and the Chinese component shall be in principle less than 50%.</li> </ul>	<p>The Chinese company not only has advanced experience to guarantee the project quality, its project construction speed is also very efficient.</p> <ul style="list-style-type: none"> <li>- Changing local people's mindset on work ethics</li> <li>- more efficient</li> <li>- training local skilled workers and provide internship opportunities for university students</li> <li>- creating an investment multiplier effect and local job opportunities</li> </ul>
Public healthcare	<ul style="list-style-type: none"> <li>- Through Chinese doctors' training and daily interaction, local doctors knowledge and capacity strengthened leading to better diagnosis and treatment.</li> <li>- The Tanzanian side partook in the whole process of hospital design, guaranteeing that local characteristics were borne in mind for both infrastructure construction and purchase of materials.</li> </ul>	<ul style="list-style-type: none"> <li>- The Chinese contractors diligent in adhering to project construction timelines, ensuring that local workers complete work on schedule.</li> <li>- The outpatient visits are 2-4 times of that before the project construction, while the outpatients of the Department of Cardiology increased nearly fivefold. The number of surgery patients increased sixfold compared to before the project's construction, and the mortality rate decreased from 22.9% to 6.8%.</li> </ul>



## 6.3 Social and Environmental Dimension: Livelihood Impacts, Poverty Reduction and Sustainable Development

The social and environmental dimensions have been critical in the evaluation of development projects since the turn of the century, and this is reflected in the globally advocated development agendas such as Millennium Development Goals (MDGs) and the 2030 Agenda. This dimension is particular pertinent in monitoring and evaluating SSC. In this assessment, two elements stand out. First, the vocational skills training organized by the Chinese side for their Tanzanian counterparts in order to promote sustainable social and environmental development. Second, the development-oriented work and life philosophy gradually established in daily interaction. These two elements tend to penetrate and affect social and cultural factors and can be difficult to measure, but they can be observed in field research and have a far-reaching impact on local people's livelihoods and poverty reduction. The improvement of vocational skills can be measured by some of the following indicators: the number of dispatched experts; the number of local trainees; the number of technical transfers, jobs created for local people and increased productivity. The development-oriented life philosophy could be interpreted in narratives from Tanzanian side, including comments on Chinese people's work style and management rules.

### 6.3.1 Improvement of occupational skills

Since the construction of the Tanzania-Zambia Railway, the training of skilled industrial workers to allow Tanzania to accelerate its process of industrialization and to promote the economic take-off of the country, has become a widely discussed topic. China-Tanzania cooperation has contributed to such progress in various ways, including in the important process of vocational skills training for industrial workers. An official of the Economic and Commercial Counselor's Office of China analyzes and states: *"In Tanzania, 60% of the workers have low skills, 36% are skilled personnel, and 14% have the average technical level. However, due to the insufficient industrial development at all levels, many college students cannot find a job after graduation which matches their skills-set. On May 1, 2016, through this activity, we helped 222 Tanzanian technical workers find a job, and planned to strengthen the combination between personnel training and employment, reflect enterprises' demands for talents timely to universities, and encourage the cultivation of new types of talented people through the issuance of May 1st Labor Medal-A Reward for excellent skills. It is of great significance to helping Tanzania realize industrialization."*

When it comes to investment, the Sunshine Industrial attaches great importance to training, including soft skills training and hard skills training. English is the working language for Tanzanian workers,, but it is also important that local workers learn basic Chinese (Figure 4) and that Chinese workers ought to learn some Swahili to

enhance mutual communication and understanding. In addition, unlike many other companies, Sunshine Industrial provides professional training for all new employees in order to ensure proper compliance of the rules and regulations of the company. Sunshine Industrial pays significant attention to the construction of corporate culture. According to a Chinese

Manager: "the company is not profitable yet. After we obtain some profit, we'll gradually hold trainings and construct our company's culture. We'll work together to solve the employees' family difficulties and technical problems. Our company will become an industrial demonstration point."

**Figure 5: A Chinese lesson being delivered to local Tanzanian employees by Sunshine Industrial**



In addition to language and value identity, another important service provided by Sunshine Industrial is technical training. According to a Chinese technical expert of Dodoma Sunflower Oil Processing Plant, the machines had to be adjusted before the installation and operation of the sunflower oil mill in January 2015, but he found there were few qualified electricians in the local area. He said: "We hired 8-9 people at the beginning, but only six of them were proven to be qualified. We solved the simplest problems first, starting from the circuit diagram drawing. They had just learned the relevant theories and never

seen components of electrical appliances. In addition, the Chinese electronic products are constantly updated. After discussion, we decided to hold additional trainings so that they can go back home after work. Later, in the production stage after the machinery ran properly, we taught them skills in various ways. For example, we set up groups of two members, one of the members pointed out the machinery failure, and the other was responsible for repair. After six months of such training from January to June 2015, all six people became backbone technicians of our team and even skilled technicians in the local



*area. Later, however, for seasonal reasons, they gradually left and got highly-paid jobs in other companies."*

In the infrastructure construction industry, skills training of industrial workers is also very important. At the project site of MNF Square, for example, a Chinese technician is usually required to guide 20-30 local technicians in order to improve the technical level of Tanzanian technicians in practice; CITCC, which is responsible for backbone optical cable projects, assigned a few Chinese technicians to each sub-contractor, and sent technicians of local docking departments to receive trainings in China from time to time. According to the local technical director for Phase III of the project under his responsibility, about 300 local technicians were sent to receive trainings in China; The Dar es Salaam Library Project incorporated training into the daily schedule of the project's implementation. During the construction stage of this project, Jiangsu Jiangdu Construction Group, responsible for project construction, provided an opportunity for students of the Department of Construction Engineering at the University of Dar es Salaam to receive an eight-week internship every summer. During the summer of 2016, the project provided internship opportunities for 20 students of the University of Dar es Salaam (14 boys and 6 girls). The project entailed the design of detailed internship courses for these students, covering the company's rules and regulations, the project's organizational structure, basic design, structural design, architectural

design, decoration design, construction machinery, construction technology and construction management. Qualified Chinese technicians were appointed to serve as lecturers and provide technical on-site guidance. Moreover, an internship program for students majoring in different professions was arranged in specialized locations. Here, each student was required to write a detailed practice record, and had to submit assignments after training.

