

# The Strategic Vision of the "Belt and Road" and a New Development of China's Economic Diplomacy

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*Abstract: The "Belt and Road" strategy is the most ambitious comprehensive regional economic cooperation strategy put forward up to date by the Chinese Government. In the process of planning, promoting and implementing this conception, the concept, practice and strategy of China's economic diplomacy witnesses a new development. This article makes some observations on the "Belt and Road" conception mainly from the perspective of economic diplomacy, with focus on the new thinking, new mechanisms, new models and new policies of China's economic diplomacy in the process of pushing forward the "Belt and Road" concept, and tries to understand its important challenges. These challenges contain new requirements on China's economic and diplomatic ability, and need to be carefully addressed in the process of promoting the "Belt and Road" strategic concept.*

The "Belt and Road" strategic vision is China's most important regional cooperation initiative, and also the economic and diplomatic strategy with the biggest integrated investment of various resources. This idea is a priority in China's diplomacy, has a great strategic significance for promoting China's diplomacy, is also systems engineering to test whether China could comprehensively use both domestic and international resources and attain both the domestic and international objectives in the new period, and has a very important diplomatic impact. In the process of planning, promoting and implementing this conception, China's diplomacy particularly the concept, practice and strategy of China's economic diplomacy witnesses a new development. In combination with the "Belt and Road" initiative and economic diplomacy, this article focuses on the new thinking, new mechanisms, new models and new policies of China's economic diplomacy demonstrated in the process of pushing forward the "Belt and Road" conception, and tries to understand its outstanding challenges.

## I. New Thinking: Economic-Diplomatic

## Mutual Inclusiveness

Economic diplomacy is the combination of economy and diplomacy, which is the most common definition of economic diplomacy. The key to this definition is how to understand the relationship between economy and diplomacy. There are two traditional views on this. *The first is the economic activity to achieve the diplomatic goal conducted by state, with economy serving diplomatic purposes. Economy is a means while diplomacy is the purpose. The second is the diplomatic activities to achieve economic goals by state, with diplomacy serving economy.*<sup>1</sup> Diplomacy is the means while the economy is the goal. A dispute between means and goals reflects the essence of whichever is more important, economic goal or diplomatic goal. This is not only a concept difference, but also policy difference.

The "Belt and Road" cooperation initiative contains both diplomatic goal and economic goal. From the perspective of political objective, *One is to build China stable relations with neighboring countries.* In accordance with the existential planning, except for the Northeast

Asian countries, the "Belt and Road " basically cover all China's neighbors on land and sea. The academic consensus is that economic cooperation, even in short term, can help promote regional peace and restrict conflict between China and its surrounding areas.<sup>2</sup> *Two is to promote cooperation with the United States in Asia-Pacific.* The United States proposed in 2010 the Asia-Pacific rebalancing strategy, with TPP as the main economic grab.<sup>3</sup> Under the circumstances that "regional comprehensive economic partnership" (RCEP) has not made significant progress and China is excluded from the TPP, China has launched the "Belt and Road" initiative in order to search for a bigger space for Sino-U.S. cooperation in Asia-Pacific. *Three is from the geopolitical perspective,* to promote the gradual integration of the Eurasian Continental systems. East Asia and North America are located at both ends of the Eurasian continents, and have a very important strategic position in the global economy and world politics. However, the link between Europe and East Asia is not close. The construction of the "Belt and Road" is conducive to a more organic connection and getting through between East Asia and Europe, and to further enhance the Eurasian geopolitical status.<sup>4</sup> *Four is to promote political relations with emerging economies in the peripheral areas.* In China's peripheral areas, the "Belt and Road" involves global and regional emerging economies such as Russia, Indonesia, India, and Kazakhstan, can generally help upgrade bilateral relations between China and these emerging economies, and inject vitality into the various strategic partnerships with them. *Five is the construction of the "Belt and Road"* can better maintain and take into overall consideration China's land and sea sovereignty, ensure their parallel development and bring to full play geo-advantages of China, a country with both land and sea.

Along with the Chinese economy into the

New Normal, the construction of the "Belt and Road" also has rich economic goals. *One is out-bound transfer of the advantageous overcapacity* to help other countries' economic development. Cement, steel products, traditional textile manufacturing industries are both China's advantageous industries and also the industrial development close to the upper limit. Especially with constraints of energy-saving and emissions reduction, these industries need to re-layout. Because of different development phases, majority countries along the "Belt and Road" need more these capacities than China. *Two is the Eastern-Middle-Western regions coordinated development,* creating a new open pattern. China's reform and opening up, from geographical sense, proceed from "East to Middle to West" gradient. If this pattern is still maintained, regional differences will continue to exist. Construction of the "Belt and Road" can help break the regional differences, and the Mid-Western regions to become open frontier on the new open path. Even in line with the original development gradient, the "Belt and Road" can promote economic factors better optimize their concentration in the Eastern, Middle and Western regions. *Three is a free trade zone strategic push accelerates the process of regional economic integration.* Accelerating conclusion of free trade agreements by major economies are becoming a new trend in the global economic development. In overall view, China's free trade agreements unmatched with its own economic strength and China's foreign trade openness, but are also relatively lagged behind compared with other major economies.<sup>5</sup> Construction of the "Belt and Road" is not only conducive to accelerating the existing FTA negotiations, but also to help brew, hatch, and spawn new bilateral or multilateral FTAs. Regional economic integration will be deepened correspondingly as China and

countries along the "Belt and Road" conclude more FTAs.<sup>6</sup> *Four is to help China make better use of foreign resources and energy.* China's economic development needs to consume more resources and energy. Along with progressing interconnection, one of the core contents of the "Belt and Road", China's needed energy and resources will be more easily transported home.

These political and economic goals are largely strategic and overall, with strong policies and practical significance. Viewing from policy practice and expected goals, the "Belt and Road" has distinct economic and diplomatic properties, however, under the framework of which the economic diplomacy has the integration between economic goals with diplomatic goals, rather than the contradiction, not to mention conflict between the two. In other words, the "Belt and Road" is not the economic diplomacy to achieve either economic goals or political goals, but transcends a narrow view that economy services diplomacy or diplomacy serves economy, and tries to achieve both economic and diplomatic goals, and helps achieve national overall objectives, including economic, political and security objectives. Under the circumstances of goals inclusiveness, there is no need to deliberately highlight the confrontation between the two. Since economic and trade cooperation depends on improvement of diplomatic relations between two countries, so the improved diplomatic relations can help promote economic and trade cooperation. Fundamentally speaking, the economic and diplomatic new thinking shown by the "Belt and Road" reflects two important trends in China's diplomacy in the new era. *First, multiple interests coexist in evolution of the strategic tasks,* From the founding of new China up to the reform and opening up, to safeguard the national security or sovereign interests is the national priority strategic task,

so the economy mainly serves diplomacy. After the reform and opening up, economic development has become the primary goal of the national strategy, so diplomacy serves economy. Today, the national primary strategic goals are to achieve greater rejuvenation of the Chinese nation, the inclusiveness between economic interests and diplomatic interests and the corresponding complexity have obviously changed compared with that in the past. Hence, it is difficult to define and distinguish between the two. *Second, the active expansion of strength in the background of national development.* In the past, China's economic diplomacy reflected the strength of China and the real relationship between China and the world economic system. Supported by the strength of China's peaceful rise, the "Belt and Road" initiative integrates the economic goals with diplomatic goals, and will vigorously shape economic goals and diplomatic goals.

