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# The West's Contribution to the Modernization of China —

## Opportunities and Limits

by Wolfgang Klenner, Hamburg\*

**It is China's intention to draw level with world standards in crucial areas of production, services and infrastructure by the end of the twentieth century. The Chinese development objectives are creating an interest in close cooperation with the Western industrialized nations wishing to contribute to the modernization of China? What limits have to be kept in view?**

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After China had opened her political doors to the West thought was given everywhere to the scope of her requirements of modern investment goods and possibilities of early participation in the China business. It was sometimes assumed that China's absorptive capacity for Western products was well-nigh unlimited. Inside the country the potential for economic cooperation with the West seemed initially also to be regarded as exceedingly high. At any rate, the various government departments concerned with economic matters began soon after the political reorientation to pave the way for business relations with the West and to invite Western firms to tender for Chinese projects. Soon there were so many schemes on record that it was almost impossible to keep track of them.

The opportunities for cooperation are now viewed more prudently on both sides. There is a basic consensus that investment goods from Western industrialized countries are of special benefit for China because of their superior productivity compared with installations of Chinese manufacture. They are held to have other advantages as well in that they help to remove existing bottlenecks in the Chinese economy and to bring on instructional effects which will ultimately raise also the productivity of the plants which

are made in China. On the other hand it is also recognized that certain limits are set to the Western contributions to China's development.

### Limited Inclination to Borrow

China is as yet unable to raise the amounts of foreign exchange required for buying foreign investment goods by additional exports or by forgoing other imports alone. A portion of the imports must therefore be financed by credits from abroad until the plant capacities for the supply of salable export goods or for import substitution have been built up. Credits far in excess of US \$ 25 bn have so far been promised to China by Western industrialized countries<sup>1</sup>, and China could certainly borrow more money for selected projects. As China has incurred only small trade deficits in the past<sup>2</sup> her imports from the West will for the time being not be held down to any significant extent by lack of credits. China herself is however at present taking a very cautious view of the desirable debt level. The result is that plans for additional imports of investment goods for which the West would be quite willing to provide credits are dropped or deferred.

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<sup>1</sup> Cf. Armin Gutowski, Wolfgang Klenner, Kurt Wiesegart: Situation und Perspektiven der chinesischen Wirtschaft. Verschuldungsnotwendigkeit und Finanzierungsspielraum (Situation and perspectives of the Chinese economy. Borrowing necessities and finance capabilities), Hamburg 1979, p. 118.

<sup>2</sup> In 1979 the trade deficit amounted to about US \$ 2 bn. Cf. The Japan Economic Journal, January 29, 1980.

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This self-imposed restraint however does not represent a fixed limit. It will depend on China's own assessment of the possibilities of producing a wide range of attractive exports and extending other foreign exchange earning activities (tourism, insurance, sea transport, equity investments abroad). Much will also depend on the willingness of Western industrialized nations to facilitate structural change in China by the means of trade policy (e. g. by import concessions). Of importance are finally the possibilities of import substitution which would make it easier to repay loans. Such possibilities should be considered for instance in the metal trade which, in terms of value, accounted for a full quarter of all imports in 1978.

Foreign aid would in many instances be indispensable for measures to increase exports or replace imports. This might involve borrowings for the financing of plant imports which will eventually strengthen China's loan repayment capabilities. The same results could however be achieved without imposing a burden on the foreign exchange position if China were successful in concluding compensation deals or setting up joint ventures on a large scale.

### Production Bottlenecks

No matter whether imports of investment goods involve foreign currency debts or not, there exist certain limits to the scope and nature of an economically productive employment of Western plants. In many economic areas the available capacities are at present underutilized or existing growth opportunities cannot be exploited because requisite complementary investments have not been made. It has been impossible at times to achieve steady high growth rates in industry because agriculture failed to raise its output sufficiently. Plant capacities in manufacturing industry have not been used fully because of inadequacies in energy and raw material production. The construction sector is suffering from grave discrepancies between project volume and availability of labour and building materials. The transport capacities do not meet requirements. The skill level of the labour force is too low<sup>3</sup>.