In addition, after the preliminary training of the students, the project also developed rotation and post-tracking for trainees. In the first stage of rotation, the students were allowed to select the work positions they are interested in according to their majors and personal interest, and would each serve two weeks in a relevant position. Then, the professional departments were divided into two types: design departments and construction departments. The students were able to work in one of these departments according to their interests and majors, and a shift system was implemented accordingly. Thus, the students had a comprehensive learning cycle regarding project construction. After the internship, they were encouraged to share their practice experience to improve the internship design and implementation in the future.

## **Column 1: Feedback from Tanzanian trainees**

*Intern M: "During the eight-week internship in Jiangdu Company, I learned a lot about company management, construction technology and skills, and found that Jiangsu Company's time management, supervision and staff organization are all efficient. It has an efficient work team, who work very hard for the company and strived to complete the project as scheduled. They've designed a good timetable and also give time to rest. During this period, I learned many skills that cannot be learned in the classroom, such as the skills for scaffolding, rebar fixing, backfill, punning and mold preparation, and various technologies often used in the construction industry. In short, this project site is a good place for practice and I benefited a lot from it. I've gained a lot of knowledge that cannot be learned from school, which is very helpful for me to grow into a qualified civil engineer."*

*Intern D said: "My experience in Jiangdu Company was good and helpful for my work in the construction industry in the future. First, the assignment of work is reasonable. The division of labor in many industries is conducted simultaneously to guarantee the project's progress. The project site's rules and regulations are well complied with.. I've learned a lot of technologies used in the project site and skills to use the machinery. The technologies here are much more advanced than those used in many local project sites. With the support of various kinds of equipment, project construction seems to be an easy job!"*

Chinese enterprises' technology transfer to Tanzania has been supported by the Chinese government and is regarded as an important factor promoting the sustainable development of the project and as key to the development of Africa generally. In order to encourage Chinese enterprises' technology transfer, mobilize the local people's enthusiasm for technical training, and to respond to the call of the Tanzanian government to improve the skills of workers and promote the employment of university graduates, since International Labor Day (May 1) in 2016, the Chinese Embassy and Economic and Commercial

Counsellor's Office in Tanzania have been supporting the launch of the "The Labor Skills contest for Local Staffs from Chinese Companies & Award Ceremony for Tanzanian College Internship Program." Due to the geographical advantage of the Dar es Salaam Library Project and Jiangsu Jiangdu Construction Group's provision of internship opportunities for college students, the activity has been jointly organized by the project contractor and Jiangsu Jiangdu Construction Group for two consecutive years at the University of Dar es Salaam. The activity this year was carried out on April 22. In this activity,

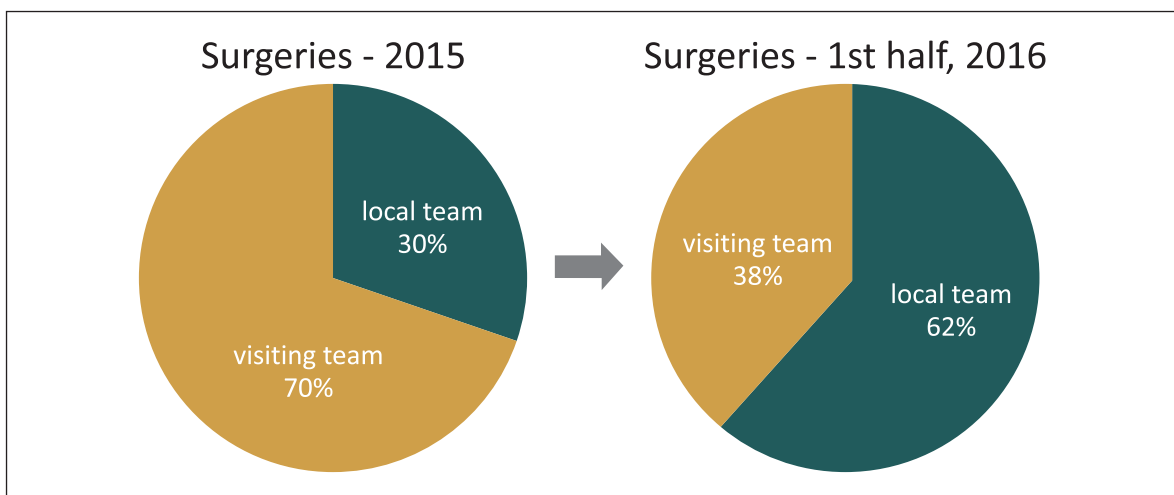
many Tanzanian employees of more than 50 Chinese enterprises in Tanzania participated in a skills competition for wall building, forklift, rebar bundling and welding, measurement and typewriting, among other skills.