## **II.A New Mechanism: Mechanism Innovation Coordinated By Central and Local Government**

The construction of the "Belt and Road" naturally involves two major categories of governmental departments: One category is the economic competent authorities including the Development and Reform Commission, Ministry of Commerce, Ministry of Finance and the Central Bank. The other is the competent authority for foreign affairs, which is represented by the Ministry of Foreign Affairs.<sup>7</sup>

The "Belt and Road" mechanism innovation is not only reflected at the ministry level, but also in the central-local relations. From the perspective of the central-local interaction, the "Belt and Road" initiative produces some new breakthroughs regarding a few important issues involving the central-local relationship.

*First, the "Belt and Road" is the most*

*successful foreign economic cooperation for the Central Government to attract local participation.* The "Belt and Road" is a strategic initiative proposed by the Central Government, which is inseparable from the local government support. Compared with other economic diplomatic initiative, this initiative shows three distinct characteristics. *Firstly, the scale of local participation.* More than 20 provinces are directly related to the "Belt and Road" building, which is unprecedented. *Secondly, the scope of local participation.* Such initiatives in the past are typically local and regional, involving a few provinces in a region. But this initiative achieves two full coverage: geographically full coverage of China's South, East, North and West; and economically the full coverage of its developed regions and underdeveloped regions. *Thirdly, enthusiasm of local participation.* Since this initiative is proposed, various local governments have given it high attention, and actively carry out docking with it in combination with their respective economic and regional characteristics.<sup>8</sup>

*Second, the systematic integration and docking between the central foreign economic initiative and the local and regional economic development planning.* From the perspective of state, the "Belt and Road" is an economic cooperation initiative between China and countries along the two routes. But from the domestic perspective, this initiative in fact connects the different economic geographic areas, fully echoes the internal needs of foreign economic cooperation initiative, and enhance the provinces opening up to inside and outside. Among China's economic geographical regions, be it China's Northeast, North, East, South, Southwest or Northwest, have their own position in the "Belt and Road" planning,<sup>9</sup> according to the regional economic development characteristics and existing regional cooperation characteristics design.

China's Northeast region is Russia- and Mongolia-oriented, Northwest is Central Asia-oriented, Southwest and South are ASEAN-oriented while North and East also go out of the country through planning of transportation and industrial parks. Therefore, in addition to opening to the outside world still wider, the "Belt and Road" also promotes the economic integration within different geographical regions and between different regions, and helps overcome the over-outbound contacts and inadequate domestic contacts of some provinces. Besides, actually the "Belt and Road" planning and the important regional economic development planning are also complementary to each other. For example, the "Belt and Road" and the Yangtze River Economic Belt Planning and coordinated development planning of Beijing, Tianjin and Hebei have a high degree of convergence.

*Third, an important try for the Central Government to achieve macro diplomatic interests and local government to better play a diplomatic functional role.* There is no such initiative like the "Belt and Road" carrying the country's major diplomatic interests.<sup>10</sup> The "Belt and Road" initiative cuts across four continents, involving important aspects of the relationship between big powers, peripheral diplomacy and developing countries.<sup>11</sup> Planning this magnificent economic cooperation initiative requires the Central Government to bring to full play the macro-strategic advantages, and fully estimate the international and regional economic situation, geopolitical situation, internal situation of countries concerned and the development trend of China and other major issues. The local participation enthusiasm is more from the perspective of local economic development and opening up wider to the outside world. Therefore, the Central Government should encourage the local government to acquire a certain diplomatic

awareness and assume a certain diplomatic (Foreign Affairs) responsibility while achieving the local economic growth. Especially for some important border provinces, dual realization of diplomatic interests and economic growth is an important part in implementing this initiative.

### **III. The New Model: the Government and the Market Jointly Progress With Division of Labor**

*The "Belt and Road" economic cooperation initiative is proposed by President Xi Jinping during his visit to Kazakhstan in September and Indonesia in October 2013.* The communiqué of the Third Plenary Session of the 18<sup>th</sup> CPCCC in 2013 proposes to accelerate the improvement of modern market system and open economic system. The key to accelerate the shift of economic development mode is to make market play a decisive role in the allocation of resources, the core issue is to handle well the relationship between government and market. In the process of promoting the "Belt and Road", the government and the market need to bring to full play China's economic system advantages in trying to achieve coordinated progress in a vigorous, promising and orderly manner.

*In order to promote the "Belt and Road" initiative, the Chinese Central Government has built a full range and three-dimensional style of work at various levels.* In December 2014, the CPCCC Political Bureau economic work conference stated clearly to take promotion of the "Belt and Road" construction as a key task.<sup>12</sup> President Xi Jinping in November 2014 chaired the 8<sup>th</sup> meeting of the central financial and economic leading group, and specially discussed the "Belt and Road" construction planning.<sup>13</sup> The State Council Executive Meeting discusses how to develop advantageous industries with Chinese characteristics and deepen industrial international cooperation in combination with

the "Belt and Road" building. The relevant governmental departments in line with their respective functions and tasks actively promote the "One Belt One Road" construction through docking. Proceeding from China's national conditions, the support of local government at various levels is one of the key factors for success of economic policy initiative.

*The Central Government vigorously promotes the "Belt and Road" construction,* which is also embodied by promoting its idea and policy to expand its international impact and get the participation and support of the countries concerned on important international occasions and foreign visits by Chinese leadership. President Xi Jinping at the Boao Forum in Asia in 2015 in his address focused on the basic planning of "Belt and Road" strategy. And he also touched on the "Belt and Road" initiative at the informal meeting of APEC leaders, the G20 conference and Pacific Island Leaders Group Meeting in November, and during his visit to 4 South Asian countries in September, attending the 6<sup>th</sup> Ministerial Meeting of China-Arab Cooperation Forum in June, 2014. Premier Li Keqiang also takes the "Belt and Road" building as an important new content during attending the Davos Forum in January 2015, the SCO Summit, the 3<sup>rd</sup> China-Central and Eastern European leaders meeting, the 5<sup>th</sup> leaders meeting of the Greater Mekong Sub-regional Economic Cooperation in December 2014, and Eurasian Summit in October 2014. Other central and local leaders also vigorously promote the "Belt and Road" initiative from different perspectives.

*From the main types of market components, various main components such as the central enterprises, local state-owned enterprises, private-funded enterprises and foreign-funded enterprises, etc. all attach great importance to this initiative.* At this stage, the central enterprises is the important market component for the "Belt and Road" building.



