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North Korea's Human Resource Development System

By **Cho, Jeong-Ah**

KOREA INSTITUTE FOR NATIONAL UNIFICATION

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Ⅰ. Introduction

As North Korea opens up and reform processes accelerate and as the development plans of the Kaesong Industrial Complex acquire further legitimacy, there will be further changes in the way North Korean labor is utilized and influenced. This is even more true when we take into account the way in which corporations are making inroads into North Korea through inter-Korean economic cooperation revitalization. Subsequently, current interest regarding the conditions and characteristics of North Korea's labor force is growing.

Currently, studies regarding North Korea's labor force are in the initial stages, concentrated on understanding labor force conditions, production, management systems, and labor policies. Through prior studies regarding North Korea's labor force conditions and standards, there exists a generalized opinion which states that, despite strong academic backgrounds, North Korean laborers do not possess high levels of competency. Additionally,

they are unable to acquire high skill levels because of retarded job training facilities and techniques, badly eroded production facilities, inside-outside exclusiveness, and premodern management methods. However, in contrast, others argue that the laborers are sound in their basic levels of knowledge and are also very enthusiastic; these being seen as the results of the compulsory education system. Another issue to point out is that when South Korean businesses make inroads into North Korea, retarded job training conditions, inter-Korean labor regulations, and labor culture differences will cause difficulties in utilizing North Korea's labor force. Much research, presuming that the vocational training within the North Korean enterprises will not be effective, is recommending introduction of a new training system for inter-Korean economic cooperation.[1]

However, these recommendations are not usually derived from the basic research results of the features of the vocational training system of North Korean enterprises. In order to improve North Korean human resource development, maximize the benefits of inter-Korean economic cooperation and explore long-term inter-Korean relations and create integrated systems in the human resource development sector, extensive research is necessary regarding North Korean labor force development structure and its characteristics.

This study classifies the North Korean human resource develop-

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1 Il-kyu Kang, *Unification Preparations: Directions and Tasks on Vocational Education and Training Policies* 1999. Il-kyu Kang, et al., *Research on South and North Korea's Exchange and Cooperation Plan in Vocational Education and Training Sector* (Korea Research Institute for Vocational Education & Training, 2000). Jong-tae Choi and Kang-sik Kim, *North Korea's Labor and Labor Management* (Seoul University Press, 2003).

ment system into the following three areas: secondary educational institutions[2]; human resource development systems within the workplace; the system of links between school and workplace that focuses on labor force relocation and initial training. In addition, this study analyzes the educational system, policies, contents, perceptions surrounding, and other factors impacting upon human resource development by focusing on systems, policies, skills, and regulations in each area.

The second chapter will examine the changes of the North Korean human resource development system after the financial crisis of the 1990s. The third chapter will examine the characteristics of the North Korean human resource development system, with the focus being on the systematic and educational aspects. The fourth chapter will look into the current state of the human resource development system, consisting of the actual functioning of the system, the organizational culture, and its customary aspects. The fifth chapter will examine the policy suggestions that this study will provide to the human resource development sector in the area of inter-Korean cooperation.

In this paper, "human resource development" implies planned and systematic learning activities, which occurs in schools, workplaces, or society. It includes secondary education and vocational training programs for unskilled or skilled workers. However, education for the labor force in advanced science and specialized fields is not included in this study.

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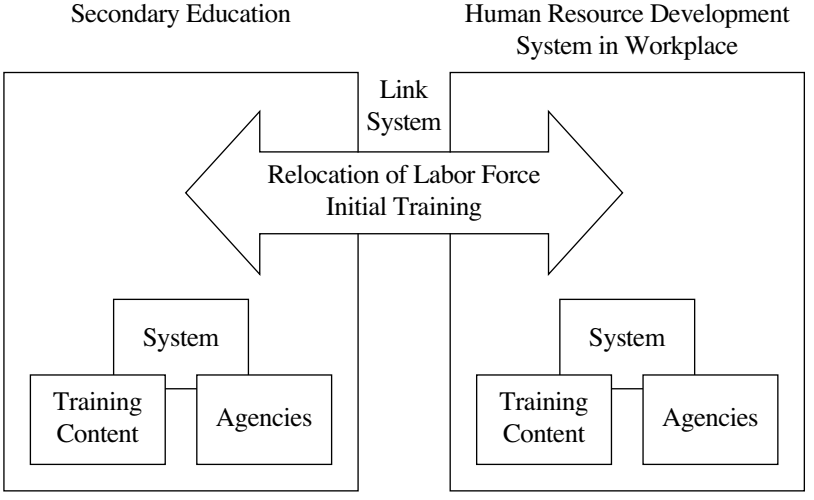
[2] An educational system in North Korea is comprised of pre-school (2 yrs.), elementary school (4 yrs.), secondary school (6 yrs.), and college education (4 to 6 yrs.). Of these, 11 years of education from one-year-period of pre-school to secondary school are free compulsory education.