Technology transfer and skills development have been emphasized not only in the field of investment and infrastructure construction, but also in the “soft” project of healthcare cooperation. The establishment of JKCI has greatly enhanced the medical treatment delivered by local hospitals. Local doctors have learned from Chinese doctors and have improved their medical skills through daily practice under the guidance of Chinese doctors, as is proven by the increasing proportion of cardiology and surgery patients receiving medical treatment at the hands of local medical workers. Overall, 31% of the diagnosis and treatment work of the Department of Cardiology (cardiac catheterization) was conducted by the international medical aid team in 2015, but

this proportion dropped to 21% in the first half of 2016. The change is more vivid in the Department of Cardiac Surgery. Here, in 2015, only 30% of cardiac surgeries were conducted by local surgeons of Tanzania. In the first half of 2016, however, this proportion rose to 62% (Figure 7). The international medical team members in 2015 and 2016 were the same.

The medical experts dispatched by China form the technical backbone of the domestic Grade A Tertiary hospitals as they have rich practical experience and high technical experience and knowledge. In the cardiac disease hospitals, therefore, when faced with any difficulties in their work, local doctors usually turn to Chinese doctors for advice and then proceed with their work under the guidance of Chinese doctors. Doctor Sun is a well-known cardiac surgery expert in China. In the Jakaya Kikwete Cardiac Institute, he usually acts as the operator or guide of 4-6 cardiac surgeries every week. During a surgery, he will carefully demonstrate each procedure

**Figure 6: The proportion of cardiac surgery patients receiving medical treatment from local medical professionals**



Data Source: Training and Consultancy of Jakaya Kikwete Cardiac Institute in Tanzania

and give appropriate explanations, and give guidance on the technical process in detail when the surgery is being performed by a local doctor. With his help, four surgeons of Jakaya Kikwete Cardiac Institute have enhanced their medical skills. The Director of the Department of Cardiac Surgery said: "I've learned a lot from Doctor Sun. Without his help, it would be impossible for me to make such rapid progress in the past two years. He is a real expert."

In addition, the Chinese experts also provided targeted trainings designed to enhance trainees' professional knowledge. Dr. Qu, for example, held tailored technical trainings about solving problems discovered in Intensive Care Unit (ICU) nursing including postoperative fluid management training, training on the use of ventilators for pulmonary edema patients, lectures on the proper use of antibiotics, as well as professional knowledge training for cardiopulmonary resuscitation. Shortcomings in these areas had led to some significant adverse consequences, so these trainings were much needed. Based on his extensive work experience, Dr. Qu gave targeted guidance and trainings addressing these problems. Now, these projects have been significantly improved by the ICU management. In addition, Dr. Sun also gave lectures on the standard package of surgical instruments for surgical nurses. Currently, the cardiac surgery is equipped with surgical instruments in line with common Chinese practices and standards.

In addition to technology, the daily management methods and system settings also represent breakthroughs

in the contribution made by Chinese experts. For example, Tanzania's hospital procedures and management practices are quite different from those in China. After becoming familiar with local medical procedures, the Chinese doctors will, according to their experience in China, put forward some suggestions, many of which will be adopted by the working departments and promoted as new systems. When talking about cooperation between surgeons and nurses, for example, Dr. Sun said that, in China, nurses are responsible for preparation and cleaning work before and after an operation, and that surgeons did not have to dedicate time for such tasks. But the situation in Tanzania is different. Therefore, nurses are not led by doctors. Indeed, during a surgical operation, Dr. Sun sometimes needed to go to another room to fetch a tool that had not been prepared by a nurse before the operation, thus hindering the operation's efficiency. After Dr. Sun made repeated suggestions and requests, the cardiac surgery operation room basically established a new job responsibilities manual for nurses that requires them to prepare all needed materials and tools before an operation. Another similar example is found in the postoperative monitoring system. Tanzania's postoperative monitoring follows the British system and is under the responsibility of the anesthesiologist. In China, however, this is the responsibility of the attending doctor. The rationale behind this is that only the attending doctor fully understands the actual situation in the operation and knows how to cope with emergencies when they arise. In JKCI, adverse consequences sometimes arose due to improper postoperative treatment.

Therefore, the Chinese system whereby the attending doctor holds responsibility is now implemented and emphasized in the Department of Cardiac Surgery, especially for high-risk patients.

In addition, technology transfer is the most important factor in the selected cases of agricultural technology transfer and community-based poverty reduction, etc. The former focuses on the demonstration and extension of the modern agricultural model of "high input, high output" in the agricultural industry, and the latter emphasizes on the transfer of labor-intensive technology for small rural households in the field of community-based poverty reduction. Technology transfer thus indicates different meanings in each case. The ATDC has also begun to promote agricultural technologies in this field at the stage of sustainable development and has achieved good results so far. The village-level poverty reduction centers conducted technical transfers relying on the Chinese team in Peapea Village and then the Mtego wa Simba village where the implementation of the project mainly relies on the local government and technicians. The projects have not only improved the technical capacity of local people, but it has also enhanced local people's project implementation and management skills through capacity building.

### ***6.3.2 The establishment of a development-oriented work ethic***

In addition to simple vocational skills training, one significant characteristic of China-Tanzania SSC is the changing of mindset which revolves around working hard. The employee-employer interaction in China's overseas investment has improved labor discipline in partner country and created a new culture thus delivering a new value reflecting the nature and form of this example of SSC.

In the field of infrastructure construction, for example, Martha, who worked in STECOL Corporation Tanzania Branch for ten years, won the award of "Best Employee" in Chinese enterprises on April 26, 2015 (Column 2).