That is mainly because the initial stage of the "Belt and Road" building will be led by infrastructure construction. In this case, the central enterprises in areas of railway, highway, power, building materials and construction contractors, etc. have a prominent position. Because of the indispensable investment and financing in the building process, the central enterprises in the financial sector may play a more important role.<sup>14</sup> Local state-owned enterprises are also actively involved in the construction process. One is those state-owned enterprises with relative strength, such as those in Shanghai, Shandong, Jiangsu, etc. Two is the state-owned enterprises along the "Belt and Road" such as those in Xinjiang, Heilongjiang, Guangdong and Chongqing, etc. Private enterprises also seize the opportunity to conduct trade and investment in the field of expertise. The "Belt and Road" initiative has already provided foreign-funded enterprises in China new business opportunities, making them better able to engage in trade and investment following the Chinese Government's planning. In the long run, with the "Belt and Road" layout getting matured and improved, all kinds of enterprises can find their right places in the process.

*In the process of promoting the "Belt and Road", the division of labor between government and enterprises is not the simple model that the government is responsible for planning while the market for operation. They have a basic division of labor, but also should have a close cooperation. However, the "Belt and Road" building in the final analysis is a market action, and the market components are the ultimate operator and the specific performer for its building. Enterprises in this specific operation process can find problems and timely feedback them to the government, which can supplement and improve the planning based on common problems. The government plays the role of macro-guidance and -regulation, the*

main market components make investment, take risk and enjoy benefit independently. Both government and market can play a major role in economic diplomacy, and both the state-owned capital and private capital are the important composition of the Chinese capital, which is a unique economic advantage for China to promote the "Belt and Road" building and should be made good use. In turn, the "Belt and Road" initiative can help promote interaction, mutual learning and mutual assistance between government and market in a wider range and more areas .

#### **IV. New Policy: The New Development of Economic Policy Application**

The "Belt and Road" initiative is in the end an economic cooperation initiative. Economy is the area, the platform, the content, the means and also the goal. From a policy perspective, this initiative shows a major development on applying economic policy to foreign countries, fully reflects the strategic consciousness and coordinates capability for the Chinese Government to give overall consideration to the use of various economic policies

*First, apply economic policies.* Compared with previous economic cooperation initiatives, the "Belt and Road" initiative is the initiative containing and using ever more variety of economic policies. The "Belt and Road" initiative has future goals including not only FTAs, which is obviously different with the RCEP and the upgraded China-ASEAN FTA. The "Belt and Road" initiative includes not only financial cooperation, which is significantly different from the East Asian financial cooperation agreement with Chiang Mai Initiative as the core; is not based on the wish to expand the total trade or trade balance, which is different to trade cooperation initiatives between any two countries; is not only a pure energy cooperation, which is

different from China's energy cooperation agreement with Russia, Kazakhstan or Turkmenistan. The "Belt and Road" initiative puts the above-mentioned economic policies into an overall policy basket, and has them integrated and rearranged. In fact, all traditional foreign economic policies can be found in the basket including trade, investment, production, energy, aid, infrastructure and services, etc., and participation of various economic policy-making authorities.

*Second, the upgrading use of economic policies.* China is deepening economic restructuring, a large amount of high quality surplus production capacity and advanced equipment & technology can be transferred to countries along the "Belt and Road", which is neither a simple transfer, nor a pure service to China's domestic economic development, but to attain win-win results with them on the basis of joint construction. This requires a conscious escalation of economic policies, their facilitating economic and trade cooperation with China. It specifically includes: *One, trade policy upgrading*, i.e. upgrading simple industrial transfer from China to countries concerned to industrial capacity transfer, technical transfer and capital transfer in line with the strategic concept and the new development of China's economic diplomacy. *Two, cooperation area upgrading*, i.e. upgrading the traditional projects contracting as main cooperation gradually to the investment and financial cooperation. *Three, financing model upgrading*, i.e. upgrading China's one side preferential loans to joint financing, financing by both state capital and private capital and multilateral financing. *Four, currencies usage upgrading*, i.e. upgrading from the main usage of the traditional currencies to increasing transnational usage of CNY.<sup>15</sup>

*Third, innovative use of economic policy.* The "Belt and Road" itself is a major

innovation in economic cooperation policy, in which innovation of other economic policies and tools are also bred, especially in the financial sector. The first of all is the establishment of the Asian Infrastructure Investment Bank, which is led by China, does not directly serve the "Belt and Road", but is conducive to its construction and can become a part of financial supply side for its construction in the Asian region. The establishment of the Bank can share with Chinese Government's pressure on providing funds for the "Belt and Road" construction. Then, this Bank is a regional multilateral financial institution, and cannot be used by China alone. In view of this, China also set up a \$40 billion Silk Road Fund,<sup>16</sup> which is independently created by Chinese foreign reserves, whose capital can be supplemented by issuing bonds in its future operation for the "Belt and Road" construction.

*Fourth, the custom-made use of economic policy.* The "Belt and Road" policy is initiated by the Central Government and shows a universal feature, but the political and economic situations of the countries concerned are rather different, so a single standardized model is inappropriate. According to the characteristics of their economic development along the "Belt and Road", the Chinese Government has arrangements and designs in line with different economic characteristics. For example, the Arab countries' participation in the "Belt and Road" construction will mainly take energy cooperation as the main axis, infrastructure construction & trade and investment facilitation as two wings, with high-tech areas of nuclear energy, space and satellite, and new energy as new breakthroughs. In order to encourage Eastern European countries to participate in the construction, China has established a special loan of US\$10 billion and specifically set up a investment fund of US\$3 billion, and launched the second phase investment cooperation fund US\$1 billion to

support joint venture projects by China and Eastern European investors in areas of road and rail infrastructure, telecommunications and energy, etc. China and Belarus establish a China-Belarus industrial park to carry out cooperation, which is one of the core links in the Silk Road Economic Belt, also the largest development area, the highest level of cooperation and the most preferential policies for China's current outbound economic and trade cooperation zone. Chinese Government and Iran Government also intend to build an industrial city in port Jask. In order to ease the huge deficit of India's trade with China, China and India have decided to set up a China Industrial Park in India, alternatively producing those manufactured products that were originally imported from China.

The "Belt and Road" initiative is the latest attempt of using various economic policies by the Chinese Government at the state level on a wide range of terms, and also involves in numerous economic diplomacy practices.<sup>17</sup> The Chinese Government and enterprises can explore better bilateral economic and trade cooperation forms, expand market, increase investment, and achieve win-win results.

## V. New Challenges of the "Belt and Road" to China's Economic Diplomacy

The "Belt and Road" marks a new stage in China's economic diplomacy. This stage has new ideas, new mechanisms, new models, new policies and new progress, and also new

challenges. These new challenges pose new requirements for the economic ability and diplomatic ability of China.

