

5 Research on the Regional Economic Development of Northeast China

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Based on the analysis of the superiority of labor force, minerals, science and technology, and economy of the northeast area of China, we have put forward the strategy of gradually expanding processing-type industries to build an international economic trade region and opening to the outside world by taking resources processing as its main direction and upgrading traditional industries with high and new technology as a key point. The strategy emphasizes the change from resources development to resources processing, upgrading industrial structure by utilizing comparative advantage, promoting even industrial distribution to the east and west, and promoting an export-oriented economy by utilizing the geographical advantage of the central developed industrial belt. In line with this strategic thinking, we have raised the direction and prospects of major industrial development.

PRESENT SITUATION OF ECONOMIC DEVELOPMENT AND RESTRICTING FACTOR

The northeast Asia economic zone is composed of Liaoning, Jilin, and Heilongjiang provinces and three mongs (Hulunbeier Meng, Zhelimu Meng, Xingan Meng), and one city (Chifeng City) in the eastern region of Inner Mongolia. In 1990 the national production of the three provinces reached 199.6 billion yuan, the total value of industrial and agricultural output was 373 billion yuan (of which the total value of industrial output was 302.2 billion yuan), and the original value of fixed assets for the independent accounting industrial enterprises totaled 2.55.3 billion yuan (net value 174 billion yuan). There were 1,761 large and medium-sized industrial enterprises. The major products were: pig iron (12.76 million tons), steel (13.86 million tons), plate glass (15.85 million weight boxes), timber (21.81 million cubic meters), crude oil (72.87 million tons), electricity (90.5 billion Kwh), raw coal (159 million tons), caustic soda (440 thousand tons), soda ash (780 thousand tons), sulfuric acid (940 thousand tons), automobiles (100 thousand), metal cutting machine tools (18,500 sets), agricultural fertilizer (1.29 million tons), chemical fiber (280 thousand tons),

cloth (1.1 billion meters), wristwatches (6.19 million), washing machines (620 thousand), and bicycles (1.36 million sets). The total grain output reached 49.46 million tons, oil-bearing crops 810 thousand tons, meat 1.27 million tons, and aquatic products 1.29 million tons.

The development situation and advantageous conditions of the northeast economic zone are as follows:

In 1990 the total population of the three provinces amounted to 98.46 million. Urban population accounted for 47.8 percent, and rural population, 52.2 percent; males 51.1 percent, and females, 48.9 percent; educational attainment at university and college level, 2.99 percent, educational level above senior middle school, 14.9 percent, junior middle school, 37.75 percent, and primary school, 44.3 percent. The educational level of the population was higher than that of the rest of the country. Labor force resources of the three provinces were 44.94 million people, of which urban labor forces accounted for 55.4 percent (higher than that of the country as a whole), rural, 44.6 percent. The labor force resources exceeded 15—20 percent of the social and economic development requirement, and scientific and educational undertakings were relatively developed. There were 147 institutions of higher learning in the economic zone with 276,000 students in universities and colleges, which accounted for 14.37 percent of the country's total. There were 2,302 state-owned scientific research institutions (of which 1,221 institutions were run by the large and medium-sized enterprises), which made up 15.82 percent of the country's total; there were 1.59 million natural science technical personnel of the state-owned sector, which accounted for 14.7 percent of the nation's total.

The three provinces covered a land area of 787,000 sq. kilometers, with a total cultivated area of 244 million mu, forest area of near 500 million mu, grassland area of 170 million mu, reserves of woods totaling 2.2 billion cubic meters, and more than 100 kinds of minerals. The greater reserves of natural resources included 12.9 billion tons of iron ore, 27.2 billion tons of coal (excluding 37 billion tons in the three mongs and one city of the eastern region of Inner Mongolia), magnetite 2.4 billion tons, boric ore 25.60 million tons, talcum ore 45.84 million tons, sulfuric iron ore 38.45 million tons, and solvent rock 1.65 billion tons. Although it was rich in mineral resources, the proportion of utilizing reserves was greater because of earlier exploitation.