## **Column 2: Stories of Award-Winning Employee Martha**

*For ten years, Martha has been working for Sinohydro Group Ltd. in its projects in Tanzania. At the very beginning, she worked at a project site alone. Later, as more and more projects were launched, she encouraged her family members to join Sinohydro Group Ltd., eventually becoming a "role model of the hydropower company." When asked for her thoughts on her decade-long career with the company, especially now with her family getting more and more involved as she does, she said: "our company is good. I will always work hard! I believe that our company will have a bright future and we'll live a better life!" Martha feels a part of the company. Manager Wang of the company also praised Martha: "Martha never complained about losing something in ten years. In addition, Martha often takes the initiative to help workers to clean their working suits. Many of the appreciative workers described her as "restless."*

*Martha does not only complete her work very well, but also often teaches others who joined the company later about the construction technologies to improve their skills and urges them to be loyal and work hard for the company.*

*Due to her outstanding performance, Martha is trusted by all leaders and workers at the project site. Whenever they need help, they turn to her. In 2008, the project of Geita Highroad was completed, and the company arranged for Martha to move to the project of No.118 Highroad in Tanzania (in Mwanza Province). In 2011, the project of No.118 Highroad in Tanzania was completed, Martha then moved to Kigoma to support an airport repair project. Now, Martha is serving the Kigoma Municipal Engineering Project with her colleagues.*

In the community-based poverty reduction project, the implementation of the project has not only increased the maize yield and changed the farming system but, more importantly, it has changed local people's views and values (Table 7), which is likely to accelerate local modernization. For example, with the support of the project, Mtego wa Sinba Village built a village committee office and village meeting room. One year later, some rural households of the village built new houses near the village meeting room. When asked why

they moved here, they said that any visitors would almost certainly use the village meeting room. Therefore, living near the meeting room was seen as a way of staying informed and participate in the decision-making process for the community which results in increased ownership to the project. Moreover, the local government would provide financial support to ensure the meeting room had sufficient power infrastructure, which the nearby houses could also benefit from.

**Table 7: Changes in local people's perspectives**

Issue	Past Perspective	Current Perspective
Planting structure	Only growing grain rations	Growing grain rations and cash crops
The functions of agriculture	Agricultural production is to meet the demand for food	Agriculture can help people to earn money and increase their cash income
Investment in agriculture	Agriculture is dependent on the weather, requiring minimal investment or labor input	Agriculture also needs appropriate investment and labor input
Views on agriculture	Extensive cultivation and low yield	Intensive farming



The introduction of Chinese technology was also accompanied by an insistence on “more investment, better results” meaning that a greater labor input is necessary in order to achieve a bigger harvest. But such a notion was not easily accepted by African people. A local rich farmer with a large area of land told me: “In the past,

*the farmers were unwilling to work as long as they had enough to eat. My family could not hire any seasonal workers in the local area and had to turn to other regions. After the Chinese technology was introduced, however, the local farmers changed their minds and became diligent.”*

**Column 3: Stories of Grain-Planting Expert Richard**

*Farmer Richard Adam is 56-years-old and he is married with four children. His family has a land area of 11 acres, of which seven acres are suitable for rice growing and four acres are suitable for maize growing. His family began to adopt Chinese production technology in 2014. In 2014, he rented a land area of eight acres for maize planting and harvested 67 bags (80-100kg per bag approxiatmately) of maize, of which 55 bags were sold and the remainder was for their own use. Before the transfer of Chinese technology, the maize yield per acre was only two or three bags. The Chinese technology has helped to increase his yield. He has sold more maize and is now willing to invest more in farming. He said: “Before 2014, I never knew that we can make money from farming. I believed that only business can help people to make money. Now, I know that we can make money from farming. As long as you invest a lot in farming and work hard, you’ll generate more income.”*

**Table 8: Specific performance of the five cases in the social and environmental dimension**

Social and environmental dimension	Improvement of skills	The establishment of a development-oriented work ethic
Agriculture	<p>The establishment of a team of industrial workers is an essential channel to realizing industrialization in Tanzania. The following activities are particularly vital in this regard:</p> <ul style="list-style-type: none"> <li>- Pre-job training of corporate philosophy and values</li> <li>- Language training and the improvement of communication skills</li> </ul>	<ul style="list-style-type: none"> <li>- Well-organized and disciplined labor force mainly includes the following four aspects: clear rewards and compliance with guidelines; strict time control; clear hierarchy and effective work; and reasonable planning to ensure work goes as planned.</li> <li>- Being efficient and productive employee .</li> </ul>



Social and environmental dimension	Improvement of skills	The establishment of a development-oriented work ethic
	<ul style="list-style-type: none"> <li>- In-service technical training: training of electricians to keep pace with the latest technology</li> <li>- The transfer of modern planting and breeding technologies</li> <li>- With the assistance of experts, transfer labor-intensive agricultural technology to the relevant fields</li> <li>- Farmers continue to adjust relevant technologies based on their conditions</li> <li>- Expand to a larger scale and attract more participants</li> </ul>	<ul style="list-style-type: none"> <li>- Embraced the idea of modern agriculture and a consequently modernized society</li> <li>- Increased the maize yield and changed the farming system, but, more importantly, changed local people's views and values with regard to planting structure, functions of agriculture, investment in agriculture and views on agriculture.</li> <li>- Willing to invest in agriculture, having realized that agriculture can also improve their lives, which leads to increased income</li> </ul>
Infrastructure construction	<ul style="list-style-type: none"> <li>- Learning in practice: teacher-trainee pairing-off training, incorporating training into daily interaction</li> <li>- The content of the training is rich, including various types of technical and management skills</li> <li>- After preliminary intensive training, the project established a shift and tracking system for the trainees to monitor skill development of them</li> <li>- Organizing a skills competition with government support</li> </ul>	<ul style="list-style-type: none"> <li>- Encouraged staff to be diligent, responsible and loyal by establishing role models and mentors</li> </ul>
Public health care	<ul style="list-style-type: none"> <li>- Training of skills in daily interaction</li> <li>- Special training courses including after-operation liquid management, usage of ventilator for pulmonary edema patients, how to use antibiotics properly, training on cardiopulmonary resuscitation, and training on standard collocation of surgical instrument set, etc.</li> <li>- Making suggestions to address challenges in daily management</li> </ul>	<ul style="list-style-type: none"> <li>- The ideas and methods for time management, construction period management, and team management have had a great impact on Tanzania.</li> </ul>

## 6.4 Learning and sharing

The learning and sharing dimension is an important objective of SSC. When partner countries have had a similar course of historical development, are at a similar development stage and have similar development problems, this is known as "parallel experience sharing" (Li Xiaoyun, 2016), where the two sides are equal in terms of political power, development stage and in terms of the practical solutions to problems. The learning and sharing dimension of SSC is mainly reflected in parallel experience sharing as well as flexible adjustment and interaction.