*First, how the "Belt and Road" can better help China find a new development model from a edge country to a core country, and better assist China's economic rise?* In the process of the "Belt and Road" construction, the key is China needs to strike two balances. First balance is between China's economic development and ability to withstand and between the market capacity and political acceptance by the countries concerned. Second balance is between China's continuous attraction of technology and capital from developed countries and China's transfer of technology and funds to countries concerned.

*Second, it is estimated that China may invest over 100 -1000 billion RMB yuan in the "Belt and Road" construction, which involves countries and regions with various situations.* It is a big challenge to ensure the economic and political security of the investment.

*Third, the issues of "addition and subtraction" in the "Belt and Road" construction.* In the process of its construction, it is generally believed doing additions, but if things are not well done, subtraction may be the replacement. So in the whole process, importance should be attached to overall balance, and preventing progress attained in one area or one country or even one region at the cost of others.

## Footnotes:

1. In order to better compare with the economic target, the diplomacy here takes its narrow concept, and refers to the national diplomatic actions serving the high politics such as politics, security.
2. See Katherine Barbieri, "Liberal Illusion: Does Trade Promote Peace", University Michigan Press, 2002.
3. Kurt Campbell, Ely Ratner, "Far Eastern Promises, Why Washington Should Focus on Asia", *Foreign Affairs*, May/June, 2011, pp.106-116.
4. On the Eurasian geopolitical significance, see [America] Zbigniew Brzezinski, "The Grand Chessboard: American Primacy and Its Geopolitical Imperatives", translated by Chinese Institute of International Studies, Shanghai: Shanghai People's Press, 2007.
5. Song Guoyou: "Global Trade Agreements and China's Strategic Choice", *Contemporary International Relations*, No 5, 2013, pp.30-35.



- 6.As far as China is concerned, the Chinese Government has significantly accelerated the progress of the FTA negotiations with countries concerned after the "Belt and Road" initiative.
- 7.Song Guoyou, "China's Peripheral Economic Diplomacy: Mechanism Coordination and Strategic Choice", *International Studies*", No.2, 2014,pp. 41-42.
- 8.Even the Taiwan region, Hong Kong and Macao Special Administrative Regions are highly concerned about the Initiative, and hope for active participation.
9. See "The Vision And Action to Promote the Construction of Silk Road Economic Belt and the Maritime Silk Road in 21<sup>st</sup> Century", *People's Daily*, March 29, 2015, P.4.
- 10.A new type of big countries relations between China and the United States is for defining Sino-U.S. relations, is not the economic cooperation initiative, and the BRICS countries cooperation mainly involves five BRICS countries.
- 11.In line with the documentation in the People's Daily on March 29, 2015, the "Belt and Road" involves four continents of Asia, Africa, Europe and Oceania. With the further progress in greater space, North America may also be included in the scope.
- 12."Central Economic Work Conference Held in Beijing", *People's Daily*, December 12, 2014.
- 13.Xinhua News Agency, Beijing, November 6, 2014 6.
14. For example, the Bank of China will, through improvement of the relevant country's institutional rearrangements and keeping focus on major projects, promote development of structured financing business and strengthen domestic and foreign interaction and multilateral cooperation, and provide relevant credit support not less than US\$ 20 billion in 2015, and reach US\$100 billion in 3 years to come
- 15.[http://www.fmprc.gov.cn/mfa\\_chn/zyxw\\_602251/t1229097.shtml](http://www.fmprc.gov.cn/mfa_chn/zyxw_602251/t1229097.shtml)
16. <http://www.pbc.gov.cn/publishing/goutongjiaoliu/524/2015/20150216122129516645149/20150216122129516645149.html>.
- 17.On the use of economic policies in China's peripheral diplomacy, See Song Guoyou: " Economic Relations and Policy Choice between China and Neighbors", *International Studies*, No.3, 2013, pp.33-42.

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*(C) Seize the key link to promote China's Standard and Specification.* Promoting China's technical standards in Africa can play a key role in expansion of China's technology transfer to Africa as well as enhancement of competitiveness of the Chinese-funded enterprises in the construction contract market in Africa. To this end, it is proposed that the Chinese government and enterprises try to attach the terms of the Chinese standard to the aid projects in the agreements to promote dissemination of China's technical standards in Africa. In Africa, setting up high-speed train, civil aviation, new energy joint research institutions to support China's related industries to enter Africa and promote Chinese enterprises

technology transfer to high-end development.  
*(D) Making joint efforts to improve the investment environment in Africa.* Improving the investment environment in African countries rely on the joint efforts of both African countries themselves and the outside countries. Therefore, a message should be directly sent to African countries, urging those who urgently need direct investment and technology transfer to improve their foreign investment law, policy environment and domestic security situation. Meanwhile, China should welcome a third party cooperation in its efforts to aid Africa, thus, it is expected to see a climax of China's direct investment and technology transfer to African countries.

# The Status Quo and Prospect of Chinese-funded Enterprises Technology Transfer to Africa

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**Abstract:** *Weak technical foundation is an important bottleneck to restrict economic growth of African countries. To promote the technological progress of Africa, the Chinese African strategy always encourages and supports Chinese-funded enterprises to transfer technology to Africa, but it is worth nothing that the critique by some African scholars and local communities on technology transfer to Africa by the Chinese-funded enterprises is spreading. In fact, in order to implement the "localization" strategy, develop African market or honor cooperation agreement on additional technical transfer, Chinese-funded enterprises always adhere to actively carrying out technology transfer to Africa, and have made certain achievements in improving the host countries' technical environment, increasing labor income and others. In order to cope with the challenges and dispel the crisis of public opinion, China should uphold the concept of "teaching how to fish" and push forward the continuous upgrading and optimization of technology transfer to Africa all-dimensionally.*

The definition of technology transfer is that technology as a productive factor, by paid or unpaid channels, flows to other countries from home country. Technology transfer includes technology location transfer and technology patent right transfer. Technology transfer can improve the technology progress and production efficiency of the technology recipient side, and is an important factor of economic growth, which has been widely proved by the history and reality of the world economic development, is the successful experience of China's economic development, and undoubtedly can also become an important route to promote economic development of Africa.

