

Economic Assistance and Loans from Socialist Countries to North Korea in the Postwar Years 1953-1963

Károly Fendler, Hungary

The sweeping changes in international politics and in the individual socialist countries and their relations in recent years have not left the Far East unaffected. As a result of internal and external events the Korean peninsula and the Korean issue are again in the forefront of international interest, or rather of heated expectations, and are the subject of diplomacy behind the scenes. Interest and "prognostic exercises" have focused particularly on North Korea. How long will the D.P.R.K., struggling as it is with a general economic crisis, be able to maintain its political system and its policy of isolation as almost the last of the socialist countries? How long will the leadership in P'yôngyang keep up its extreme personal dictatorship, and how long will the people bear with it? What impact will the inevitable changes have on the process of unification and the relative political balance of power in the Far East?

Considering the conflicting social, political and ideological systems and economies of North and South Korea, economic relations would appear to be the area in which the two Korean states may approach each other, even if this is not going to be a smooth process (in this context I do not wish to touch upon the issue of nationalism). To grasp the prospects for economic cooperation and the stabilization of the North Korean economy, it is essential to consider the existing economic conditions and the economic structure of the D.P.R.K. In other words, what may *South Korean* (and other foreign) *capital* that is ready to cooperate and invest there expect? In short, how effective can Seoul's internationally recognized "north policy" (Nordpolitik) be on the peninsula itself, and will it be able to support its pursuits economically? For this reason, I find it important to analyze the role of the economic assistance and loans extended to North Korea by socialist countries in the postwar years, which have determined the structure and features of the economy and of industry, in particular heavy industry, up to the present day.¹

I.

Reconstruction was the most important task for the majority of both the victorious and the defeated countries after World War II. For a number of countries in Eastern Europe and Asia this task was coupled with the historical problem of economic and social *modernization*. This was particularly true for underdeveloped Korea, which had been liberated from 40 years of Japanese colonial rule. In actuality, however, the twofold task became part of and a tool in the evolving bipolar international politics and the confrontational strategy of the superpowers. Unfortunately, divided Korea served as an illustrative example of the cold war and one of its hottest spots. In the postwar decades China and North Korea represented the socialist or Soviet type of development as one form of the modernization effort in Asia. Both countries, and the D.P.R.K. in particular, relied on the assistance of the Soviet Union and the East European countries as their main

(and extensive) source of capital accumulation. Although these latter countries were much more developed than their Asian counterparts, they too were struggling with the problems of modernization. Their policy of assistance was not determined by their own internal economic interests or by mutual economic interests as much as it was influenced by the policy of the Soviet Union and the prevailing practice of "proletarian internationalism".² It should also be noted, however, that, given the international situation at the time, North Korea could only have expected financial assistance from the Soviet Union, China and other socialist countries. In fact, the D.P.R.K. achieved relatively rapid and spectacular economic growth, and its situation stabilized between 1953 and 1963, despite several problems. Comparing the situation with that in South Korea during the same period (before 1961), the achievements were interpreted as signs of the "supremacy" of socialism. It was ignored that the otherwise justified modernization, accelerated industrialization, i.e., the "classical" phase of the industrial revolution, took place in North Korea (and several other countries) at a time when a historically entirely new phase of modernization was about to evolve on the international scene. This meant partial reproduction of historical backwardness. This is also borne out by South Korea's modernization in the 1960s and the comparative analysis of the development in North and South Korea.

As I have already noted, by the early 1960s the D.P.R.K. had made relatively significant progress, with the economic and technical assistance of the socialist countries. The postwar industrialization brought fundamental changes in both the structure of production and the geographical location of production capacities (which had originally reflected the Japanese pattern).³ Even if at a moderate level, the basic needs of the people were satisfied and supplies were ensured. Economic and humanitarian assistance, developing foreign trade relations and foreign training programs for students and specialists helped North Korea to become integrated in the international relations of socialist countries. The traditional isolation that had marked Korean society and politics for centuries had relaxed somewhat by the end of the 1950s. Potentially this opened up prospects for the D.P.R.K. to continue its modernization efforts more resolutely and to catch up with the development, though within the framework of the socialist system.