Through four decades of work, the commodity grain bases have been established in the vast northeast plains with commodity grain providing 36.47 million tons annually. Timber production bases have been set up in the northwest, east and Changbai mountain areas and annual timber production accounted for one-half of the national total. Animal husbandry bases have been built up in the west and northeast of the economic zone with the output of meat accounting for about 8 percent of the national total. Iron and steel production bases have been established focusing on the Anshan Iron and Steel Company and the Benxi Iron and Steel Company, with the iron and steel produced making up more than 20 percent of the national total. Energy production bases have been built up with the output of crude oil produced by "three fields" making up 50 percent of the country's output. Coal made up more than 10 percent of the nation's total and generated electricity was 15 percent of the national total. Mechanical and electrical equipment production bases have been set up

especially in big cities, which can provide the state with a complete set of metallurgy, mining, chemical industry, electricity, transmitting and transforming equipment, many kinds of metal cutting machine tools and transporting machines, and so on. Chemical bases have been established considering Daqing, Jilin, Dalian and Fushun as a center, with a greater proportion of the country's total output of basic chemical industry, raw materials and petroleum, and chemical products being turned out in these areas. A comprehensive transport network, extended in all directions and composed of railway, highway, water transport, aviation, and piping, has been taking shape by linking up with seven production bases. Railway mileage accounted for 28.8 percent of the national total with highways reaching about 10 kilometers per 100 sq. kilometers, and the volume of goods transported to Dalian Port occupied the first place in the entire country. The length of pipeline was 2,700 kilometers. A developed industrial belt from Dalian in the south to Harbin in the north has been formed on this transport network.

During the "Seventh Five-Year Plan" period, the proportion of the second industry dropped, and the proportions of the first and the third industries went up. In 1990 the proportion of the second industry in the gross national production dropped to 53.6 percent from 60.4 percent; the first industry went up to 22.6 percent from 19.8 percent; and the third industry went up to 23.8 percent from 19.8 percent compared with 1985. During this period, more attention was paid to the development of the third industry than previously.

In recent years infrastructure has been greatly improved. There is about a 40 percent surplus of transport capacity for highway transportation, but railway transportation was still in great demand. During the period of the "Seventh Five-Year Plan," Shenyang—Dalian Expressway was built which extended more than 370 kilometers. In recent years, greater developments have been made for transportation on the sea. The handling capacity of Yingkou's new port has somewhat expanded, the first stage project of Dayaowan Port has been completed, and Dandong Port and Jinzhou Port have been put into operation successively. The unsuitable situation of aviation transport has greatly been improved since Shenyang's Taoxian Airport was put into operation. In 1990, business volume of mail and telecommunications increased by 150 percent over 1985. Shortage of water supply in some cities and shortage of traffic in the cities have aroused close attention by the Liaoning Provincial Government. Although the infrastructure in the city still needs strengthening, it can suit the demands of opening to the outside world at present.

In 1990 the total social output value for both urban areas and townships of the zone reached 307.5 million yuan which made up 68.5 percent of the total social output value; the output value of large and medium-sized industrial enterprises was 17.16 million yuan, accounting for 56.7 percent of the total value of industrial output; urban social commodity turnover was 68.2 billion yuan which accounted for 66.5 percent of the total social commodity retail sales; urban investment in fixed assets made up more than 80 percent of the total; the average per capita cost of living and income was 1,089 to 1,398 yuan; bank saving for urban residents was 64.2 billion yuan, which accounted for 88 percent of the total bank savings. The urban economy grew rapidly, with a smaller proportion of rural economic growth in the zone. The total value of

rural social output reached 141.8 billion yuan, making up 31.5 percent of the total social output value; the turnover of rural social commodity of 34.3 billion yuan made up 33.5 percent of the total social commodity retail sales; the proportion of rural investment in fixed assets in the total investment reached almost 20 percent; the average per capita cost of living and income amounted to 217 to 736 yuan; rural resident bank savings were 8.3 billion yuan, which made up 12 percent of the total bank savings.