In this study, "system" refers to the dynamic whole that comprises actors, organizations, and structure in which the two dimensions of structure and agency are included. In other words, it is a concept that includes the characteristics of the North Korean economy and factory system, national system and policies regarding human resource development, and the dynamics between the system within the workplace and the various agencies pertaining to the system.

Figure 1. The North Korean Human Resource Development System Framework



For research methods, analysis of original records and texts regarding North Korean labor and education sectors was conducted simultaneously with interviews of North Korean refugees. The main research focus was on the primary data of "Socialist Pedagogy" written by Kim Il Sung and Kim Jung Il, pedagogic textbooks used by colleges of education, and other works and publications related to education and labor.

Ⅱ. Changes in the North Korean Human Resource Development System after the Financial Crisis

1. Total Crisis in Human Resource Development

In July of 1994, the so-called "Kim Jung Il Era" began after the death of Kim Il Sung. The "Kim Jung Il Era" represents the completion of what is a monolithic social and political system, an era where the new generation surfaced in North Korean society, and an era where the North Korean system's intensifying crisis emerged.[3] Isolation from the international community due to the fall of socialism, the death of Kim Il Sung, an explosion of economic paradoxes exposed by the brutal realities of the famine, and other total crisis conditions appeared across the whole society. Total crisis also affected the area of education, triggering the breakdown of education infrastructure, decline of attendance, and a decline in the quality of education. Heavy floods in 1995

[3] Jong-suk Lee, *Revised Understanding of Modern North Korea* (Seoul: Yeouksabipyong (Review of History), 2000), pp. 86-87.

destroyed or damaged 4,210 kindergartens, 2,290 primary and secondary school buildings, representing about a quarter of the total primary and secondary schools in the nation, and swept away 346,200 textbooks, which amounted to about 3,000 tons.[4]

In addition, school education was administered abnormally after the early 1990s. The principle reason was that the teachers and students were unable to attend school because of the famine. It is difficult to understand the situation exactly because after the financial crisis, attendance by the students varied considerably according to period and region. According to statements made by North Korean refugees, the general attendance rate didn't reach 70% and some regions didn't even reach 30% during the mid-1990s, when the financial crisis was at its worst. Currently, the attendance rate is almost back to normal and most regions returned to normality, with about 2 to 3 students absent per class. However, there is a margin for a deepening of the regional education gap because some regions still have a high rate of absenteeism,[5] depending on the characteristics of the region.

During the financial crisis period, the attendance rate of teachers

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[4] UNICEF, *Analysis of the situation of children and women in DPRK*, 2003.

[5] For example, one North Korean refugee testified about the current state of education in North Hamgyong Province near mountain area, where his relative lived with the following, "About half of them didn't attend school. At the end, they'll give out diplomas and assign them to arms factory. You have to walk about 10 ri (about 40 km) but during winter, they don't let their kids go to school. It's not an exaggeration to say that kids from those rural farms or valleys don't go to school at all. That was unthinkable in the past. Before, they used to teach just three kids in the valley by establishing a branch of school but ever since the country lost its interest, the system became alienated." H2, North Hamgyong Province College Instructor, interviewed in November 2005.

also declined. Food rations for the teachers continued longer compared to other classes but that also discontinued in the mid-1990s. The government wanted to regulate laxity in discipline by the teachers through teachers' organization activities but it was difficult to prevent relaxation of as the suspension of rationing became increasingly prolonged. As the laxity in discipline during work by the teachers became a pervasive status quo, officially, the political ideology education toward the teachers intensified and the emphasis on their revolutionary role continued. However, in reality, the government of a school adopted a temporary policy wherein the teachers were divided into several groups and sent out, on leave for one to two weeks, to look for food and the remaining teachers taught the classes.[6]