In the context of economic development perspectives, the modernization of political power and the superstructure, the question of "how to move on" began to dominate the debates held by the political leadership in the second half of the 1950s. Kim Il-sung and his group of loyal followers, however, (again) came out as winners in the factional fights, strengthening his personal power and the political/administrative system of the cult. The 20th and 22nd congresses of the Soviet Communist Party and the conflicts between the Soviet Union and China caused the leadership in P'yôngyang to dissociate itself from and defend itself against foreign, mainly socialist countries (fight against "shadejuùi", "modern revisionism", etc.). Consequently, as postwar aid programs expired in the early 1960s, the D.P.R.K. could hardly expect further major economic assistance, which they had already fully included in the calculations for the new seven-year economic plan (1961-1967).

As a result, the internal and external resources for the extensive economic development had become exhausted by the mid-1960s. To safeguard its power position, the biased leadership thwarted any attempt to reformulate political and economic concepts even within the given socialist model. The D.P.R.K. was increasingly unable to keep pace even with the sociopolitical and economic development in the East European socialist countries (although it enjoyed more favorable conditions in many respects, e.g., natural resources and labor supply). Its rigid internal policy and conservatism made its political relations with the other socialist countries increasingly tense, although this was not always explicit. D.P.R.K.'s internal, mainly economic conditions were further undermined by the announcement of the "parallel economic and defence development" program, which served to reinforce personal power and was clearly oriented towards tension.⁴ It was not only based on total (perhaps intended) misunderstanding of the internal possibilities and the international situation, but can also be considered to be a response to the emerging reform efforts in some socialist countries (Hungary, Czechoslovakia, partly the Soviet Union, etc.). It is clear by now that with this program P'yôngyang took the path of prolonged economic crisis rather than modernization, and that this produced inevitable results. And it did so at a time when South Korea had already made great achievements in its genuine modernization program. While *dictatorship* effectively eliminated the country's historical backwardness in the South, in the North it led to a general political and economic dead end and crisis, despite some limited prestige investments. There the industry built with foreign assistance is not a basis for modernization, but as *state property* it serves as the economic foundation of *present* personal power.

II.

In this section I wish to describe the assistance and the loans extended to the D.P.R.K. and their role they played in the country's economic development in the postwar decade. I shall first deal with the magnitude and nature of the Soviet and Chinese assistance and give a comparative analysis, because of the decisive importance of these two countries. It is therefore necessary to briefly discuss the most important agreements on economic and financial cooperation, mainly with the Soviet Union, in subsequent decades, because the direction and sectoral implementation of those agreements were based on the previous aid programs. The comparison of the Soviet and Chinese assistance policies will also help to draw certain conclusions about the policy toward Korea in these countries.

As is well known, the *Soviet Union* financed the lion's share of nonrepayable assistance and loans made by socialist countries. As early as August 1953 the Soviet government provided North Korea with nonrepayable assistance amounting to 225 million rubles (1 billion old rubles) for the postwar reconstruction of the economy. At the same time, it cancelled over half of the D.P.R.K.'s debts on prewar Soviet loans and postponed repayment of the outstanding debts under favorable terms.⁵ At the request of Korea, in August 1956 the Soviet Union granted another nonrepayable economic aid to the tune of 67.5 million rubles (300 million old rubles).⁶ This aid, totalling about 300 million rubles, played a decisive role in the implementation of the three-year reconstruction plan (1954-

1956) and the five-year economic plan (1957-1961) and helped to lay the foundations of industrialization and modernization. More than 40 plants, most of them industrial, were reconstructed or constructed with this Soviet aid between 1954 and 1961 (cf. Appendix 1). Assistance included design and construction work provided by the Soviet partner, delivery of complex equipment and raw materials, transfer of technical documentation and technology and training of the Korean technical staff.⁷ The overwhelming preponderance of the economic, technical and financial assistance provided by the Soviet Union and other socialist countries was directed toward the production sector; the government of the D.P.R.K. used about one third of the available funds to purchase complex equipment for heavy industry.⁸

The aforementioned economic aid from the Soviet Union in 1953 and 1956 financed, among other things, the rehabilitation and reconstruction of the hydroelectric power plant in Sup'ung, the foundry in Ch'ongjin, the steelworks in Sŏngjin, the nonferrous metallurgic works in Namp'o, the fertilizer factory in Hŭngnam, etc. and the construction of a cement factory in Madong, the chemical works in Pon'ung, the textile works, the silk factory, the meat processing plant in P'yŏngyang and a fish canning factory in Sinp'o, etc. The same aid was used to build a veneer factory in Kilchu, a furniture factory in P'yŏngyang and to restore the port of Namp'o. The Soviet Union also participated in the reconstruction of the railway infrastructure (cf. Appendix 1). All told, the production capacities reconstructed or constructed with Soviet assistance accounted for 40% of electricity generation, 53% of coke production, 51% of cast iron, 22% of steel, 32% of rolled steel, 45% of reinforced concrete blocks, 100% of copper, cadmium and ammonium sulfate and 65% of cotton fabrics by the end of the five-year plan.⁹ Economic aid programs also helped to develop and expand North Korea's export capacities and foreign trade to some extent.