The relatively advantageous geographical position includes a continental coastline that reaches 2,180 kilometers, with 4 harbors for external contact; the borderline was over 7,000 kilometers with more than 20 ports for foreign trade. In 1985, 134 "Three Kinds of Capital" enterprises were newly established, and 514 enterprises in 1990, an increase of 180 percent over 1985. In 1990, the volume of export for foreign trade commodities reached US \$7.4 billion, 28 percent over 1985; the volume of the import US \$1.3 billion; actual utilization of foreign capital US \$870 million, 16 times that of 1985. Ports to the outside world increased quickly, the "Three Kinds of Capital" enterprises developed rapidly, and the utilization of foreign capital increased by a wide margin.

The Northeast Economic Zone possessed many superiorities of speeding up economic development and expanding openness to the outside world. However, there still existed some restricting factors.

In light of Liaoning Province's survey and analysis, equipment which the industrial enterprises owned accounted for 70 percent before the 1960s, 109 percent in the 1970s and 20 percent since the 1980s. A smaller proportion of equipment of mechanical and electrical integration and backward technical equipment was an important restricting factor of implementing a high grade industrial structure.

In recent years, high and new technology industries, low energy consumption and high efficiency industries grew slowly; traditional industry, high energy consumption, and low efficiency industries continued to occupy a leading position. Such an industrial structure which was not favorable to economize energy and expand accumulation will certainly affect the growth of an economy.

The Northeast was an old industrial base with a large number of old and outmoded equipment that needed to be updated. However, the needed advanced technical equipment could not be provided in the economic zone and by the domestic mechanical and electrical industries because of shortage of funds. Lower economic performance and backward mechanical and electrical industries were two factors that restricted progress in industrial technology and even economic development.

STRATEGY AND OBJECTIVES OF REGIONAL ECONOMIC DEVELOPMENT

The Northeast Economic Zone has the advantageous geographical position of resources technology and openness to the outside world. In order to give better play to the superiority, the future development of the economy should focus on the careful and thorough processing of resources. We should gradually expand processing-type industry to establish the international economic trade zone of openness to the outside

world by upgrading traditional industry with new and advanced technology.

In the change from resources development to the careful and thorough processing of resources, we should vigorously introduce foreign capital and technology and speed up industrial technological transformation and upgrading. A new generation of high and new technical industrial groups could form a stronger technical superiority, combine technical superiority with the resources to form rich economic superiority, and thus, accelerate the change of national economy from speed to benefit.

In implementing a high grade industrial structure, a low technical level is a significant factor of backwardness. Therefore, centering on superiority, we should develop a coordinated industrial structure while vigorously improving professional technical level. We should closely combine the readjustment of industrial structure, product upgrading and replacement, and technical updating of enterprises. We should focus on developing economizing enterprises with high technical content, large economic performance, and low energy consumption; upgrade technically the three leading industries, specifically petroleum and chemical industry, mechanical and electronics, and iron and steel; complete the updating and upgrading of leading products of different trades; and work hard to develop new types of industry to form an optimized industrial structure.

The developed industrial belt from Dalian in the south to Harbin in the north was an advanced area which played a guiding role in technology of the whole region. The abundant resources in the east and west areas of this developed industrial belt still need to be exploited. The coming distribution is to spread out gradually to both the west and east sides while giving full play to the radiation of the central developed industrial belt, shaping new industrial belts with different characteristics. An industrial belt which emphasizes exploiting energy and non-ferrous metal should take shape in the western area. The western railway which linked Yiminhe River with Shenyang—Shanhaiguan Railway should be built up. On this industrial belt, there are some cities and mining areas such as Yiminhe River, Huolinhe River, Yuanbaoshan, Chifeng, Tongliao, Shuangliao, Baicheng, Wulahaote, Hailaer, and so on. Taking the eastern railway as an axis in the east area, the exploitation and processing of non-ferrous metal and non-metal as chief forms should be established. On this industrial belt, there are some medium-sized cities including Jiamushi starting from the north, Dandong in the south, and Mudanjiang, Yanji, Hunjiang, and Tonghua in the middle.