From all this arises a need to start with suitable adjustments in the framework of existing plant capacities to ensure the smooth operation of the economic processes before investments are made in non-bottleneck sectors for the latter would now have

no positive effect on productivity. They would merely be "over-investments". The limits to Western development contributions deducible from the described situation could however be extended by removal of the imbalances, and a wide field would eventually open up in which Western countries would be able to assist in modernization and diversification and the provision of new capacities.

### Organizational Problems

Whether the potential gains of productivity from the use of Western plants materialize depends in part also on the availability of the requisite technical and administrative personnel and corresponding organizational prerequisites. In China, as probably in most of the less developed countries, education constitutes at present a bottleneck. There is a shortage of skilled personnel in many areas, making itself felt particularly grievously in China because the events during the Cultural Revolution prevented full use of the available educational facilities in the sixties. Chinese estimates put the resulting shortfall of college-graduates at over one million.

The basic organizational conditions for efficient operations do not always exist. The necessary understanding for rational organization of working processes, for clear separation and association of production procedures and for scientific analysis of shop-floor operations is sometimes missing. A crafts production mentality is still being encountered all too often. The management of industrial plants also creates problems. In contrast to the Cultural Revolution, the emphasis is now put on vertically orientated leadership structures<sup>4</sup>. These may well have their advantages. But the line management must be competent in their fields, there must be a clear demarcation of the powers and responsibilities of line management, party officials and trade union cadres, and technical competence must be commensurate with the tasks to be accomplished in a particular field<sup>5</sup>.

An answer has, finally, still to be found to important questions of wage policy<sup>6</sup>. The introduction of performance-related earnings presupposes methods of performance evaluation which however cannot be

<sup>3</sup> Cf. Hua Guofeng: Report on the work of the government. Xinhua News Agency, New Bulletin, June 26, 1979.

<sup>4</sup> Cf. Wolfgang Klenner: Ordnungsprinzipien im Industrialisierungsprozeß der VR China (Regulative principles in the industrialization process of the P. R. China), Hamburg 1979, p. 305.

<sup>5</sup> Cf., e.g., Li Yingzhang: Gaijin gongye qiye guanli de jijian yijian, in: Jingji Guanli, Beijing, No. 3, 1979, p. 42 ff.

<sup>6</sup> Cf., e.g., Zhao Lükuan, Pan Jinyun: Lun jijian gongzi, in: Jingji Yanjiu, No. 2, 1979, p. 45 ff.; cf. also the collection of articles on wage policy: Jianguo yilai an lao fen pei lun wenxuan, Shanghai 1978, espec. Vol. 2, p. 430 ff.

fully effective until the division of labour has been perfected and the working process has been efficiently organized in time and space. Considerable problems arise because the performance quite often depends not on the individual work effort alone but on input supply difficulties, planning mistakes, crop failures and other factors beyond the workers' control.

The Chinese leadership intends to draw on Western expertise, management methods and organizational procedures for the solution of all these issues. It is probable that the limits for sensible use of Western plants could thereby be extended. The Chinese are not however prepared to jettison certain basic principles of a socialist economy. However greatly their views may have changed, influential circles in China believe the growth prospects of a socialist economy to be superior to those of market-economy systems.

### Technological Dualism

Plant imports cannot make a major contribution to the solution of certain structural problems such as reducing the number of persons earning their living from agriculture, which is between 300 and 400 millions, or that of the unemployed which may be well above 20 millions. These problems might even be aggravated in certain circumstances by one-sided concentration of the development efforts on foreign contributions. Plant imports will therefore probably have to be deferred where they make unacceptable inroads into other important development tasks.

In many industries modern factories as well as enterprises of the traditional kind or at an intermediate technological level contribute to the production. Coal, artificial fertilizers, machinery, and even iron and steel are being produced by relatively modern methods in a few industrial centres while in rural regions traditional production methods are still applied. The consequent technological dualism has to be tolerated for the foreseeable future for the sake of better supplies for rural regions or to enable wide sections of the population to participate in the industrialization process and to benefit from its effects on training and employment<sup>7</sup>. China has an interest in the gradual modernization of the traditional sector but the supply of complete highly-modern installations is of no avail for this purpose. It remains to be seen whether industrialized nations can offer appropriate technical solutions for at least some parts of this sector of the Chinese economy.