Technical/technological assistance also played an important role. Under an intergovernmental agreement of February 1955, the Soviet Union transferred more than 600 complete technical documentations to the D.P.R.K. between 1955 and 1959, enabling North Korea to launch several new products, e.g., in electro-technology, the chemical industry, engineering, metallurgy, transport, etc., within a relatively short period of time. Joint research work was also started, e.g., substantial ore and nonferrous metal and other mineral resources were explored with the assistance of Soviet geologists. Several thousands of Korean experts received on-the-job training in the Soviet Union and East European countries, and more than ten thousand students studied at universities and colleges in the socialist countries.

Before the Soviet aid programs had been fully utilized, another major intergovernmental agreement was signed in March 1959 for Soviet technical assistance in the construction of industrial and other projects. The assistance was used for the construction of a thermal power station, an ammonia factory, a polychloric vinyl factory and two textile factories (for wool and cotton) in P'yŏngyang and a substantial expansion of the metallurgical works and a textile factory in Sŏngjin. All of these constructions were the high priority projects in the seven-year economic plan (1961-1967). The value of the related Soviet deliveries and technical assistance was about 112 million rubles (500 million old rubles), which the Ko-

rean partner was supposed to repay with standard export goods under trade agreements (paragraph 7).¹⁰ The Soviet Union in fact extended credit for the new "plan package". To illustrate the repayment capacity of the Korean partner, we should note that as of July 1960 the Soviet Union cancelled the D.P.R.K.'s accumulated debts of 171 million rubles and delayed repayment of another 31.5 million rubles.¹¹

The following thirty years were essentially marked by continuous long-term loans from the Soviet Union and regular prolongation of the North Korean repayment liabilities¹² (e.g., in 1961, 1965, 1966, 1970, 1976 and 1991, etc.). The respective details go far beyond the scope of this treatise. In summary, we can say that the Soviet nonrepayable aid and loans, most of which were subsequently cancelled, went to finance the reconstruction, construction and expansion of over seventy projects, more than forty of them in industry, in approximately the past thirty-five years. These projects created the most important plants and factories in the energy sector, in mining, primary industries, ferrous and nonferrous metallurgy, the chemical industry, construction industry, oil refining, engineering, textile industry, transport and communications, etc. in North Korea. Their economic significance is also borne out by the share of the plants constructed or reconstructed with Soviet assistance in overall production, accounting for 63% of electricity, 33% of steel, 11% of cast iron, 38% of rolled steel, 50% of oil products, 25% of coke, 20% of textiles, 14% of fertilizers and 42% of iron ore mining in 1982.¹³

The country's accelerated industrialization was not, however, accompanied by a parallel development of export capacities. On the contrary, it resulted in considerable debts owed to both socialist and capitalist countries. According to statistics, as of 1 November 1989 the D.P.R.K.'s debts to the Soviet Union alone amounted to 2,234.1 billion rubles,¹⁴ almost half of the country's total exports in a period of one and a half to two years.¹⁵ The annual foreign trade turnover of the D.P.R.K. is around 3 billion rubles, roughly 50% of which is with the Soviet Union.¹⁶ Pursuant to the intergovernmental agreement of November 1990, from 1991 on the Soviet Union and the D.P.R.K. will settle payments in convertible foreign exchange and apply international market prices in their trade, and the same principle is essentially intended to apply to the amortization of North Korean debts.¹⁷ In the light of the D.P.R.K.'s economic situation, it seems doubtful that major changes will occur in this respect in the foreseeable future (let alone North Korea's debts to capitalist countries).

