BUSINESS FOR DEVELOPMENT:
IMPLICATIONS FOR EXPORT STRATEGY-MAKERS

CHINA

CHINESE EXPORT STRATEGY:
BUILDING UP TECHNOLOGY-INTENSIVE ORIENTATION

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Introduction

In the beginning of the 21st century, every consumer around the Earth would have one pair of China made shoes, 2.8 pieces of China made garment, 1.7 meter China made cloth and every two would own one cap, one towel and one pair of socks made by China. Neither comfortable with nor the least proud of the figures, to the contrary of some speculations by outsiders, strategists for China export have repeated one simple question to themselves for quite some time. The question is how much more can China produce and market to the world in the face of both physical and psychological barriers around the world for labour intensive products’ export, perhaps more so with trade restrictions such as TBT measures or even discriminatory antidumping measures? As a nation long for a successful transfer to a market economy at the earliest possible time, China has been updating her export strategies for quality rather than quantity, profit rather than foreign exchange income, sustained development of economy and social progress rather than serving as a mere world factory.

Today I would share with you the vision and efforts on promotion of technology intensive export, which has been the latest of its kind in China’s export strategies, and I should state here that the views at this presentation are only representing those of mine and my colleagues attending the Forum. Any questions, request of exchange of views at or after the forum is welcome.

I. Export Strategy Framework for China

   a) Framework in operation
   China has been following the following 4 export strategies:
      1. Winning by quality
         By which export product is expected to rise in quality as a means of enlarging overseas market by attracting buyers with good quality.
      2. Market diversification
         By which target countries and regions do not have to confine to U.S., Japan and Europe. This diversified approach implies new international markets such as Russia, Asean countries and developing countries at large.
      3. Reinvigorating trade by science and technology
         By which product mix for export should balance between traditional vs high value added and preferably higher technology content or tech-intensive export should be encouraged.
      4. The strategy of going global
         By which Chinese investment goes abroad.

   The following table demonstrates the emphasis Chinese export strategists put on the different aspects of export.

<table>
<thead>
<tr>
<th>Title of strategy</th>
<th>Emphasis</th>
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<tbody>
<tr>
<td>Winning by quality</td>
<td>Export products</td>
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<td>Market diversification</td>
<td>Export market</td>
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<tr>
<td>Reinvigorating trade by science and technology</td>
<td>Export products’ tech content</td>
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<td>The strategy of going global</td>
<td>Export backed by invest abroad</td>
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</table>

   b) Significance of the technology-intensive orientation within the framework
   Technology orientation in export strategy is best reflected by the strategy Reinvigorating trade by science and technology, in which S & T serves as the basis and means to boost the technology content of export products, with high technology products preferred as a priority (please note definition high technology products is not identical with those of OECD countries). Technology orientation previously focused on electron-mechanical products, which are still an important part of the national export target.
It is not that the strategy is more important than others, but Chinese strategists take it as an imperative means by which to sharpen the competitive edge of Chinese products and will provide a basis to improve quality by more technology input to the traditional Chinese exports and bring about renewed popularity of Chinese made products abroad. Therefore, the strategy of technology intensive export supports evidently other export strategies still operational in China.

II. Why Technology-intensive orientation

a) High technology export performance

As an illustration of China’s efforts in implementing the strategy focusing on technology intensiveness, high tech products export of China is described below.

The Chinese concept of high tech products basically covers range of products category, rather than statistical data based ratio of R & D to total cost or sales as used in OECD countries. High tech products are listed in a published Catalogue for Chinese High Technology Export Products, which updates on an annual basis. They include products from IT, biotech & medicine, new materials (high value added), consumer electronics, household electric appliances.

![China's High tech Products as Percentage of Total Export](image-url)
From statistical data collected from the Chinese Customs, the development of high tech products export has become a phenomenon in recent years. Chinese strategists has regarded reinvigorating trade by science and technology strategy being adopted from 1997 as one of important contributing factors to the high tech export growth. It follows that the strategy should be the focus of more expectations for the years to come.

b) Challenges to Chinese export and solution
Chinese government strategists for export promotion are faced with many problems. One of them relevant to the topic here is technology intensiveness.

Take high tech products export as an example, the driving force behind the success are processing trade and FDI operations in China. Chinese export strategists have more expectation than satisfaction.

Processing trade in China involves two types of processing

- processing with imported materials
- processing with customer's materials

(Materials means raw materials, spare parts and components to be processed or assembled)

Processing trade accounts for 89.6% of total high tech export, while ordinary trade merely 7.4%. It is evident that the basic form of production for high tech industry is processing and assembling, falling short of proprietary intellectual property and Chinese owned trade brands.