Meanwhile, the state of the human resource development system in factories is more serious than the education sector. After the financial crisis, simply the operation itself of the system is difficult for most local factories and the operation capacity of joint enterprises and large-scale centrally controlled enterprises is also at a low level. Currently, it is difficult to get a clear picture of the operating conditions of the North Korean factories. However, the majority of the North Korean refugees testify that the factories they belonged to were not in operation, with the big factories operating only partly. For example, one refugee testified that out of the three blasting furnaces in Kim Chaek Iron Mill, only one furnace is in operation and Chung Jin Steel Mill is not in operation, making the machines useless.[7] When the workers go

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6 Hee-young Kim and Man-kil Han, eds., "Endless Duty, Starving Instructor's Life," in *How is the Education in North Korea* (Seoul: 1999), p. 183.

7 According to the testimony from H1, there were ovens and mortars produced by the Kim Chaek Iron Mill as 8·3 Products in the market, but now, the iron mill is not regularly operating and there aren't any new products in

to work at the factories, they are either mobilized into social labor projects like construction or just register for work and actually run their own businesses for a living. Additionally, as labor regulations in factories have become suddenly very lax regarding the attendance rates, the education participation rate has also noticeably declined and theft of resources and machine parts is a frequent occurrence. According to the results of one research study, North Korean laborers' average production index in 1998, if regarding the 1989 index as 100, is 52.5, which is a decline of 47.5%.[8] The fact is labor force development and reeducation of workers are becoming secondary issues in this situation where the recovery and operation of the factory itself are problematic.

2. Political Ideology Education Program Reforms

After the death of Kim Il Sung, the political ideology education's objective, which focused on embossing the legitimacy and originality of Kim Il Sung's ideological theory and the greatness of his leadership, directed its focus on the intact inheritance of the identical concepts by Kim Jung Il. In particular, it emphasized "being completely fascinated, have unconditional adoration, and being loyal with conviction, conscience, morals, and life" to Kim Jung Il by the students. With this education direction, loyalty and filial piety teachings to Kim Il Sung and Kim Jung Il were emphasized. Cultivating the students as "loyal sub-

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the market.

8 Jong-tae Choi and Kang-sik Kim, *North Korea's Labor and Labor Management*. Average Production Index per person is represented as actual GNP divided by the economically productive population in percentage in a given year.

jects" and "filial sons" by engraving Kim Il Sung's teachings and following Kim Jung Il as a trusted leader through adversity was the grand mission of education.

During the period between the end of 1998 to April of 1999, a course called "Communist Fighter-Mother Kim Jung Sook's Youth" in the primary school curriculum and "Revolutionary History of Communist Revolutionary Fighter Mother Kim Jung Sook" course in the secondary education curriculum were introduced.

Kim Jung Il's power succession project was initiated with the appointment of him as the General Secretary of the Korean Workers' Party in January of 1997 and completed with the abolition of the Chairmanship during the First Session of the 10th Supreme People's Assembly and reconfirmation of Kim Jung Il as the Chairman of the National Defense Commission. After the completion of the power succession project, political ideology education, there are two primary focuses: the military-first line on the one hand is emphasized, together with high-technology and science education to build a "great powerful nation" on the other hand.

3. Development of Science & Technology Education and Prodigy Education in the IT Sector

On the one hand the use of ideology is intensified for regime protection, on the other the development of high-tech science is being emphasized simultaneously as a vital point, under the banner of building a great powerful nation, to overcome financial crisis and develop the nation in the long-term.

Following this, a "talent-focused plan" has been taking form as the education policy base, and the rise of cultivation of Ph.Ds in their 20s and 30s since the end of the 1990s. Currently, the most prominent change in the North Korean education is the special education for the gifted, especially the consolidation of the talent education in the information technology sector. In the "Thesis on Socialist Education" published in 1977, special education for the gifted is not mentioned at all. However, Article 6 of the Basics in Chapter 1 of the Education Act, legislated in 1999, clearly alludes to an important plan for the gifted that "strengthening talent education is an important requirement in socialist education. The state should completely guarantee students with superior natural aptitude and talent with education by establishing a talent education system."