The central developed industrial belt should increase the concentrated degree of science and technology, improve the modernization standard of metallurgy, mechanical and electrical, chemical, building materials, light and textile industries, and shift the industries with high energy consumption and projects completed with ethylene to the two sides of the region. In this region, cities which have a population of over one million should develop new and advanced technological industries chiefly, and at the same time we should advance the city distribution to the areas along the coast and borders. Medium-sized and small-sized cities along the coast and borders should develop some processing industries. Arrangements should be made so that a stream of industries for some specialized cities can be developed relying on the exploitation of certain kind of resources.

We should give full play to the advantageous geographical position to carry out

opening, further speed up steps of openness to the outside world, and push the change into an export-oriented economy. The Northeast Asia Economic Forum is a key point of openness of the northeast region to the outside world. We should utilize foreign funds and technologies to handle the technical upgrading of heavy industries in the northeast, and work hard to participate in the level division with Japan and South Korea. We should deal with the shortage of energy by using the abundant resources in Russia's Siberia, especially oil and natural gas. Japan has planned to lay two natural gas pipelines between Siberia Yakusk oil and gas field and Hokkaido and Kyushu Island in Japan. Those two pipelines need to be laid along the border of the Northeast Economic Zone, which would then provide the northeast region with the possibility of utilizing natural gas from Siberia. We should do our best to combine closely the industrial upgrading of the northeast with developing an export-oriented economy, and further expand the openness to the outside world. Keeping the central developed industrial belt as a focal point, we should accelerate the move of large and medium-sized enterprises on this industrial belt to the international market, rely on large and medium-sized enterprises, introduce large amounts of foreign capital, create large and medium-sized "Three Kinds of Capital" enterprises, promote progress in science and technology, and expand foreign exchange. We shall speed up the construction of key ports, and focus on construction of seven ports including Dalian, Yingkou, Heihe, Suifenhe, Manzhouli, Tumen, and Hunchun, taking them as a significant window of opening to the outside world, conducting economic and technical exchanges, creating "Three Kinds of Capital" enterprises, and pushing the opening to the outside world to a new stage. In order to suit the demands of window development, we shall establish an export base of mechanical and electrical products such as electricity generating equipment, automobiles, machine tools, diesel engines, freezers, containers, tractors, bearings, spare parts and components; build up an export base of superior products such as magnetite deep-processing product, magnetic materials, boron series products, graphite electrode, and carbon resources; set up an export base of deep-producing products including agricultural, sideline, local and special products. We shall readjust export structure appropriately to change gradually the focal point of expanding foreign exchange earnings to the heavy industry such as machinery electronics and raw materials. We should meet the demands of expanding the openness to the outside world, gradually forming regionalization and grouping and turning the Northeast Economic Zone into an important base of introducing and digesting foreign advanced technology, learning and popularizing advanced experience of management, and implementing export replacement and expanding foreign exchange earnings.

The growth rate of economy should stay at more than 8 percent in the next period. In coming years we must quadruple the gross national product with the rate of national income obviously increasing, technical equipment of about 50 percent of large and medium-sized enterprises reaching advanced international level, and the proportion of progress in science and technology in the national economy going up to about 40 percent.