After the Korean war, the *People's Republic of China* also played a major role in the restoration and reconstruction of the North Korean economy. According to an agreement concluded in Beijing in November 1953 the Chinese government undertook to grant 800 million Yuan in nonrepayable aid to the D.P.R.K. In addition, China cancelled the North Korean debts that had accumulated in bilateral trade between June 1950 and December 1953 (that item alone exceeded 52 million new rubles in 1952-1953).¹⁸ The two countries also signed an agreement on economic and cultural cooperation, under which the Chinese partner was to provide nonrepayable technical assistance.¹⁹

Under the 800 million Yuan aid program²⁰ China supplied coal, textiles, grain, building materials, vehicles, steel products, machinery, agricultural equip-

ment, fishing boats, etc., between 1954-1957. In addition, China assisted in the reconstruction of North Korean railways and the construction of manufacturing plants (glass factory, ironware factory, silk mill, textile works, etc., cf. Appendix 1).²¹ Exchange programs and training and scholarship programs were also launched.

In September 1958, further intergovernmental agreements were signed, one for "mutual supply of major materials" and a loan agreement. Under the latter agreement, China extended a 10 million dollar loan for the construction of the hydroelectric station in Unbong and additional 42.5 million dollars for various construction projects between 1959-1962.²² In October 1960 China and the D.P.R.K. entered into yet another loan agreement and an agreement "for the supply of complex equipment and technical assistance" to the tune of 96 million new rubles. The agreements were implemented between 1961 and 1964, resulting, among other things, in a tire factory, a radio factory, a papermill and a fountain pen manufacturing plant constructed with Chinese assistance.²³ It is not impossible that certain military plants were also constructed (for manufacturing ammunition and light and medium-sized weapons), but no concrete data are available.

Later on, Chinese aid and loans became increasingly rare. In the summer of 1970 a high-level Korean military delegation in Beijing signed an agreement on Chinese assistance, but the details are not known.²⁴ In October of the same year an intergovernmental agreement on "economic and technical assistance" was concluded in Beijing, but again no details were published. It is assumed that they were related to the D.P.R.K.'s six-year economic plan targets (1971-1976).²⁵

The most uncertain aspect of postwar assistance and lending by socialist countries is the magnitude and amount of Chinese aid. There are no reliable statistics to show whether China cancelled the D.P.R.K.'s debts, or at least part of them, or whether it agreed to prolong repayment. Several Western studies estimate China's contribution to the reconstruction of North Korea at half the Soviet assistance and loans.²⁶ Glenn Paige, already quoted, suggests a figure of 1.8 billion rubles. It is difficult to give a more accurate estimate because of problems of currency conversion and redistribution of liabilities.

About 25 projects were constructed with nonrepayable assistance from the *East European socialist countries* in the postwar decade, two thirds of them in manufacturing and heavy industries (cf. Appendix 1). Together with technical assistance and cancelled debts, the total value is estimated at 700-800 million rubles.

The Soviet literature gives different estimates on the amount of nonrepayable aid from socialist countries, generally varying between 500-800 million rubles. P'yôngyang previously reported a figure of 500 million rubles.²⁷ It is a fact that for 7-8 years after the war, nonrepayable aid was a major source of annual budget revenues and capital accumulation.²⁸ The utilization of foreign, mainly Soviet, aid was in harmony with the Stalinist concept, which gave priority to the development of industry, and in particular of heavy industry, and with the socialist economic model that P'yôngyang had also adopted. P'yôngyang saw accelerated industrialization as the way to modernize and raise the country and for decades maintained a high accumulation rate to the detriment of consumption.

In the late 1950s and early 1960s it was still acknowledged that sector "A" of the economy had been created with the assistance of socialist countries, making it possible, as it were, to channel domestic resources for the development of manufacturing and agriculture. That notion was, however, soon replaced by the concept of "prosperity out of our own resources", which also applied to economic development, especially after the aid programs had been terminated. The forced development of heavy industry and the control over consumption required that internal political tension be maintained even with administrative instruments, which was and still is needed to a large extent to justify the political system of personal power. It is, however, increasingly becoming an obstacle to real modernization.