In the recent decade, processing trade rises in its share of Chinese high tech export from 70.2% in 1993 to 89.6% last year, while ordinary trade falls in its share from 27.6% to 7.4% during the same period. The contrast leads to the conclusion that processing trade has been a driving force of Chinese high tech export. But it is also concluded by more and more researchers that behind this driving force lurks the worrisome fact that technology creativity and innovation of Chinese high tech companies have been far from satisfactory and will not improve dramatically in the short run. International competitiveness is therefore considered compromised.
III. How China proceed with the strategy

a) Present situation of technology intensive export

In terms of products with comparatively higher technology intensity, China has been a net importer. From 1998 to 2002, China’s trade surplus of Miscellaneous manufactured Articles (a classification includes furniture and its spare parts, garments and accessories, shoes and boots, etc.) had been expanding year by year. In contrast, trade in products with comparatively higher technology intensity such as machinery and transpiration equipment had been under continuous deficit. In other words, the basic structure of China’s foreign trade is framed by exporting low value added consumer goods to exchange for imported capital goods.

In areas of high tech products, the situation has much room to improve. Despite the fact that trade surplus in computer and communications products increased to 26.3 billion USD in 2002, a 107.8% annual growth rate (12.6 billion USD in 2001), in general, high tech trade has been in deficit, the majority of which came from electronics, CIMS (Computer Integrated Manufacturing System) and aircraft and space craft. In 2002, the deficits of the three sectors were 27.4 billion, 7.5 billion and 4.2 billion USD respectively. These figures represent huge demand of the Chinese market towards the 3 technology areas, which obviously have insufficient supply by Chinese manufacturers. It is also worth noting that the trade surplus in computer and communications products implies China’s reliance on processing and assembling in high tech industry development.

For 5 consecutive years (1997 - 2001), China’s high tech trade deficit has been on the rise. Around the middle of 1990s it even rocketed into over 10 billion USD. The deficit dropped down a bit later but rose again from 7.6 billion USD in 1997 to 17.7 billion USD in 2001 and stopped rising until 2002 when high tech trade deficit was about 15 billion USD. The reason is although high tech export has been growing rapidly, the import develops much faster.

However, Chinese strategists have not expected to reverse the status quo in the foreseeable future. As China has been undergoing industrialization, Chinese observers and researchers take active high tech import as positive signs and inevitable tracks to follow. Therefore there will continue to be a huge market in China for high tech products and service coming from abroad. The time for judging trade performance by absolute balance of trade has passed.
Researchers are more concerned about sustained economic development and social progress as the ultimate goal for export, not visa versa.

b) Rising TSC of Chinese high tech product

From the Trade Specialization Coefficient (TSC), the international competitiveness of Chinese high tech products has been under constant improvement. In the early 1990s, Chinese high tech products had a TSC of -0.5. After 1995, the index rose by a comparative large margin. A bit of down turns in 1998 and 1999, it rose again to -0.1 in 2001.

![Graph showing high tech trade surplus and TSC from 1991 to 2002.](image)

High tech Trade Surplus and TSC (1991~2002)

Largest TSC calculated for Chinese products could be found in household electronics (0.91) and garments (0.93). TSC figures for the majority of other industrial products, however, have been in minus. This type of figures indicates advantage of Chinese export in household electronics and garments and obvious disadvantage in chemical industry, iron and steel, semiconductor, automobile and other high value added products.

b) Measures taken in accordance with the strategy

The Chinese government has been actively carrying out the strategy for raising the technology intensives of the export. Hundreds of projects have been operational with government support in terms of finance, and technical assistance.

Key Types of Projects Supported are as follows:

- **Framework construction**
  - Information service system for HT export
  - Infrastructure and facility at export bases
  - R & D on policy measures
  - Quality certification system
- **TBT systems in HT areas**
- **Software internationalization**
- **S & T development projects**
  - IT
  - Biotech & medicine
  - Chinese traditional medicine
  - New materials
Besides, specific geographic areas have been designated as key target of government support. Specialization exhibitions also prosper in favour of the strategy.

- 22 National HT Export Bases
  - Criteria: HT export orientation
- 20 Key cities for HT Export
- Permanent Exhibitions
  - China Beijing International High-tech Expo (5 times since 1998)
  - China Hi-Tech Fair (5 times since 1999)

**Concluding remarks**

For quite some time to come, Chinese export strategists will be thinking hard on the following two issues, in terms of export strategy focusing on technology intensity.

1. Market access capacity for non processing trade exporter is evidently problematic, with marketing and distribution of exported products relies heavily on the buyer side of the international processing trade, as have mentioned in this presentation.
2. Development of proprietary IP products for export, which is the ultimate resource for national high tech content export, has been far from satisfactory since key technology, esp. proprietary IP tech is owned by the FDI investor., taking into account that FDI companies not only constitute the largest share of processing trade but also largest share of Chinese high export.

**Type of Exporters for HT Products in Export Value**

- **Companies with Foreign Investment**: 82%
- **State Owned Enterprises**: 15%
- **Non-state owned enterprises**: 3%

![Pie chart showing the distribution of exporters for HT products in export value.](image-url)