DIRECTIONS AND PROSPECTS OF MAJOR INDUSTRIAL DEVELOPMENT

We should focus on comprehensively utilizing and expanding the new field of fine chemical products as a focal point. The Northeast region is richer in oil and gas resources, with good conditions for developing petroleum and chemical industry. The petroleum and chemical industry will become one of the leading industries of the Northeast region. The economic zone had a dozen big refineries with a processing capacity of over 40 million tons, which had a greater potential for developing fine chemical products. At present, the fine chemical industry products that can be produced include several hundred kinds of products such as agricultural chemicals, dyes, coating, reagents, catalyst and auxiliary, functional high polymer, binder, foodstuffs, and feed additive, of which the output of dye, catalyst, and auxiliary have been larger. To sum up, there are a few varieties, and fewer that can be processed largely. In order to complete deep processing of oil and gas resources, we should focus on developing products of the petroleum and chemical industry. However, the overall utilization level of existing large refineries has remained low, and petroleum and chemical industry has grown slowly. From now on, we must adopt advanced technologies and do a better job in deep processing of oil and natural gas by comprehensive utilization. We should give priority to the transformation of a dozen large-sized refineries to accelerate the petroleum and chemical industry. Stress should be placed on the development of ethylene, synthetic resin, synthetic rubber, synthetic fibre monomer, chemical fertilizer, and fine chemical industrial products, and the provision of some raw materials for the development of chemical, building material, textile and light industries. Basic chemical and raw material industry is also a superiority of the Northeast Economic Zone. Products such as sulfuric acid, nitric acid, soda ash, caustic soda, nitric acid sodium, subnitric acid sodium, potassium chloride, and boron compound occupy an important position in the entire country. Therefore, emphasis should be laid on the development of basic chemical raw material industry while accelerating the development of fine chemical industrial products.

Mechanical and Electrical Industry

Development of the products of mechanical and electrical integration should be put in a preferential position. The Northeast Economic Zone was China's important mechanical and electrical industry base, and the electrical engineering and electrical equipment manufacturing industry occupied a significant position in the entire country. It had China's largest factories producing electricity generating equipment and transmitting and transforming equipment. The whole trade had more than 70 foundation enterprises with large-sized power station equipment producing one-third of the whole country's output, and high-voltage transmitting and transforming equipment accounting for 40 percent of the nation's output. The heavy-duty mining and mechanical manufacturing industry has developed a productive system of metallurgy and heavy-duty mining mechanism manufacturing with large-sized enterprises as a foundation. This system included 100 backbone enterprises which could produce products with more than 200 series and over one thousand varieties.

It could also produce smelting equipment such as the blast furnace, the large-sized oxygen blowing converter below 2,000 cubic meters; provide excavating equipment for producing open cut metal mine and coal mine at 10 million tons level; and produce multiple-purpose large-sized forging equipment, lifting and transporting equipment, engineering mechanism, and pneumatic mechanism. The universal mechanism manufacturing industry had more than 200 core enterprises which could supply the national economy with more than 2,000 kinds of products including the petroleum and chemical industry packaging mechanism. Environmental protection equipment, light and textile mechanism, and machine tools with about 20,000 sets of various machine tools are produced annually. There were also over 40 enterprises including large-sized shipyards, automobile manufacturing factory, rolling stock plant, airplane manufacturing plant, and so on which provided an abundant base for developing shipbuilding, locomotive engine, automobile and airplane. This was one of the important transport and mechanical production bases. Electronic industry also possessed a certain foundation. There were over 50 core enterprises and 19 research institutions in the economic zone, which had a number of high level scientific research contingents which engaged in electronic technological research.

The mechanical and electrical industry was one of the leading industries in the economic zone. At present, low efficiency and poorer precision of mechanical and electrical products which have been provided for the national economy has (or restricts) restricted the progress in technology of national economy. The future main point of development is to combine mechanical equipment with electrical technology and produce more products of mechanical and electrical integration in order to build up a modern mechanical and electrical industry base. There should be no quick increase in the quantity of mechanical and electrical industrial products, while larger improvement is needed in the technical level in order to make the leading role of progress in science and technology even greater. We should closely combine the electrical products with technical upgrading in order to climb to a higher stage of highest-quality, high technology. Technical upgrading of electrical industry should be put on a preferential level to develop electronic products, speed up the development of products of mechanical and electrical integration, and improve the automation level of equipment to give play to the superior position of heavy-duty machine manufacturing industry. We should focus on upgrading a batch of large-sized enterprises, including Fulaerji No. 1 Heavy-duty Machine Plant, Shenyang Heavy-duty Machine Plant, "Three Powers" in Harbin, Shenyang Cable Plant, Shenyang Mining Machine Factory, Dalian Crane Plant, and Shenyang No. 1 Machine Tool Plant in order to produce large-sized and high precision heavy-duty machines and advanced universal machine tools and improve capacity of equipment. Series of automobiles, locomotives, buses, aeroplanes, boats, and ships should be developed, focusing on Changchun No. 1 Automobile Factory, Dalian Shipyard, Dalian Locomotive Plant, Harbin Aeroplane Manufacturing Corporation, Harbin Aeroplane Manufacturing Center, and Chang—Chun Bus Factory. We should change "large and overall" and "small and overall" categories in the mechanical industry to develop some specialized factories producing spare parts and components and improve the specialization level of mechanical industry. Because of the accelerating of the