As I have noted, Soviet and East European nonrepayable assistance and subsequent loans were mainly channeled into industry, and particularly into heavy industry, and the main directions of economic relations in the 1960s to 1980s were also rooted in the aid programs. On the other hand, partly as a result of its own development standards, China supplied North Korea primarily with manufacturing plants and equipment or constructed projects that required an immense amount of labor (volunteers) and relatively little technology (roads, bridges, railways, etc.). Periodic food and consumer goods supplies from China also played a significant role in the overall supply. In other words, Chinese assistance and loans were generally absorbed into the Korean economy²⁹ despite the temporary and often spectacular impact they made. Although diminishing, production capacities built with Soviet aid still play a significant role. This also means that the D.P.R.K. can undertake the periodic reconstruction and expansion of the existing industrial facilities and ensure the necessary supply of spare parts and technological development only with Soviet assistance and further loans. This has a perceptible impact on the pragmatic approach in the P'yông-yang leadership's policy, balancing between Moscow and Beijing for the past thirty years. It is also indicated by the dates of major Soviet lending and prolongation of loans every five to six years, as noted above.

In conclusion, with the exhaustion of extensive reserves and possibilities for modernization, the introduction of convertible accounting in trade, the country's isolation from international politics and economy, the existing model and its strategic economic potentials have also become exhausted, and the possibilities for balancing international and internal politics are about to end for the North Korean leadership. If the D.P.R.K. receives further foreign aid and loans, which will be inevitable and will presumably come from Japan and South Korea, they will have to serve a radically different political system and modernization strategy. Such assistance can, however, be effective only if it also takes into account the relative achievements of the modernization efforts after the Korean War and the results of industrialization. An understanding of these achievements will therefore be vital for North Korea's new economic partners.

Notes

- 1) For details on this assistance, cf. section II and the Appendix.
- 2) It might be interesting to consider what assistance policies and practices the socialist countries would have pursued had it not been for the Korean War (and the war in Vietnam). Although

- the question is historically irrelevant by now, it confirms, after all, that assistance policy was invariably made subject to prevailing political objectives.
- 3) As a result of the strategically oriented industrialization carried out by Japan between 1930-1944, 79% of the heavy industry production was concentrated in the North in 1940 (*Kyôngje yôn'gu*, P'yôngyang, No. 8, 1957, p.70).
 - 4) The author shares the views of Mrs. M.E. Trigubenko (Soviet Union), that the roots of the D.P.R.K.'s present general economic crisis should be traced back to the economic policy of the 1960s. M.E. Trigubenko: *Contribution at the 2nd Soviet-Korean Symposium*, Seoul, November 10-12, 1990).
 - 5) *Otnosenia Sovetskogo Soyuza s narodnoi Koreyei, 1945-1980. Dokumenti i materiali*. Moscow, Nauka, 1981, pp.102-103. The Soviet Union extended a loan of approx. 48 million rubles (212 million old rubles) to the D.P.R.K. in March 1949.
 - 6) *Ibid.*, p.405.
 - 7) Bagrianskaya, L.S.: "Ekonomitseskoe sotrudnitsestvo Sovetskogo Soyuza s KNDR", *Narodi Azii i Afriki*, No. 1, 1965, pp. 19-65.
 - 8) *Ekonomitseskoe sotrudnitsestvo i vzaimopomosts socialistitseskich stran*. Moscow, 1962, p.169.
 - 9) *Ibid.*, p.171.
 - 10) *Otnosenia ...*, pp.169-172; *Ekonomitseskoe sotrudnitsestvo ...*, p.178.
 - 11) Trigubenko, M.E. (ed.): *Koreiskaya Narodno-Demokratitseskaya Respublika*. Moscow, 1985, p.172.
 - 12) *Ibid.*, pp.173-181.
 - 13) Trigubenko, *op.cit.*, pp.174-175, 179-181.
 - 14) *Izvestia*, March 1, 1990.
 - 15) *Ibid.*, November 13, 1990.
 - 16) *Ibid.*
 - 17) *Ibid.*
 - 18) Pang Hosik: *Sahoejuüi chinyông naradûlganüi kisul kyôngjejêk hyôpcho* (Technical-economic cooperation among socialist countries), P'yôngyang, 1958, p.20.
 - 19) *Chosôn chungang nyôn'gam* (Korean Central Almanach), 1954-1955, p.79.
 - 20) P. Richter estimates that 800 million Yuan to equal US\$ 276 million (*La Chine et le tiers monde*, Paris, 1971, p.177); L. Tansky converted that amount to US\$ 300 million (*Current Scene*, September 1972, p.8); Japanese sources quote US\$ 200 million, while others estimate US\$ 340 million. Using the exchange rate of 2.34 Yuan to one US\$, which was applicable at the time, it would be US 340 million.
 - 21) Pang Hosik, *op.cit.*
 - 22) *Chosôn chungang nyôn'gam* (Korean Central Almanac), 1959, p.146; Paige, G.D.: *The Korean People's Democratic Republic*, Stanford: Hoover Institution, 1966, Chapter IV.
 - 23) *Chosôn chungang nyôn'gam* (Korean Central Almanac), 1961, p.134; Paige, *op.cit.* 24) *Current Scene*, September 1972, p.9; *Világgazdaság*, July 1, 1972.
 - 25) *Chosôn chungang nyôn'gam* (Korean Central Almanac), 1971, p.360.
 - 26) *Asian Survey*, July 1971; Richter, P.: *op.cit.*, p.177.
 - 27) *Ekonomitseskoe sotrudnitsestvo ...*, p.167; *Problemi Daljnego Vostoka*, 1972, No. 4, p.33; *Nodong Sinmun*, April 23, 1963.
 - 28) Estimates based on *Chosôn chungang nyôn'gam* (Korean Central Almanac) Vols. 1954-1961: 1953 - 18.4%, 1954 - 33.7%, 1955 - 21.6%, 1956 - 16.5%, 1959 - 4.9%, 1960 - 2.6%.
 - 29) The Chinese "Friendship" oil pipeline was built in the 1970s.