Kim Jung Il directed in 1984 to establish Pyongyang Jeil Godeungjunghakkyo which is a top-level secondary school consisting of the best students in North Korea. In 1985, total of 12 Do Jeil Godeungjunghakkyo were established in each province. Kim Jung Il directed in 2005 to establish more top level secondary schools because many graduates of top-level secondary schools only attend the few select universities, including Kim Il Sung University, and those gifted students are unable to attend the specialized universities. Soon after, a policy was adopted to expand top-level secondary schools throughout the cities and counties nationwide in 1998 and a follow-up measure was taken to establish one additional secondary school in every city, county, and district nationwide in March of 1999.[9] Currently, there are a total

[9] "March of Hardships, Great Leader Bringing a Turning Point in College Education Development during the Periods of March of Hardships and Forced March," in *Gyowon Propaganda Notebook 1* (Pyongyang: Gyowon Newspaper, 2003), pp. 17-18.

of 200 top-level secondary schools established in the cities, counties, and districts nationwide.

In contrast to the introduction of Pyongyang Jeil Godeungjunghakkyo which selected only the gifted students for education in the mid 1980s, the government established a selective multilevel system of Pyongyang Jeil Godeungjunghakkyo, Province top-level secondary schools, and City and County top-level secondary schools in order to distinguish and differentiate the secondary school students for selection according to their abilities. In addition, in 2002, the government conducted an entrance exam for four universities, including Kim Il Sung University, which allowed those who were accepted to take the undergraduate and graduate courses continuously.[10]

However, this expansion of education for the gifted and establishment of a differentiated education system according to skills are contradictory policies for a human resource development system that consistently led to egalitarianistic education system. Additionally, these policies are inconsistent with the goal of the socialist system that emphasizes social equality rather than excellence. Therefore, in one respect, the government is emphasizing the necessity of the education for the gifted while insisting that unlike the capitalist society's education for the gifted, North Korea's education for the gifted is fostering all people to become a "competent builder of socialism." In other words, while the capitalist society views people's innate talents as absolute, socialist education discovers those "prodigies" who are the "nation's wealth" early to develop their abilities while simultaneously devoting all their effort to fostering the abilities of all

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10 *DPRK Central Yearbook*, 2003, p. 194.

their people.[11] This is a dangerous high-wire act of balancing between the realistic objectives of economic development through quality science specialist education and the mechanism of socialist principles and justifications for the pursuit of equal education.

According to the testimony from a North Korean refugee, the extensive construction of top-level secondary schools is met by considerable resistance among the residents. The majority of the residents approved the establishment of Pyongyang Jeil Godeungjunghakkyo and Do Jeil Godeungjunghakkyo because they considered the policy of education for the gifted as though "a prodigy is a national resource that can support a thousand."[12] However, as the top-level secondary schools expanded to the county and district level, the national support toward the other regular secondary schools diminished absolutely and relatively. Additionally, not only did the students' level decline, but the opportunities for the college entrance exam were also reduced, causing difficulty in advancing to college, and public discontent was widespread. As the public opinion of the district top-level secondary schools grew worse, the government recently converted few district top-level secondary schools into regular secondary schools. In addition, the government modified a policy which allows the selection of secondary school graduates for admittance to the district top-level secondary schools through an entrance exam.

The education for the gifted is especially revitalized in the infor-

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[11] "Lets Embody More Thoroughly Our Party's Talent-Focused Plan into Educational Development," *Gyowon Newspaper*, May 15, 2002.

[12] C1, Senior Middle School Instructor.

mation technology and the computer training sectors. Training in the information technology sector was initiated in the 1990s. Computer training in secondary schools was put into effect moderately in the early 1990s and was adopted as a regular subject in 1998, training those students above 8th grade for about 2 hours a week. In top-level secondary schools, computer class was conducted as a regular part of the curriculum for 6th grade and above since the late 1980s, giving instructions on typing and programming. Outside the regular curriculum, all schools organized a "computer model" with the best talents to give them more intensive training. Moreover, in 2000, the "Program Training Guidance Bureau" was established under the Ministry of Education, generalizing the IT specialist training project through a Program Training Center and Computer Training Center. On January 28, 2001, Kim Jung Il ordered the establishment of a Special Computer Prodigy Training Site from Mankyungdae students and children's palace, Pyongyang students and children's palace, Keumsung Academy, Keumsung Jeiljunghakkyo and Keumsung Jeisjunghakkyo.