### 6.4.1 Parallel experience sharing

One precondition for parallel experience sharing is an ethos of equality. In such cases, the parallel experience can be beneficial. In the case of Chinese investment in Tanzania, many Tanzanian workers have pointed out "we are equal", including a receptionist, Mr. A, a motorcade manager, Mr. B, and a cleaner, Mr. C, as well as the kitchen staff. When exploring the meaning of "equality", researchers often refer to the standard generally adopted by Western companies, or take English as a bridge connecting the Chinese and Tanzanian sides. The receptionist, Mr. A, mentioned his experience of working for a Chinese company: "I believe that the Chinese and Tanzanians have many similarities. We work together like a family. In addition, it is very important that English is the working language rather than Chinese or Swahili. I

don't think it is a simple Chinese company. Instead, it is an international company."

It is precisely because of the historical development processes shared by China and Tanzania, as well as the similar positions under the global structure that brings two sides to reflect on each other's situation in an equal relationship. The overseas Chinese managers, for example, believe strongly in retrospection. Many Chinese managers praised African workers' intellect and the internal logic in their decision making.

For Tanzanians, reflecting on values and ideas is also common. Generally, they believe that the Chinese people are hard-working, responsible and honest, and point out that such values and ideas have brought new opportunities to improve their livelihood. The Tanzanians also mentioned in a number of interviews that China and Tanzania were "good friends" with equal status during Nyerere administration by which time the two countries had similar levels of economic development. Now, China's economic development process has many implications for the development of Tanzania. The Permanent Secretary (PS) in the Vice-President's office of Tanzania said: "*China has witnessed rapid economic development and its experience is worth learning from.*" At the same time, however, the Tanzania government also reflects on its own situation and pointed out that *the problem of environmental management has not been well addressed in China. In Tanzania, environmental issues and constitutional issues are of equal importance, and they are two key areas for the PS. He said: "Foreign investors and*



*donors all need to remember that concerns about environmental issues is the focus of our work here and cannot be ignored."* In terms of institutional settings and investment approval, environmental issues have always been a key concern of capital investment. All Chinese project proposals need to pass environmental assessment before they were permitted to take any actions. The assessment is very strict and run by different Tanzania government agencies. Chinese companies usually need to hire a professional organization in Tanzania to help them deal with the whole process. After the project proposals passed the assessment, a report/certificate will be issued to the company/project implementer.

According to the self-reflection of the Chinese and Tanzanian sides, they are each aware of their strengths and weaknesses. This parallel relationship is at the core of SSC. With an equal parallel relationship, the sharing of development experience becomes prominent. In the village-level poverty reduction center, many agricultural technology experts from China have given technical guidance and presented demonstrations in the project village and exchanged ideas with local technicians and farmers. Through the localization of Chinese technologies, they have

strived to adapt to the local agricultural production conditions and habits. The popularization of small farmer-based labor-intensive technologies is supported by the corresponding organizations, namely the village committee, and has achieved good results. In the project design and implementation process, Chinese side emphasizes the leading position of the village committee, acknowledged the leading role of the village cadres, carried out various trainings, visits and other activities and provided an institutional guarantee to enhance the self-development capacity of the village cadres and farmers. The project experts and technicians do not always stay in the village but do provide technical support from time to time. Most of the work needs to be done by local people with the village committee at the core. In the absence of labor subsidies, it is of vital importance to stimulate village committee's awareness of self-development and to mobilize village officials to get involved in the process of village development, especially the process of collective labor resource mobilization for village road building, which has implications of project construction in local areas and for the mobilization of local workers. For villagers, by demonstrating the high yield resulting from the implementation of Chinese labor-intensive technologies, the project has emphasized the "more pay for more work" ethos and has changed the general attitude of local workers, creating a sense of self-reliance. Many local people claimed that under northern-funded projects money was often given before the work started. However, their experience with Chinese partners has been different, and they now

understand that financial rewards will come only after work has been satisfactorily completed (Author interview, 2016).

The parallel experience sharing of this SSC is also reflected in the project's sharing of China's experience in the process of building the sample village. Many agricultural aid projects tend to extend their coverage and/or expand their influence, and select a small number of project households in a few villages. However, a small number of project demonstration households could not cohesively ensure technology diffusion in a village. Taking villages as units for development intervention, China's agricultural technology promotion projects in Mwanza Province have made villages the main body of technology adoption rather than having demonstration households scattered across many villages. This reflects China's common practice when promoting rural development. Implementing a project in one village allows most farmers to get involved in project construction. The effects of technology adoption as shown by demonstration households can be easily seen by the farmers, and the creation of a village eases the process of local diffusion. Now, Peapea village has become a well-known village in Tanzania. Many other villages send people to learn from the pioneer villagers' experience in adopting the planting technology popularized by the Chinese experts. In the selection of Mtego wa Simba village, Chinese experience in building model villages was adopted. During this process, the local government officials recommended a village with good agricultural production conditions located 100 kilometers from the provincial

government. The officials believe that the farmers from such villages would be highly enthusiastic about production and would accept Chinese agricultural technology more easily. But one Chinese technical expert said: *"We should select a village with convenient road links that is close to the provincial government because the success of such a demonstration will be seen by the local government and convenient road links are conducive for visits of people from other villages."* This is similar to China's domestic practice of rural development, especially the building of model villages in its anti-poverty work.