Appendix 1: Projects completed with nonrepayable assistance from the Soviet Union and other socialist countries in the DPRK in the Three-Year and Five-Year Plan periods.

No.	Project main products	Unit	Capacity			Year of comple- tion
			from aid	from own resour- ces	total	

Soviet Union

1.	"Kimchaek" Steelworks in Ch'ongjin					
	cast iron	1000 t	350	250	600	1955
	steel	1000 t	-	540	540	
	coke	1000 t	400	-	400	
2.	Steelworks in Söngjin (Kimch'aek)					
	electrosteel	1000 t	50	50	100	1955
	iron moulds	1000 t	2	10	12	1955
	rolled steel	1000 t	120	310	430	1955-59
3.	Nonferrous metallurgical works in Namp'o					
	black copper	1000 t	2.5	5	7.5	1955
	electrolytic copper	1000 t	2.5	4.5	7	1958
	electrolytic zinc	1000 t	8	15	23	1957
	sulfuric acid	t	18	18	36	1959
	gold	t	7	-	7	1958
	silver	t	30	-	30	1958
	cadmium	t	60	-	60	1959
4.	Chemical Works in Hüngnam					
	ammonia	1000 t	100	28	128	1956
	ammonium sulfate	1000 t	-	220	220	1957
	superphosphate	1000 t	-	220	220	1958
5.	Ammonium nitrate works					
	ammonium nitrate	1000 t	136	24	160	1958
6.	Chemical works in Pon'gung					
	hydrochloric acid	1000 t	10	30	40	1955
7.	Chemical works in Pon'gung - expansion					
	ammonia	1000 t	10	15	25	1958
	caustic soda	1000 t	-	75	75	1963
	herbicide 2.4D	1000 t	-	0.5	0.5	1963
8.	Cement works in Madong					
	cement	1000 t	400	-	400	1959

9.	Veneer plant in Kilchu					
	plywood	1000 m ³	12	-	12	1959
	planed plywood	1000 m ³	1.8	-	1.8	1959
	laminated boards	1000 m ³	14.4	-	14.4	1959
10.	Furniture factory in P'yöngyang					
	furniture	mil. rbl.	20	-	20	1957
11.	Textile works in P'yöngyang (60,000 spindles, 2,650 looms)					
	cotton	mil. m	65	15	80	1956
12.	Silk and weaving factory in P'yöngyang (10,000 spindles)					
	silk	mil. m	10	-	10	1959
13.	Dyeing plant in P'yöngyang					
	dyed fabric	mil. m	45	-	45	1957
14.	Meat processing plant in P'yöngyang					
	sausage	1000 t	1	-	1	1956
	canned meat	1000 t	1	-	1	1957
15.	Fish canning factory in Sinp'o					
	canned fish	1000 t	4	-	4	1955
16.	Reinforced concrete factory in P'yöngyang					
	concrete blocks	1000 m ³	45	-	45	1957
17.	Tractor repair stations					
	overhaul of tractors	units	300	-	300	1957
	overhaul of engines	units	300	-	300	1957
18.	Hydropower station at Sup'ung					
	power generation	bil. kWh	3.5	-	3.5	1956-58
19.	Namp'o port					1960
20.	Radio station with 2 transmitters (150 kW and 15 kW)					1955
21.	Radio station with 4 transmitters (150 kW each)					1963
22.	Energy supply unit on the Sinch'ön-Kowön railway line (complete with workshops and greasing plant)					1959
23.	Railway bridge over the Tuman River					1959
24.	P'yöngyang city hospital (600 beds)					1957