In recent years, the African public opinion for strengthening technology transfer to Africa by the Chinese-funded enterprises is on the rise, among which there is some negative evaluation of the current situation of Chinese enterprises' technology transfer to Africa. In 2013, Hilary Patroba of South African Institute of International Affairs published an article arguing that technology transfer to Africa by

the Chinese-funded enterprises was too low.<sup>1</sup> Frank Youngman of University of Botswana argued that Chinese-funded building enterprises in Botswana failed to provide skill and technology transfer.<sup>2</sup> In March 2013, Lamido Sanusi, governor of Central Bank of Nigeria criticized the Chinese-funded enterprises for failing to offer technology transfer to the local community.<sup>3</sup> In the same year, *African Economic Research Consortium*, a main African think-tank based in Kenya, in its report *Impact of China-Africa Investment Relations: The Case of Ethiopia* also criticized Chinese-funded enterprises saying that their management skills transfer and technology transfer are extremely limited.<sup>4</sup> In early 2014, the Ethics Institute of South Africa carried out a survey on the evaluation of China's participation in African affairs with survey objects from 15 African countries. Survey results show that 40.1% of evaluation on the impact of Chinese enterprises on local economic development is negative. One of the reasons of the negative evaluation is complaints about Chinese enterprises failing to provide

technical transfer or technology transfer to the local community.<sup>5</sup>

In order to understand the objective situation of technology transfer by Chinese-funded enterprises to Africa, and to study the in-depth reasons of negative evaluation by African public opinion on technology transfer by Chinese enterprises, Researchers of West Asia-Africa Institute, Chinese Academy of Social Sciences, supported by "China Africa Joint Research and exchange program set up under the "China Africa Cooperation Forum", in 2014 carried out a special research project in Madagascar Mauritius, Algeria and Morocco in Africa.

### **Major areas of technology transfer by Chinese-funded enterprises to Africa**

The project team found, after an in-depth survey, technology transfer to Africa by the Chinese -funded enterprises was not vacant as criticized by the African public opinions concerned. On the whole, Chinese enterprises technology transfer to Africa occurs mainly in the following areas:

#### *(A) Project construction methods and construction technology*

The Chinese Government has for a long time in Africa aided a large number of construction projects. Since the reform and opening up, the status of the construction project contract is on the increase. In the field of construction engineering, Chinese construction enterprises transfer a large amount of construction engineering technology and construction methods to the local community. These techniques include not only simple skills such as the plaster smearing, brick and tile clueing, welding, construction machinery operating and others, but also include complex technology such as construction technical testing, technical drawing, on-site measuring, concrete pouring, temperature controlling and others. Team No.14, CRCC has been in

business operation in Algeria for a long time and in line with the local market characteristics has developed 86 construction methods and 15 construction technologies, which are all transferred to local partners and enterprises free of charge.

#### *(B) Operation and maintenance technology of mechanical equipments*

This technology transfer occurs mainly in the fields of project contracting, manufacturing, equipments marketing and others, involving many types of construction machinery and production equipments such as excavators, loaders, scrapers, etc. spinning machines, knitting machines used by factory workshops, as well as airport high-end security equipment, TV stage lighting equipment, modern appliances, electronic products lines, mobile and fixed communication network equipments, etc.. Chinese-funded enterprises not only teach local workers and customers the skills for equipment operation, but also through the provision of post guaranty services, training courses, on-site technical guidance and other ways to teach local communities the skills for equipment maintenance.

#### *(C) Information and communication technology*

HUAWEI, ZTE and other Chinese communication enterprises have become world's leading communications solutions and equipment suppliers, and also Africa's largest information and communications technology service providers. Their technological development is significantly higher than some Western companies, and they transfer to the local people the modern information and communication technology usually through training local employees, and providing local operators and sub-contractors communications equipment debugging, configuration, maintenance and other aspects of training,

#### *(D) Agricultural production technology*

Since the beginning of the 1960s, China

began sending agricultural technicians to guide land reclamation, teach agricultural technology, hydraulic projects in African countries. Having entered the new century, agricultural technical assistance is still an important part of China's technical cooperation with African countries. At present, China has signed agricultural technology cooperation agreements with many African countries, which increasingly institutionalizes the agricultural technology cooperation between China and Africa. In 2007 China aided Madagascar a hybrid rice demonstration center, spreading China's hybrid rice planting technology to Africa.

*(E) Business management skills*

Chinese-funded enterprises in Africa attach importance to training local talents to undertake the medium and senior management positions. In Algerian branch of the Chinese Construction corporation, local employees are promoted to serve project assistants. Especially those local people who have received training or learned Chinese in China are promoted to higher management positions. For example, in the Chinese-Mali joint venture sugar and textile factories, local employees are promoted to CEO as deputy general managers.

**The main forms of Chinese enterprises' technology transfer to African countries**

There are multiple forms of international technology transfer, which includes technology licensing trade, and also the international transfer of technology driven by franchise operation, direct investment, commodity trade and service trade, as well as international transfer of technology emerged in African markets such as training and technical cooperation. The forms of Chinese enterprises' technology transfer to Africa are multiple, in addition to a few cases of technology licensing trade, all other forms are in existence.

*(A) Franchise operation*

Franchise operation is a business operation

model that franchisees agree, in the form of the contract, with franchiser to use its name, trademark, proprietary technology, product and operation management experience for the latter. Transnational franchise business are more common in sectors of fast food, restaurants, food, rent and leasing, auto sales and other industries, and franchise business of Chinese enterprises in Africa mainly in the area of auto sales. Chinese auto companies such as Chery, JAC, Geely and BYD have established franchise stores including "4S" stores in Algeria, Morocco, etc., and transferred to operators professional skills including marketing and promoting skills, operation and maintenance of franchise stores, vehicle repair and maintenance, etc.

*(B) Direct investment*

Foreign direct investment is a comprehensive international economic activity, which often involves in international technology trade, technology and information sharing, import of technical equipment and software, and the flow of technical experts. Madagascar Kingdeer Cashmere Holding Co. Ltd. was founded in 1998, which applies production equipment and production technology by the Kingdeer in China, takes advantage of low cost labor, local quality water and preferential export quotas to Europe, expanded the scale of production and become a large-scale manufacturing enterprises with staff of 4353. Tianli Spinning (Mauritius) Holding Co. Ltd. was founded in 2001, which applies China's domestic first-class spinning equipment, spinning technology and management methods. In Algeria, Algerian holding joint ventures also use manufacturing technology of electrification products from the CRCC joint venture in production.

*(C) Goods trade*

Commodity is an important carrier of technology, goods trade can also produce technology transfer. Cooperation between

China's Hisense and Algeria's Condor is a typical case. From the relationship between the two sides, Hisense is only Condor's supplier, does not participate in its production and marketing activities, but from the need to maintain customers, Hisense transfers to Condor a large number of proprietary knowledge and technical support, including provision of moulds and moulds drawings, product prototypes and data, design and assembly production lines, and confirmation of basic operating specifications, etc.. Through cooperation with China Hisense, Condor's technical ability has greatly improved, and gradually shaped independent linearly development and software debugging Condor abilities.

*(D) Service trade*

Cross-border trade in services also tends to bring about transnational transfer of technology. At present, China's service trade to Africa is mainly construction projects contracting and communication services. Chinese-funded construction engineering enterprises more and more use the model of overall contract in contracting construction projects, and in the course of projects implementation as well as through hiring and training local employees, transfer a large amount of engineering technology in the forms of sharing technology with the host countries' partners, and submitting to the host country engineering drawings free of charge. Huawei, ZTE and other Chinese telecommunications service enterprises adopt the model of "handing in key" in undertaking projects in Africa, and transfer technology to local personnel through hiring a large number of local workers and sub contractors and provide a large amount of training.