#### **6.4.2 Mutual adaptation and interaction**

After World War II, a complete system was set up for the booming NSC, including not only a special assistance management department, but also a large number of consulting firms and professional aid workers. International development assistance became very professional, specialized and routinized, and different consulting firms or organizations performed their respective duties in the system, with a clear division of labor. Generally speaking, for both aid project planning and aid project execution, a public bidding process should be held to select a consulting firm. However, in reality, aid project planning is usually developed by the consulting firm that wins the bid, while aid project execution falls under the responsibility of the winner of a separate bidding process. The process of project operation must be designed in strict accordance what is planned, and the monitoring and evaluation is also conducted on the

basis of the logical framework set up in the design of the project planning and can hardly be adjusted in the process of project implementation, meaning a lack of flexibility and adaptability. For SSC project implemented by China, there are no such professional consulting agencies, and the project execution agencies are professional technical departments rather than professional consulting firms, as is the case with China's SSC. China's aid projects are usually implemented by enterprises, research institutions and universities. Most of the people engaged in development work have their own jobs in China, serving as civil engineers, doctors, teachers or researchers. When abroad, they are mainly engaged in development assistance work, applying their professional knowledge. They neither have strict norms to follow nor are they assigned with specific tasks or given a specific guide to act on. Usually, they have only one overall project objective and they mainly discuss the project actions with the objects of the project. Under the objective framework, the project actions can be adjusted to make them more flexible and adaptable.

Whether it be the Chinese side or the Tanzanian side, in the process of parallel experience sharing, a project proposal and plan should be adjustable according to the actual situation. When being asked about the impact the work had had on him over the years, for example, especially with regard to his understanding of Africa, the Chinese manager of Sunshine Group said: "In fact, we have been making adjustments all the time, and will adjust our policy based on the actual situation of local area anytime when needed." For example,



based on the local business environment in Tanzania, the Chinese manager summed up the business strategies his company had deployed as follows: *"First, the company should have the relevant certificates. We've got all kinds of relevant certificates, of which some are actually not required by the local governments. Although the cost is a little bit high, it helps reduce problems. Second, we should not be afraid of problems and should have a safety consciousness. Strive to address all the problems that can be solved and don't go out after nine o'clock in the evening for security reasons. At the same time, the company has bought insurance for all the local employees and the workshops as well. Third, hold trainings of the work team with domestic development experience. Respect the local people. It really works. We respect the local employees and live with them in peace."*

In practice, both sides gained some common recognition of the local social structure. The administrative manager, for example, said that there is no middle class in Tanzania which is a major obstacle to the country's social development (Author interview, 2016). It is not conducive to

social stability." The Director of Dodoma Sunflower Seed Oil Factory also pointed out: *"in Tanzania, low-income people account for 90% of the total, which has a direct impact on the development of our products. At the beginning, we focused on brand construction for high-end products. Later, in order to enhance the marketability of the products to the local population, we had to classify the products and increased the supply of middle- and low-end products."*

Thus, in the course of business operations, constant adjustments should be made to the strategy in accord with the knowledge of the local market and social structure. However, the practical experience summarized by the Chinese manager here is from practice only, and lacks the strategic guidance of a specialized research system and think tank. The Tanzanian side has also accumulated technologies and experience in its interaction with the Chinese side. For example, a Tanzanian sales manager (mentioned above) and some administrative staff have learned and embraced Chinese companies' characteristics of strict management, strict time control, careful planning and department setting. These conclusions are reached after comparing the Chinese experience with their experience of Indian and British companies. But, crucially, this knowledge is still a kind of tacit knowledge rather than universal knowledge that can be spread. This fragmented study of China-Tanzania SSC has not developed into a mechanism or platform that would enable the knowledge gained to have an impact over China's cooperation with developing countries.

In the field of infrastructure construction, the Tanzanian side often proposes re-negotiating in the process of project construction. During the execution of a project, if the Tanzanian side feels that Chinese loans or investment projects that would have negative impact on local natural resources, it will propose to re-negotiate. For instance, for the Mtwara-Dar es Salaam Natural Gas Pipeline (MDNGP) supported by preferential credit loans of US\$1.2 billion from the EIBC, for which an agreement was reached. In 2011, relevant officials of the Tanzanian Comptroller and Audit General (CAG) proposed that Tanzanian government should re-negotiate with China because the lending agreement stipulated that the Chinese side would get the finished project as collateral if Tanzania failed to repay the loan, which may damage the national interests of Tanzania as natural gas is such an important natural resource for Tanzania and it cannot be controlled by foreigners. This project was signed with China in 2011 by former president of Tanzania. It was expected to increase the power supply by 500MW in Tanzania. In many cases, after the formal process, this adjustment is regarded as feasible, which would provide Tanzania with some room for re-negotiation.