25.	Cement works at Ch'ŏnnori					
	turnkey supply of a schiffer plant	mil. blocks	24	-	24	1955-56
26.	Installation of a poultry processing plant					1957
27. -28.	Two battery traction units on the Yangdŏk-Ch'ŏngsŏng railway line					1956
29. -32.	Four battery traction units on the Yangdŏk-Sinsong and Ch'ŏng-sŏng-Kowŏn railway lines					1957-58
33. -40.	Projects Nos. 138, 139, 217(65), 217(26), 548, 549, 551, 573					1953-57
41.	Flax spinning factory in Hyesan (15,000 spindles)					1963

P.R. China

1.	Glass works in Namp'o					
	plate glass	mil. m ²	6	-	6	1954
2.	Silk and weaving factory					
		1000 spindles	30	-	30	1957
3.	Consumer goods manufacturing plant					
	consumer goods	mil. won	1	-	1	1954
4.	Enamelled ironware factory					
	enamelled vessels	mil. won	1	-	1	1954
5.	Restoration of the P'yŏngyang railway store					1954
6.	Restoration of the Ch'ŏngju railway store					1954
7.	Restoration of the Kowŏn railway store					1954
8.	Textile works in Sinŭiju					
		1000 spindles	62.4	-	62.4	1959
9.	Ball bearing factory					
	ball bearings	mil. complete sets	1.2	-	1.2	1960
10.	Kraft paper mill in Hyesan					
	kraft paper	1000 t	20	-	20	1963
11.	Sugar mill in Hoeryŏng					
	sugar	1000 t	10	-	10	1963

12.	Fountain pen manufacturing plant					
	fountain pens	mil. pcs.	1	-	1	1963

German Democratic Republic

1.	Automatic telephone stations					
		1000 sets	6	-	6	1957
2.	Reinforced concrete plant in Hamhŭng					
	reinforced concrete	1000 t	50	-	50	1957
3.	Rehabilitation of the Hamhŭng housing estate					
	housing flats	1000 m ²	5.3	-	5.3	1958
4.	Bricks and tile factory in Hamhŭng					
	bricks and tiles	mil. pcs.	33	-	33	1959
5.	Ceramic pipes manufacturing plant					
	ceramic pipes	1000 m	500	-	500	
6.	Elevators	1000 t	40	-	40	
7.	Printing plant in P'yŏngyang					
	newspapers	mil.	400			1963
	printed pages	bil.	4.8			
	posters	mil.	560			

Poland

1.	Locomotive and wagon repair station in Wŏnsan					1959
2.	Locomotive and wagon repair station in P'yŏngyang					1959
3.	Hospital in Hŭngnam (500 beds)					1955

Hungary

1.	Scale factory in P'yŏngyang					1959
2.	Machine tool factory in Kusŏng					
		units	1000	-	1000	1960

3.	Paint factory in Pongun					
	paint	t	900	-	900	1960

Rumania

1.	Aspirin works					
	aspirin	t	25	-	25	1958
2.	Cement works in Sŭngnori					
	cement	1000 t	200	-	200	1959
3.	Brick and tile factory in Sunch'ŏn					
	bricks and tiles	mil. pcs.	6	-	6	1959
4.	Hospital in P'yŏngyang (600 beds)					1959

Czechoslovakia

1.	Machine tool factory in Hŭich'ŏn					
		units	1000	-	1000	1958
2.	Automobile factory in Tŏkch'ŏn					1958
3.	Machine tool factory in Unsan					1958
4.	Engine manufacturing works in P'yŏngyang					1958
5.	Rolling mill for the nonferrous metallurgical works in Nanp'o					
		1000 t	12	-	12	1962
6.	Cable works in P'yŏngyang					
	cables	1000 t	12	-	12	1962

Bulgaria

1.	Parquet and timber works					
		1000 m ²	130	-	130	1956
2.	Brick and tile factory in Wŏnsan					
	bricks and tiles	mil. pcs.	5	-	5	1956