upgrading of mechanical and electrical products and improving the technical content of unit products, the growth rate of output value will also be relatively fast in case of no increase or less increase of product output.

Iron and Steel Industry

We should focus on developing pipes, plates and belts in thin and small-sized varieties to replace imports. Through four decades of construction, the iron and steel base has been established with five steel factories (Anshan, Benxi, Fushun, Dalian, and Qiqihar) as the backbone. This base has not only provided a great deal of ordinary steel for the state, but also some top-quality steel products: deep stamping cold-rolled steel plate produced by Anshan Iron and Steel Company; high-temperature alloy steel cold-rolled sheet worked out by Fushun Iron and Steel Company; and High-speed tool steel and hot-rolling small-sized steel products produced by Dalian Iron and Steel Company. All have been awarded a "gold medal" by the state. Generally speaking, Anshan and Benxi Companies, the two largest steel-works still focus on producing roughly rolled steel, with Fushun, Qiqihar, and Dalian Companies producing special steel. The proportion of producing roughly rolled steel must be reduced step by step, and stress must be placed on the development of pipe, plate, strip, thin, and small variety products, for which the state needs to replace imports. The Northeast Economic Zone has a higher technical level, and its leading position in providing high-quality steel products for the development of national economy will be increasingly strengthened. In days to come we should give priority to the upgrading of the five steel works, accelerate training technical personnel, and promote actively progress in science and technology. We shall focus on enlarging blast furnace, computerizing steel-smelting and steel-rolling, and automatizing transport gradually. The automation level of production should be improved in a planned way, and the computer comprehensive automation system with an advanced level should be established in large and medium-sized enterprises step by step, organically integrating links in the production chain. Efforts should be made to readjust product structure, accelerate the development of high-efficiency steel products such as low-alloy, thermal intensification as well as cladding material coating, processing of composition surface and cold banded steel, continuously expanding the production capacity of petroleum pipe, shipbuilding plate, sheet, strip steel, silicon steel sheet, medium-sized thick plate, shaped materials and seamless steel tubes; the proportion of plate, pipe, and strip materials will rise about 60 percent, and the proportion of alloy steel produced by the special steel works will increase about 80 percent by the year 2000.

Building Material Industry

The development of new building materials and high-grade cement should be put on the position of first importance. There were more than 80 core enterprises in the Northeast Economic Zone. The major products consisted of more than 300 varieties such as cement, plate glass, toughened glass, glass fibre, quartz glass and its products, building and sanitary ceramics, industrial ceramic products, glazed tiles, and asbestos products. However, there were more traditional building material industries and fewer newly built ones, more varieties of cement with greater output, but less high-

grade cement above 600. Our future plan is to develop steadily building material industry and make our efforts to develop new building materials. We shall adopt advanced technologies to exploit famous brand and top-quality products and fine and high-grade products and readjust product structure. The proportion of high-grade cement and proportion of new pattern wall material should be increased remarkably, and cement should be developed toward high-grade, multiple-varieties and specialization, and output should be increased appropriately. We shall focus on improving the quality of plate glass, exploiting glass deep processing technology, vigorously developing special-type processing glass. We shall develop new designs of building sanitary ceramics, increase varieties, improve quality, reduce production cost, and strengthen ability of competition. Efforts must be made to develop new-type wall materials to replace gradually the traditional building material products. We shall work hard to complete deep processing of non-metal ore with multiple specifications and thin products developed. Technical upgrading of core enterprises should be carried out, and efforts should be made to promote progress in technology of the building material industry and to strengthen competitive ability. With the increase of investment in fixed assets, especially the expansion of foreign and domestic markets, the development of the building material industry will be promoted at a certain growth rate.