In the construction phase of JKCI, the project period was extended for about seven months, with the main reason being that some changes took place in the process of project construction, and adjustment became inevitable. In accordance with the agreement, for example, the building of consolidated foundations should have been under

the responsibility of the Tanzanian side. However, in fact, the Tanzanian side suggested that it would be better for the Chinese side to take charge of this work because the ground buildings were closely related to the foundations and the development of a unified construction standard would be preferred. If the Tanzanian side was to undertake this job, some problems in the divergence with the ground buildings would likely have arisen in the future, wasting both time and resources. Through consultations, the Chinese side accepted the Tanzanian side's proposal and took over the foundation consolidation work. This was the main reason behind the project construction period being extended. Another reason for the extension of the project construction period was that the two sides did not reach a consensus on the specifications of some facilities. For instance, according to the initial design, the Chinese specifications were used for all fire-fighting equipment, which differ from the local specifications and have different methods of use. Such a design could not be accepted by the relevant department in Tanzania and did not conform to local customs. Through communication, during the project implementation, specifications that were more in line with the local situation were used.

In the case of community-based poverty reduction, when the Chinese technical experts carried out an investigation into the project design in Village Peapea for the first time, a series of project activities were designed. In particular, the demonstration households, the household chosen by the project to learn



and demonstrate Chinese technology, numbered at least 30 different types. The Chinese technical experts believed that these activities should be conducted in line with the local conditions, including infrastructure, climate and knowledge/labor resource of the local people, etc.. When the project was launched, however, none of the rural households were willing to serve as demonstration households, so the project stalled. Then, the group of Chinese technical experts began to discuss with local villagers ways to solve this problem, and finally decided to respect the wishes of the local people. This meant adjusting the contents of the project activity, reducing the number of demonstration households, changing the way of determining demonstration households from self-recommendation to recommendation by farmers, and changing the demonstration plots from individual plots to collective land. The project action was constantly adjusted according to the actual situation of the local village in order to adapt to the local environment so that the project could be carried out smoothly.

**Table 9: Performance of the five case studies in the learning dimension**

Learning dimension	Parallel experience sharing	Flexible adjustment and interaction
Agriculture	<ul style="list-style-type: none"> <li>- Premise of parallel experience sharing: to obtain equal status in both sides' self-reflection</li> <li>- The self-reflection produced tacit development knowledge, which has not become explicit knowledge yet, which is therefore difficult to share across a large area</li> <li>- Modern farming methods, covering rice and maize planting</li> </ul> <p>The shared parallel experience includes:</p> <ul style="list-style-type: none"> <li>- The organizational methods of small farmer farming</li> <li>- Village heads' ability to guide development</li> <li>- Creation of model demonstration villages</li> </ul>	<ul style="list-style-type: none"> <li>- Understood the local social structure in practice, thus broadening the product structure to bring it in line with local market demand</li> <li>- From demonstration to promotion, adjustments were made according to the actual situation</li> <li>- The number of demonstration households and the standards for the selection of demonstration households were adjusted based on the actual situation of the local area</li> </ul>
Infrastructure construction	<ul style="list-style-type: none"> <li>- Chinese building standards</li> <li>- The management team's working style</li> </ul>	<ul style="list-style-type: none"> <li>- Tanzania has scope for "re-negotiation"</li> </ul>
Public healthcare	<ul style="list-style-type: none"> <li>- Similar technology</li> </ul>	<ul style="list-style-type: none"> <li>- In the design of the framework, the suggestions of the Tanzanian side were accepted, showing respect for the local medical system and cultural traditions; more effective approaches were explored at the technical level</li> <li>- Coordinated building standards and embraced habits of both sides</li> </ul>





## 7. Conclusions

### 7.1 Key features of the evaluation framework

Unlike the emphasis placed on accountability in the evaluation of the effectiveness of development in NSC, SSC attaches more importance to learning i.e. the two sides' mutual reference and reflection under the premise of "non-intervention", aiming to obtain best practice and knowledge for development. This evaluation of SSC pays attention to whether the SSC in question has promoted new parallel development experience sharing in the political, economic and cultural dimensions from a macro

perspective under the principles of non-intervention, political independence and equal, mutual benefit and mutual respect, and whether the principles have been implemented in the specific cases cited. Taking as an example China-Tanzania cooperation in the fields of investment, infrastructure construction, agricultural technology transfer, healthcare as well as community-based poverty reduction, the evaluation has attempted to summarize the features of this assessment method through analyzing macro and micro data in the political, economic, social and environmental, and learning dimensions.

**The features of this new assessment are as follows:**

First, it pays significant attention to the interactions between the two sides and the mutual benefits. Unlike the one-way relationship in NSC, SSC focuses on the bidirectional effects of this interaction. While paying attention to the political, social, economic and cultural impacts of Chinese intervention on Tanzania, China has also been shaping and reshaping itself in all the aspect mentioned above throughout the process. This is something the evaluation should pay attention to. The Chinese side, for example, will also reflect on its development course and point out differences between China and Tanzania in political, economic, social and cultural dimensions, as well as the relevance to the local conditions, historical differences and their respective advantages and disadvantages. Such intentional or unintentional self-reflection can avoid the establishment of an unequal relationship stemming from single knowledge evaluation. This kind of self-reflection is also sensitive to interference in the internal affairs of other countries.

Second, the data that new SSC evaluation relies on not only statistical data, but also qualitative data such as micro cases, discourses and personal experience. These data are very detail and sometimes fragmented but can provide not only vivid pictures of China-Tanzania Cooperation, but also to some extent reveals the nature of SSC. Although qualitative data cannot bring very meaningful international comparison, yet they are of great significance in in-depth understanding of SSC on the ground.

Third, in terms of the content of the framework, it pays attention to the political, economic, cultural, and social and environmental factors and their linkages with historical experience. Therefore, the history of NSC should be used as reference when we evaluate SSC. It is also important to point out the evolution of SSC in the 20 years and the development paths of both China and Tanzania to thoroughly understand this complex phenomenon. Through a detailed data summary at the micro level, the evaluation highlights two elements in each dimension, such: as the demander-driven cooperative interaction and the enhancement of government ability and state influence in the economic dimension; the localization strategy and results-oriented cooperation in the political dimension; the improvement of occupational skills and the establishment of a development-oriented work and life philosophy in the social and environmental dimension; and the parallel experience sharing and flexible adjustment and interaction in the learning dimension. The two-dimensional classification in the four dimensions is not preset but summarized based on the basic data, and needs further improvement in the evaluation of a larger area. On the whole, however, the elements of the four dimensions have some inherent logic and highlight some features of China's SSC, which are introduced in the following part.