*(E) Technical assistance*

China's technical assistance to Africa has played an important role in technology transfer. For example, Mauritius is in urgent need to

obtain agricultural produces processing value-added technology. With assistance from China, the Food Technology Laboratory under the Mauritius Ministry of Agriculture and Food Security carries out technical exchanges and cooperation with the Chinese Food Fermentation Research Institute, send technicians to China to participate in the food processing and preservation technology training, and receiving Chinese experts on-site teaching, and develop a variety of food preservation and storage technology and related products locally, such as sweet potato chips, sweet potato cakes, white radish kimchi, fermented Doufu, etc.. Again, after the China-aid Mauritius radio and television building is completed, China's technical working group carried out personnel technical training on the building's internal electrical system, air conditioning system, stage lighting, civil engineering, etc., and provides technical materials and maintenance manual in English to the Mauritius technicians.

**Specific methods for Chinese enterprises to carry out technology transfer to African countries**

Chinese-funded enterprises mainly adopt 3 methods to transfer technology to local community: One is technical training; two is technical cooperation; and three is training of local management. In addition, the flow of local employees with Chinese enterprise technical training has also played a certain effect in promoting the dissemination of Chinese enterprises technology in Africa.

*(A) Technical training*

Chinese funded enterprises have various forms of technical training in Africa, which can be divided into the following 6 categories:

*Firstly, carry out non-formal on-site technical training on the basis of one training one or one training several.* This training form is more common in the field of contracting



construction projects, training subjects are local construction workers, training content is mainly construction technology and operation skill of construction machinery, and this kind of training has obvious characteristics of "learning by doing". However, this non-formal on-site technical training can transfer relatively simple technology to host countries.

*Secondly, organize special training activities such as training courses or central training in the host countries.* This method is mainly for application and operation of high-end technical equipment or control system. for example, Mauritius new airport project built by Chinese Construction Co. uses advanced equipment and operating system such as three-dimensional "CT" security scanner, and the airport's "IT" information system. It invited professional engineers of those supplier to give training to airport technicians for a period of 3 months. The Chinese-aide Mauritius radio and television building project also uses a similar training method, Chinese side dispatches two groups of technical experts to give training on application technology of electrical system, stage lighting equipment, computer control system, etc. within the building. In Algeria, HUAWEI, ZTE organize professional and technical training, which cover 200 – 300 people annually.

*Thirdly, organize local employees or partners to come to China for training.* Compared with training organized in host countries, it is restrained by expensive travel costs, so Chinese enterprises are more selective in choosing the trainees. Algeria branch ZTE each year arranges 10 groups of local employees to go to the ZTE university of the company headquarters located in Shenzhen for training, and these trainees are mainly outstanding engineers. Hisense also arranges annually employees of Condor company -- Algeria partner - to go to Hisense Quality Control Center in Qingdao for training on

laniary, process control, product development, and the trainees are mainly the backbone force of the business.

*Fourthly, establish regional training center.* HUAWEI has established regional training centers in African countries such as South Africa, Kenya, Egypt, Morocco. In February 2012, HUAWEI Morocco Network Institute was built, which is the support platform for first French language training center and the first French speaking area information and communications technology (ICT) certification system landed in the region built by HUAWEI in the world.

*Fifthly, provide support for the host government training programs.* HUAWEI and Governments of Tanzania, Zambia, Angola have formulated the *Information And Communication Technology Talent Training Program* to help African countries systematically train talents for computer technology. Building the East-West highway project in Algeria, Team No.14, CRCC provided funds for the local government to hold training courses for training local construction workers. ZTE Algeria company and the Algerian Ministry of Post and Telecommunication jointly set up a training school to train local talents for communication, which has provided training for over 600 people. In addition, the Algeria company of China Construction Co. cooperated with Labor Bureau of Barcelona province to provide training for local construction workers, and awarded them technical certificates

*Sixthly, provide internship opportunities for local college students.* Providing internship opportunities for local college students is also an important form of technical training for African countries by Chinese enterprises. In Algeria, HUAWEI provides 40 internship positions for local college students every year, and those who have performed well during the internship will be hired by HUAWEI. During

building the East-west highway project in Algeria, Team No.14, CRCC provided internship opportunities for 100-200 Algeria national engineering college students.

*(B) Technical cooperation*

Technical cooperation refers to the transfer of advanced technical information or concepts to local departments or enterprises through establishment of cooperative relations between Chinese-funded enterprises and local governmental departments or enterprises. The means of technology transfer to Africa through technical cooperation by Chinese enterprises include sharing technical knowledge with host country partners in business activities, and setting up joint research institutions with host country enterprises and providing technical guidance for host country partners, etc.

*Firstly, share technical knowledge with host country partners.* Constructing the new airport projects in Mauritius, the Chinese Construction Co. reached an agreement with local enterprises, which are responsible for part of the construction work. In order to help these enterprises to complete construction of the complex project, the Chinese side hands over the construction drawings and construction schemes for the advanced construction technology such as the large-span box-type hoisted welding and large area optical glass roof instillation, and large sheet membrane film structure installation.

*Secondly, establish joint research institutions with host country enterprises.* The internationalization of R & D is an important form of international technology transfer. In Algeria, CRCC with local counterpart and other enterprises jointly established the railway research center, engaged in research work on desert railway technology, high-speed railway technology, traditional railway innovation technology and maintenance and management of railway operation, etc.

*Thirdly, provide technical guidance to host*

*country partners.* China Water and Electricity group contracted in Mauritius a hydropower dam project, which is initially designed by a French company, but the original design was found to have serious defects, the technical experts team of the Three Gorges Hydropower Group and China Water and Electricity group through field visits proposed the flood dam and the Main Dam anti-earthquake amendments, and was accepted by the Mauritius side. While supplying parts of home appliances, electronic products to Condor, Hisense annually send engineers to Algeria to provide technical guidance and help Condor solve the problems encountered in the production process.

*(C) Senior staff training*

The employment rate of local management staff for Chinese companies in Mauritius and Madagascar is high. Management of HUAWEI Mauritius Co. Ltd. is mainly locally employed, among which 3 assistant managers at the senior level are all local employees, finance, supply chain, human resources assistants positions at the medium management level are taken by local employees. Beijing Construction Co. Mauritius Branch employs 20 local people as medium managers, most of them are promoted from ordinary workers and these positions include work of certain technical content such as coordinator, laboratory technician, mapping and measurement. China-Mauritius Public Engineering Co. Ltd. has a total of 39 staff on the management team, of which 28 are Chinese, 11 Mauritius people, accounting for about 28% of the management team, 1 Mauritius served as deputy general manager. A deputy general manager of the Kingdeer Madagascar Co. Ltd. is a local employee, and deputy directors of 5 workshops are also local employees.