Light and Textile Industry

We will accelerate the updating and upgrading of products. As a complete category, the light and textile industry includes paper-making, sugar-refining, dairy products, salt-making, food-canning, winemaking, mechanism chemicals for daily use, printing, electric light source and household electrical appliances, clothing, building hardware, fur, chemical fibers, cotton textiles, wool textiles, linen textiles, silk textiles, and textile mechanism, with more than 400 enterprises. However, it urgently needs upgrading technology in order to compete with better products. In coming days we shall make efforts to develop steadily the light and textile industry by improving grade, quality, and varieties. Exploitation of new products should be conducted appropriately for light industry while readjusting product structure. The textile industry should work hard to improve the level of product processing and carry out readjustment of product structure in accordance with the demands of markets at home and abroad. It should not only exploit high and medium grade products which have higher additional value but also meet the need of various textile products at different consumer levels. Growth rate would not be fast by simply relying on agricultural raw materials to develop light and textile industry. The Northeast region was a raw material base which had a superior position in developing light and textile industry using local raw materials. We should do our best to utilize this superiority to speed up the development of light and textile industry. The self-supporting level of light and textile industry should be improved gradually, and its proportion in the region's industry should be appropriately increased. The main points of development are, firstly, to combine closely the technical upgrading of large-sized backbone enterprises with the updating and upgrading of old products, adopt international standards, develop new products, and form a dozen new kinds of industries such as

maize deep processing, packaging and decorating, medium-grade and high-grade beverage, nutritious and high-efficient foodstuff and daily-used household electrical appliances. Secondly, the light and textile products should be developed by relying on fiber crops, wool and chemical fiber as raw material. We should resist in the principle of "thin, chemical mixture and fine and deep" to change the structure of raw material, improve product grade, and strengthen ability in earning foreign exchange. Thirdly, the proportion of light and textile industry which used industrial products as raw materials should be increased. The light and textile industry is a less developed industry in the Northeastern economy; therefore, its future growth rate should not be lower than that of heavy industry.

Basic Industry

Conditions which were unsuitable to the development of the national economy should be changed as soon as possible. Shortage of energy was one of the principal contradictions in economic development. The energy structure was unsuitable to the demands, thanks to outputting a larger amount of petroleum and inputting a great amount of coal. To deal with the shortage of energy, we must implement the principle of "exploitation within the region, state allocation, synchronously carrying out reducing consumption and readjusting energy structure and putting energy-saving on the preferential position." In order to solve the problems about energy in the Northeast, the state and province have made arrangements positively. In the next ten years, the scale of coal mines newly constructed and cooperatively allocated by the state will amount to over 80 million tons (including three mengs and one city in the east of Inner Mongolia). A number of roads, galleries and harbor power stations will be built with the output of petroleum stabilizing at the existing level. All trades and professions should emphasize energy conservation.

One of the main contradictions in economic development is shortage of transportation capacity. Shortages still exist in transport capacity in railways; in highways, there are a surplus of transport capacity and an unreasonable transporting structure. We shall further perfect the construction of a comprehensive transport network, readjust transportation structure, adopt widely advanced technology, give full play to the superior position of various transportation methods, and improve comprehensive transport capacity. We shall upgrade existing lines by adopting new technology, develop electric railway, and increase the proportion of large tonnage automobiles and boat and ship transport. Construction of railway, harbors, inland navigation, and airports should be increased in order to promote the coordinated development of various kinds of transport means.