### Support for Agriculture

The inquiry into possible limits of Western development contributions indicates that such limits do indeed exist but are certainly not rigid. Insofar as they have been set by China herself through political decisions about the extent to which she will incur debts they can be extended by changing the economic conditions determining China's ability to pay off such debts. But even in as much as they may be attributable to past mistaken economic decisions or differences in the material conditions for social and development policy they need not be rigid either. There certainly are already, according to all the available information, concrete opportunities for Western development contributions in the areas indicated on the following pages.

Western industrialized states could assist China in the advancement of her agriculture which constitutes the most serious bottleneck. The experience of countries in different regions would be of interest for field crops, technical crops and animal husbandry as China comprises various climatic zones.

Imports of farming machinery and implements may be considered as a means to increase per-capita yields. Foreign firms must however take into account that there is at present a shortage of skilled workers for the handling and servicing even of Chinese-made agricultural machinery. It would therefore be advisable to provide appropriate training programmes. Some of the factories and workshops set up throughout the country on a district, commune and brigade level for the production or repair of farming machinery might be made use of for this purpose.

China could also benefit from Western experience with raising per-hectare yields through improvement of the quality of seeds, development of herbicides, better cultivation methods or extended irrigation and drainage. More fertilizer factories are intended to be ordered from the West in order to lessen the dependence on imports of artificial fertilizers which in 1978 still amounted to US \$ 400 mn. Large areas of virgin land will have to be brought into use in view of the increasingly intensive use made of the available arable lands and the consequent soil impoverishment. Suitable Western equipment could therefore meet with interest in China.

### Industrial Key-Points

In the industrial sector key-point areas have been fixed which are to be developed further with Western aid. In the crude oil sector China wants to speed up the

<sup>7</sup> Cf. Wolfgang Klenner, *op. cit.*, p. 329 ff.

opening of new oilfields so as to meet her own growing requirements – about 90 mn tonnes in 1978 – also in the future and to be able to export increasing quantities. The greatest importance is currently attached to the off-shore zone where the transport problem – especially with regard to exports – could be solved relatively easily if oil is found. Considerable arrears have to be made good in the refinery installations which are technically obsolete and of inadequate capacity.

Coal will remain the backbone of the country's fuel supply. Existing big mines are therefore to be mechanized and modernized with help from the West. China is interested in acquiring modern processing facilities capable of ensuring a high and constant coal quality. She seems at present to be less interested in a comprehensive modernization of the numerous small collieries – about 20 000 with an average annual output of about 9000 tonnes in 1977. However, as transport is scarce, it seems possible that, in the future, the advantages of local production will be appreciated and suitable modernization concepts welcomed.

In the electricity sector, at present one of the worst bottlenecks, foreign assistance is to be mobilized in order to create the conditions for a speedy increase of electricity generation. The erection of new power stations is envisaged while existing generating plants are to be modernized. Use is to be made at last with foreign help of the hydro-electric power potential which is put at about 580 mn kW and is thus one of the biggest in the world; in 1979 hydro-electric stations accounted for no more than 17 % of the total electricity generated. An increase of this share will save oil – which in the same year supplied 21 % of the electricity production – and coal (62 %) which can be set aside for export<sup>8</sup>. The construction of grid systems is to help to stabilize the supply of electricity.

China hopes that cooperation with the West will lead to advances in the iron and steel sector in which the labour productivity is only a fraction of what it is normally in the West. The coal consumption per ton of crude steel is more than three times that of modern steelworks in the West, and the gap could perhaps be considerably narrowed by suitable modernization measures. China also seeks Western support in her efforts for improved adaptation of her product range to requirements. She needs modern technological processes for the production of specialized high-quality steel alloys which she lacks and for this purpose

has to make appropriate alterations in, and additions to, the existing works. China finally wants assistance in the building of new steel capacities. Her steel production is to be raised by the mid-eighties by 15-20 mn tonnes to 45-50 mn tonnes. The purchase of complete works from abroad however seems no longer to receive as much consideration as two years ago. As much of the plant as possible is to be made at home in order to economize on foreign exchange.