## **7.2 Key points of China-Tanzania cooperation**

Through the analysis of five industrial sectors in four dimensions, this paper has highlighted the dual elements of each

dimension and the differences between industrial sectors. Some features of China-Tanzania SSC, as revealed in this particular SSC evaluation, are outlined below.

As seen from the macro trend, across various industries SSC has emerged as a force in global development that can no longer be ignored. At present, China is a key partner of some African countries in infrastructure construction. Some African countries have started to incorporate the Belt and Road Initiative into their national development strategies. The total amount of investment through SSC in Tanzania accounts for nearly half of its FDI and this continues to rise. It is obvious that emerging countries such as China will play an increasingly important role in the development of Tanzania. In addition, the new cycle of double circulation will also grow in importance. Unlike NSC, which attaches great importance to investment in soft systems, China's SSC pays more attention to infrastructure construction and industrial development. China and Tanzania have a complementary economic relationship. The number of SSC projects accounts for a large proportion of the total projects in Tanzania, but the average SSC project's investment is far lower than the average for NSC projects.. China has become involved in numerous projects in Africa in recent years and this trend has triggered some reflections among the international community . "Soft" cooperation between China and African countries such as the healthcare services, agricultural technology transfer and community-based poverty reduction has increasingly become the focus of action of the Forum on China-Africa Cooperation in recent years.

From the political perspective, demand-oriented cooperation and interaction as well as government's capacity building have been highlighted. China's foreign investment system is still dominated by the host country, which means that China has not yet established a standardized framework of engagement to guide foreign investment by influencing the formulation of regulations on international capital management. In the current situation, Chinese enterprises overseas such as Sunshine Group have been implementing a localization strategy, focusing on the construction of local brands, local markets and local reputations. This business strategy is closely related to China's foreign policy of non-interference in the internal affairs of other countries. To enhance the governance capacity of partner countries, generally speaking, it is through channels such as reducing fiscal expenditure, enhancing the regional influence of the partner countries, optimizing the industrialization strategy and increasing the quantity and quality of human resources.

From the economic perspective, localization strategy and being results-oriented are two elements that have been highlighted. China has succeeded in its economic and trade cooperation with Tanzania, in its foreign aid work and in its implementation of a localization strategy in Tanzania. Chinese companies usually complete projects ahead of schedule through intensive labor, and this characteristic has been evident since the implementation of the Tanzania-Zambia Railway. The localization strategy for the purchase of materials is relatively poor in the host country, which is directly related to the insufficient industrialization of the

local area, the small number of finished products and the high prices for imported goods. However, as African countries develop industrially, the proportion of local procurement would be likely to increase which will have a positive impact on the local economy.

From a social development perspective, the focus of China-Tanzania SSC has been on sustainable development and the strengthening of vocational skills of the local communities.. In Tanzania, China has not only transferred technologies to the local area, but it has also helped to train industrial workers with the industrialization in Tanzania and has instilled in local people a sense of both diligence and responsibility. Ultimately, the two sides have gone beyond a simple labor relationship and a community of common interests and destiny has been forged, which strengthens the likelihood of sustainable development.

From the perspective of learning, parallel experience sharing and flexible adjustment and interaction are two prominent elements that have been highlighted. The Chinese and Tanzanian sides have constantly reflected their own national policies and strategies from their experiences of the cooperation in order to obtain the best development practice and learn lessons. Specifically, learning in this example of SSC took place through daily adjustment. The knowledge gleaned from this process is invisible to a large extent, so a complete system of knowledge has not been established yet. Parallel experience sharing relies on a common consensus between the two sides. Under such conditions, both sides can take the

initiative to adjust their cooperation to reach their optimal status so as to ensure that project activities are flexible and can adapt to the local environment. All the aspects stated differentiate China from its counterparts, the established donors, hence, China's international cooperation entails a kind of soft parallel experience sharing (Li Xiaoyun, 2016), instead of a systematic intervention engine.

In the political dimension, the new SSC focuses on national sovereignty and governments' capacity building in the economic dimension, it emphasizes on mutual benefits and effectiveness improvement; and in the social and environmental dimension, it underlines the establishment of development-oriented work and life philosophy; the last but not the least, in the learning and sharing dimension, the new SSC participants would like to undertake a two-way communication in the above three dimensions. A government's capacity to guide the development, the prioritizing of yield and efficiency, and the emphasis on the market and development ethos are kinds of "progress" and "development" system in modern society. It is to some extent reflecting the progressive ideas deeply planted in the 19th century. To look into the SSC from both historical and global perspective can help us to make better sense of the features highlighted in the evaluation. n.

All in all, for the past 40 years, SSC has evolved from "political solidarity" among southern countries to a comprehensive cooperation in the form of trade, investment and development cooperation. The traditional principles like mutual

respect, equality and non-interference make SSC enjoy a more horizontal relationship that is more sustainable and welcomed by partner countries. It is also proved to be an more feasible and efficient framework of cooperation compared with traditional donor-recipient paradigm. In the future, these unique features of SSC

should be sustained and diversification of evaluation framework should be encouraged as each southern country is different from others with its own historical, cultural, developmental background. The purpose of SSC evaluation is not to make international comparison but to enhance mutual learning and experience sharing.









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