*(D) The technology spillover*

The emerging re-transfer of Chinese technology to Africa in the first place is a spillover effect of technology transfer and this effect is often associated with the flow of

personnel. This phenomenon is rather common in Africa. Chinese Construction Co. in cooperation with the Bureau of Labor of Barcelona province, Algeria, provide construction technical training for local people, and rewarded them with technical certificates for qualification, and those with the certificates can quickly find jobs in other construction sites and take the trained skills to new construction sites. In Morocco, Algeria, etc., some local subcontractors trained by the Chinese telecommunications companies such as HUAWEI, ZTE, can directly provide the host country the installation, debugging commissioning and maintenance for communications equipments, thereby, further promoting the technology spillover effects of Chinese-funded enterprises in host countries.

### **Motivation of Chinese Enterprises to Transfer Technology to African Countries**

The reason why Chinese enterprises transfer a large amount of technologies to Africa is inseparable from the market constraints, enterprise's motivation and the government's push.

#### *(A) From the enterprise perspective*

*Firstly, provide technical training to host countries under agreement.* The construction contract signed between a Chinese construction contractor and a host country has always set up a clause of providing technical training for the host country. In Algeria, in accordance with the agreement signed with the host country, CRCC allocates a sum equal to 4% of total wages paid to local workers to train local staff, 2% goes to old staff training and another 2% to new staff training. Zhongjian Algerian Co. every year allocates several million yuan for staff professional and technical training.

*Secondly, use technology transfer as a tool to attract customers.* In cooperation with Condor, Algeria, the reason that Hisense provides technical support for Condor is mainly

for keeping customers stable. In order to ensure that Condor chooses Hisense products, Hisense helps Condor install and commission production lines, provides grinding machine and drawings, and sends engineers to provide on-site technical guidance, etc., and carries out a large amount of technical transfer, so that Condor's production and business activities are benefited a lot, therefore, both sides attain mutual benefits and win-win results. While selling large-scale machinery to local customers, Madagascar Hongyuan Machinery Import and Export Co. Ltd. is responsible for installing equipments, commissioning, trial operation, technical training and maintenance work, its purpose is through the provision of value-added technical services to customers to enhance the competitiveness of its products in Madagascar market.

*Thirdly, proceeding from the needs of "localization" development strategy by the enterprises.* With the sharp rise in China's domestic labor cost, the labor cost in Africa is obviously becoming more and more competitive. Therefore, taking into consideration the cost and efficiency, many enterprises have adopted the "localization" development strategy, expanded the use of local manpower, and carried out planned technology transfer to the local community.

#### *(B) From the government perspective*

China's policy on Africa constantly attaches great importance to technology transfer to Africa. Looking at the China's policy on Africa announced at the Sino-African Cooperation Forum--Ministerial Conference by the Chinese Government, technology transfer is an essential content. The *Program for China-Africa Cooperation in Economic and Social Development in 2000* proposed that China will provide special funds to support and encourage Chinese enterprises with strength to invest in Africa, establish joint venture or cooperation projects effective and suitable for

local needs, increase local employment, and transfer technology. The Chinese side is willing to provide modern and appropriate technology and management skills in the areas of projects contracting, technology and management cooperation." *The Addis Ababa Action Plan* in 2003 provides that China will further encourage and support enterprises of various ownerships with strength to invest in Africa, including establishment of joint venture enterprises aimed at encouraging technology transfer and creating employment opportunities for African countries. The *Beijing Action Plan* in 2006 put forward encouraging and supporting Chinese enterprises with strength and credibility to invest in Africa and to develop projects conducive to improving African countries technical level, increase employment and promote the local economic and social sustainable development. The *Sharm el Sheikh Action Plan* in 2009 emphasized that China will in cooperation of various fields encourage and promote technology transfer to African countries, including advanced technology having a significant impact on the national economic and social development in Africa. The *Beijing Action Plan* in 2012 proposed that China will continue to strengthen cooperation with Africa in the aspects of technology and management, increase technical support and experience sharing, and help African countries to improve the ability of independent development.

### **Effect of Chinese-Funded Enterprises Technology Transfer to Africa**

The effect of Chinese-funded enterprises technology transfer to local community is mainly reflected in following four aspects:

(A) *Improve technical environment of host countries and support pillar industries of African countries*

Whether it is R & D technology or applied technology, the technical level of African

countries is very low, although at the current stage Chinese enterprises mainly transfer applied technology to local community, yet through technology transfer, the technical environment of African host countries has been greatly improved. Firstly, Chinese-funded enterprises have cultivated a large number of skilled workers, increased the local technical reserves. Most of the local enterprises in Africa are lack of professional and operational technicians, and hiring skilled workers can significantly improve the work efficiency of these enterprises. Secondly, the introduction of advanced equipment and the transfer of relevant applied technology provide key support for the local social and economic development. For example, the construction of the Mauritius new airport terminal contracted by China Construction Co. used many world's advanced equipments, so that the airport hardware reaches the international level, while the training helps the airport staff master the operation skills of the equipments, and also improve the software level such as airport service and technical assurance. Mauritius is a tourism based country, the imported equipments and technology for the new airport is helpful to improve the competitiveness of Mauritius tourism, as a pillar industry of the national economy in the international market. The advanced equipments and technical training provided by HUAWEI for the African telecom operators greatly improve the local environment for mobile, fixed network, voice, broadband and others, and provide a critical infrastructure for the African countries to quickly step into the modern information society.

(B) *Increase employees' income in host countries and raise living standards of African people*

Africans, having received skills training, become skilled workers with one or more skills, improve their employment capacity in modern

sectors, and their individual income level will also greatly improve; and they are more competitive in the labor market even if they change jobs. Cotton planting bases set up by Tianli Spinning in Madagascar hire a number of local residents, who are semi-nomadic, have no fixed boarding, and aging production tools, adhere to the traditional way of living, and have no production technology and capability. Through technical training, Tianli Spinning teach them the advanced planting technology, and to operate large mechanical equipments, and their level of productivity has a substantial increase, not only able to get a stable income, and the way of living also changes from semi-nomadic to settle down, so they are largely relieved of poverty.

*(C) Help local people to embark on independent entrepreneurship, and promote African entrepreneurs to grow*

Some technicians trained by Chinese enterprises embark on the road of independent entrepreneurship after a grasp of certain technology. A Mechanical operator trained by Mauritius branch of Beijing Construction Co. purchases machinery equipments through bank loans and lease them to Beijing Construction Co, and later buys more machine equipments for expansion and establishes a specialized company, not only continue to cooperate with the Corporation, but also take orders from other Multi-National Corporations. Such a case is not uncommon in Africa. Some skilled workers trained by Kingdeer Madagascar Co. Ltd, after their departure from the company, use the received science and technology to independently start their own business, open workshops with a dozen or score sets of looms. Madagascar branch of Team No.18, CRCC has trained some mechanical repair technicians, who having obtained skills also opened a repair shop, and together with the company's quality supervisor jointly opened a supervision company.