### **Expansion of Non-ferrous Metal Production**

The ambitious plans for the establishment of non-ferrous metal complexes announced in 1978, largely with the intention of thus earning foreign exchange, seem to have been deferred. The problems encountered in the existing mining and processing capacities and in transport are too great. In some cases it is perhaps intended to wait for the results of the most recent prospecting and exploration work in order to be able to make the best possible decisions on the choice of suitable sites. For the time being priority is given in any case to copper and aluminium which still have to be imported although deposits of them exist in China and to other non-ferrous metals commanding high prices in the world market. China is greatly interested in Western equipment for their extraction and production and wishes to acquire it, as far as possible, on the way of compensation – technologies for raw materials.

China still imports some of the iron ore needed to cover her requirements although she has ample deposits. The cost of opening these up and creating the requisite infrastructure was however hitherto considered to be too high. There are signs that this assessment may change.

China has repeatedly indicated an interest in Western support for the expansion of her capacities in the light industry. Her decision to raise the consumption level of the population makes an increase of the light industry's production and a diversification of its production programme imperative. There are wide-reaching opportunities for Western firms which wish to assist in establishing a production programme commensurate with a higher standard of living. Since China believes that the light industry has good export prospects and therefore wants to set up production capacities additionally for the export trade, Western firms will find scope for commercial transactions or establishment of joint ventures and special manufacturing operations in export zones in an increasing number of industries.

<sup>8</sup> Cf. Li Rui: Bixu youxian fazhan shuidian, in: Renmin Ribao, March 6, 1980.

China will hardly be able to develop the transport and communications sector through use of her own resources sufficiently to sustain the modernization of the economy which is after all characterized by a marked regional and operational specialization and correspondingly high transport and communications requirements. Even now the current production and many investment projects are far too often impaired by a shortage of transport capacities. How underdeveloped the transport system is as a whole can be judged from the fact that the railway network which has to provide substantially more than half of all transport services is little more than 50 000 kilometres long.

For comparison, the Federal Republic of Germany has about 30 000 km of railway lines and Japan about 40 000 km. China will want railway engines, signal systems, trucks, ships and quay installations to modernize and extend her transport and communications system.

To take over technical solutions from the outside world or use Western examples for guidance was denounced in China for a long time as "adulation" of foreign countries or as "lumbering behind". The West could never be overtaken by emulating its concepts, it was thought. While laborious attempts were made to copy Western solutions, the Western countries were getting farther ahead. But now it is pointed out that Japan has achieved a leading role in the world economy by adopting Western technologies in the initial phase of her industrialization. For a long time certain groups in the Chinese leadership were, besides, convinced that Western concepts could not be made to serve Chinese needs and the objectives of the building of socialism in particular. They denied the existence of "compelling technical factors" and sought alternatives based on China's own resources. This made China for many a development model. It remains to be seen whether China can still preserve free scope for alternative solutions as her development advances.

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#### DEVELOPMENT FINANCING

## Why a New International Development Organisation is Needed

by Graham Bird, Guildford\*

**The present arrangements for providing developing countries, and in particular the least developed countries, with international finance are inadequate in both quantitative and qualitative terms. Fundamental changes seem necessary. These changes might incorporate the establishment of a new International Development Organisation (IDO). Such an organisation could be financed in a way which does not conflict with the current consensus on international monetary reform.**

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Developing countries may gain access to international finance through a number of channels. These include: long term capital direct from other countries; short term finance from the Eurocurrency market; loans from the World Bank or International Development Association or various regional development banks; or short to medium term finance from the International Monetary Fund.

However existing arrangements have, over recent years, exhibited a number of shortcomings. Crucial amongst these are: first the specific project orientation of the clear majority of long term finance and the degree of conditionality attached to short term finance from the IMF; second the inability to deal with the particular problems faced by the least developed countries which find it difficult if not impossible to attract private finance and therefore have to rely more heavily on institutional assistance which, as the first

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