We shall speed up the development of program-controlled automatic exchange equipment and satellite, optical fiber and data communications in the construction of mail and telecommunications. Newly increased telephones in the cities will amount to more than one million sets by the end of the "Eighth Five-Year Plan." We shall improve the communication capacity of 4 hubs including Dalian, Shenyang, Changchun, and Harbin; construct two ringlike optical fiber communication systems and satellite ground stations from Beijing to the Northeast; build grouping exchange network and trunk line digital communication network, with Shenyang as its center;

expand the transmitting capacity of telegraph; and increase the rate of telephone popularity and the efficiency of post and telecommunications.

Agricultural Production

Grain should be the focal point to implement and upgrade the all-round development of agriculture, forestry, animal husbandry, side-line and fishery. The Northeast has preferential conditions for developing modernized agriculture. The vast Northeast plain is China's important grain production base. The Great and Small Xing'an Mountains and Changbai Mountains are a significant forest base for the entire country. Hulunbeier and Keerqin Grassland are China's well-known animal husbandry base. There were abundant marine and beach resources in the southeast coast with an important marine products base. In the future, we shall give play to this superiority by utilizing water conservation and three-dimensional agriculture, speed up the socialization, merchandization and modernization drive of agricultural production, upgrade production technology which took traditional production factor as a key with modernization means, improve conditions of agricultural labor, promote the change from agricultural labor force to industry, and relax contradictions between industry and agriculture. We should increase investment in agriculture to accelerate the construction of agriculture and implement agricultural modernization. 5000 mu of medium and low yield fields should be transformed to establish the construction of commodity—grain—base counties. We must speed up the construction of three rivers, Songnen, Songliao Plains, and Liaohe Delta production bases; continue to harness the Songhua River trunk stream, develop beet, oil-bearing River trunk stream, develop linen, bluish dogbane in a planned way to provide some needed raw material for the light industry. We should vigorously strengthen forestry construction in the Great and Small Xing'an Mountains and Changbai Mountains Areas forming a timber production base which can be utilized for generations. Construction of grasslands should be turned (in the west and north of the Northeast Economic Zone) into a modern animal husbandry base. In Liaodong Peninsula and the Liaoxi Corridor, an aquatic product, fruit, and special local product production base should be constructed. Modernization level should be continuously improved to change traditional agriculture into a modernized one and consolidate the foundation position of agriculture in the national economy.

Tertiary Industry

Emphasis should be on the development of industries which can directly serve production, such as science, education, information, consultation, banking, material circulation, traffic, mail, and telecommunications. Comparing the tertiary industry which mainly serves life with tertiary industry which serves production, it is more urgent to develop tertiary industry which directly serves production. There will be no greater increase in economic performance and no fast development in economy if the backwardness of tertiary industry which directly serves the production is not changed. At present, some problems in economic development have not been quickly solved. The main cause was that tertiary industry which directly serves production grew too slowly.

COUNTERMEASURES AND SUGGESTIONS

The Northeast region is rich in resources, with a solid industrial foundation, stronger scientific and technical forces, and wide prospects of cooperation with other countries. Concrete suggestions for cooperation are as follows:

- In accordance with the principles of mutual benefit fairness and reasonableness, we shall implement an open-door policy to the outside world. Cooperative countries are wanted to offer some low-interest loans in line with this principle. Arrangement will be made on a priority basis to the countries which will cooperate with us and provide us low-interest loans according to this principle in import and export trade and cooperative exploitation.
- To strive for the economically developed countries to abolish restrictions on exportation of high and new technologies to the Northeast and expand economical and technical exchanges with the Northeast. New and advanced technologies should be utilized as far as possible on cooperative development projects to produce new and advanced technical products. This kind of product is permitted to get into markets in the Northeast.
- To cooperate and initiate banking and monetary organizations in order to reduce circulating links in utilizing foreign capital and import and export trade and promote export orientation in the Northeast region.
- To establish factories abroad with foreign traders and engage in deep processing of resources by utilizing superior resources such as magnetite, boric ore, talcum ore and graphite ore.
- To organize retired scientific and technical personnel and workers from economically developed countries to come to the Northeast to conduct technical services, for whom we will provide preferential living conditions and working environment.