*(D) Help Africa develop new industrial sectors, and accelerate its industrialization process*

Before HUAWEI, ZTE and other Chinese-funded enterprises enter the African market, Africa's communications industry develops very slowly, the reason is that, then, the global communications solutions and equipment supply market were almost monopolized by the Western companies. Western companies' technical barriers and their indifference to the African countries market resulted in far behind development of the African countries communications sectors compared with other developing countries. The arrival of HUAWEI, ZTE has taken these countries communications sector onto the "fast lane" of rapid development. Chinese communication enterprises have not only introduced advanced communications equipments into Africa, helped African countries establish modern communication facilities such as fixed line, "2G/3G" communication, mobile broadband and others, but also teach local employees and subcontractors communication and information technology and knowledge through professional training, and train a group of engineering and technical personnel with advanced communication technology. These local engineers and sub-contractors that have received training by Chinese telecommunications corporations are capable to directly provide services for local telecom operators, independently install, commission and maintain communication equipments. Some other local companies through cooperation with Chinese telecommunication corporations design new applied platforms for local operators, have communication service products adapted to the local market and develop "APP" applied products. Therefore, technology transfer to the African countries by the Chinese enterprises push African countries



to develop communications industry by leaps and bounds.

Before establishment of cooperative relations between Hisense and Algeria Condor, Algeria basically had no production capability for family appliances and electronic products, and Western companies are only eager to export to Africa their finished products, but are not willing to transfer technology. With Hisense's technical help, Condor in 2004 set up a television production line, and in 2006 a refrigerator production line, so Condor's imports from Hisense change from electrical units into electrical parts. Based on the experience of technical cooperation with Hisense, Condor began contacting other Chinese-funded enterprises such as GREE, Gionee, and with afore company's technical help built production lines for air conditioner, notebook computer, flat-panel computer, household appliance, electronic product, and gradually realize localized production of home appliance and electronic product through importing semi-assembled parts or simple scattered parts. In the process of deepening technical cooperation with Chinese enterprises, Condor localization rate of household appliances, and electronic products continue to rise, at present, the Condor localization rate of flat-panel TVs has reached 7%-10% , and the localization rate of refrigerator, air conditioners has reached 50% ~ 60%. Currently, Condor, through technical cooperation with Chinese enterprises, has become Algeria's largest supplier of electrical and electronic products. Its products not only go well in Algerian market, but also go to Egypt, Tunisia, United Arab Emirates and other Arab countries. It is the technology transfer of Chinese-funded enterprises that leads to rapid development of Algerian home appliance and electronic products manufacturing industry.

### **The Main Reasons For the Negative**

### **Public Opinions**

Technology transfer to Africa by Chinese enterprises has achieved so many results, why have there emerged the related negative evaluation? In our view, there are basically the following reasons.

*First, there is lack of research and publicity on the Chinese side.* Domestically, there is neither official statistics on China's technology transfer to Africa, nor the relevant systematic research results by the academic community. Since ourselves are not clear, naturally it is impossible to teach others. In Africa, Chinese enterprises mostly adhere to the principle of "doing good deeds without publicity" or "doing good deeds but making little publicity", and some enterprises are even just care about profits with no publicity awareness. Therefore, the Chinese enterprises technology transfer achievements are unknown.

*Second, the level of technology transfer is relatively low.* Because of limitations of various conditions, the current technology transfer is mainly the transfer of operational skills and the transfer of technical rights is relatively little, and there is no typical project of technical rights transfer. Especially since the Western countries still dominate the engineering, equipment and operational standards, so the Chinese standard and criteria are difficult to enter the African market, African countries acceptance of China's technical standards and criteria are low, which is a major obstacle to China's implementation of large-scale technology transfer to Africa.

*Third, the expectation of African side is high.* In recent years, African countries have become increasingly unsatisfied with maintaining economic growth through exporting a large amount of resources, showing a strong aspirations for locally processing resources to extend the "value chain" of the local industry, and to accelerate the development of industrialization and solve the

employment problem. Scholars of African Studies such as South African Institute of African Studies publish a series of research papers on extending the African industrial "value chain", which has exerted a great impact on African development concepts. To a large extent, the voice of African countries for technology transfer is rising, which is the portrayal of this new development concept. Comparatively, the technology transfer scale and level of Chinese enterprises have a big gap with this great expectation.

*Fourth, the investment environment in Africa is poor.* Although technology transfer can occur in many areas, yet, there is no doubt that its most powerful carrier is still direct investment projects. However, the frequent conflicts in Africa, the worrying security situation in some countries, more financial and investment restrictions, complex land system, poor infrastructure, small size of the market, rampant local epidemic, labor low quality and so on, restrict the attraction of direct investment in Africa and technology transfer

### Conclusions

The technology transfer to Africa by

Chinese-funded enterprises is not only a new challenge, but also a new opportunity for the development of China-Africa relations. We believe that:

*(A) Technology transfer to Africa should be vigorously promoted.* African countries call on China to strengthen the transfer of technology to Africa, reflecting the new development concept of African countries, and also the new expectations of African countries for China, which provides a new opportunity for the development of China-Africa relations. It is a proposal that the Chinese Government declare the principle on Africa of "teaching how to fish", and promote the common development through a large-scale transfer of suitable technology to Africa.

*(B) Strengthen research and promote publicity.* Integrate governmental, academic, media and corporate force to carry out basic research on the technology transfer to Africa, promote understanding the concept of "teaching how to fish", and further strengthen awareness of Chinese-funded enterprises to attain common development with African countries through technology transfer to Africa.

**(continued to page 23 )**

### Footnotes:

1. Hilary Patroba, "China in Kenya: Addressing Counterfeit Goods and Construction Sector Imbalance," The South African Institute of International Affairs, China in Africa Project, Occasional Paper, No.110, March in 2012.
2. "Strengthening Africa - China Relations: A Perspective: From Botswana," The Centre for Chinese Studies, Stellenbosch, November in 2013, Discussing Paper, P.11.
3. The [http: the bdlive. Co. / www. / Za / Africa / africanbusiness / 2013 / 07 / 17 / Gigaba-urges-Caution-On-China-in - Africa](http://www.bdlive.co.za/Africa/africanbusiness/2013/07/17/Gigaba-urges-Caution-On-China-in-Africa), the 2014-11-240.
4. Alemayehu Geda and Atenafu G. Meskel, "Impact of China - Africa Investment Relation: The Case of Ethiopiay", African Economic Research Consortium, CA, No.11 / July 2013.
5. Liesl Louw Vaudran, "SA Leads Africa in Anti-Chinese Sentiment " Feb., 21, 2014, [http: / / mg. Co. Za / article / 2014-02-20-sa-leads-frica-in-anti - Chinese sentiment](http://mg.co.za/article/2014-02-20-sa-leads-frica-in-anti-Chinese-sentiment), 2014 - 10 - 21.