He also ordered the selection of Prodigy Class students in Keumsung Academy and Keumsung Jeiljunghakkyo via math contests and computer contests and educating them in the "Pyramid Method" to evaluate their skills, eliminating the below-average students and supplementing brilliant students. The curriculum for the students in Computer Prodigy Class was formed to help them concentrate on computer training by educating them with academic specialties, revolution history, mathematics, and foreign languages.[13]

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[13] "General Guideline to Improve Computer Prodigy Development," in *Gyowon Propaganda Notebook 2* (Pyongyang: Gyowon Newspaper Press,

This shows the specialization of the prodigy education system in the computer sector. The reason that North Korea decided to establish the Computer Prodigy Class in the Keumsung Jeiljunghakkyo, the arts and sports field specialist development body, instead of the Pyongyang Jeiljunghakkyo, a prodigy training body, was caused by the extreme deficiency of the computers, instructional materials, and instructors to manage the computer training in the Pyongyang Jeiljunghakkyo. In addition, because of the special features of the North Korean human resource development system, they are planning and developing a fixed number of experts necessary for specific industrial sectors and they have, in general, adopted a "limited information" policy instead of having a public information and open-door policy.[14]

Although North Korea emphasizes strengthening of prodigy education in the high-tech education sector, in reality, the general conditions for implementing IT training remain insufficient. They only possess about 500,000 computers. That figure translates into about 2 computers for every 100 people.[15] Except for few model schools, most secondary schools have to acquire and source their computer training needs by themselves with "self-reliant revolutionary mind"- self-financing in other words. The computers necessary for training are usually supplied by most students' "foreign currency earnings" or support from the parents. Under these circumstances, the disparity of education conditions and levels between schools are very much apparent. The reality is that because of the lack of equipment, only the select schools or students in computer circles are able to have suffi-

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2003), pp. 75-76.

[14] Kyung-jun Song, *Current State and Features of North Korea's IT Education* (Chonbuk National University Masters Thesis, 2005), p. 13.

[15] *Ibid*, p. 8.

cient exposure time on the computers.

There are substantial disparities between prodigy education bodies and regular middle schools, not only in terms of education conditions, like the number of computers they possess, but in the education curriculum as well. Keumsung Jeiljunghakkyo instructs 11 subjects for 1,660 hours, including "C and C++ Programming," "Windows Operation System," and "Linux Programming," and the school also has more than 1,300 computers. Pyongyang Jeiljunghakkyo instructs 10 subjects for 400 hours, including "Calculations," "Data Base," and "Linux Programming" and possesses about 100 computers. Other Jeiljunghakkyos instruct 4 subjects for 280 hours, including "Calculations" and "Programming" and possess about 10 computers. On the other hand, a regular secondary school instructs about 30 hours on "Computer and Programming" and only possesses about 1 or 2 computers.[16]

Currently in North Korea, the IT education in colleges or research institutes can be differentiated into the development of elite IT specialists in major universities and research institutes and the development of IT administrative experts in the Computer Technology College and other regular colleges. Kim Il Sung University, Kimchaek Engineering University, College of Science, and the Korea Computer Center represent the developmental institutes for elite IT specialists and Pyongyang Computer Technology College, Hamheung Computer Technology College, Pyongyang Printing Technology College, Hamheung Chemical Industry College, and Rahjin Marine Transformation College represent the developmental institutes for IT administra-

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16 *Ibid*, p. 8.

tive experts. In addition, the specialist development education in "borderline fields" that deal with grafting the IT within the general industrial sector is called "IT Borderline Education" and it is being developed simultaneously with the IT education. Those from this field are engaged in automation of the production process in each industrial sector and computerizing power plants, railroad sectors, and other leading sectors.

Although not very active, Pyongyang Program Academy, Pyongyang Information Center, and the People's School educate the general public in computer education. Chungyang Information Center's "Program Development Training School" was established with the support from the pro-Pyongyang General Association of Korean Residents in Japan and the United Nations Development Program. This school possesses 300 computers and gives instruction to the general public on subjects like computer program, multimedia, network, construction of database in business management, and computerized architecture design. It has both a specialist class and non-specialist class and the training period is about one to two months. Furthermore, in 2000, it began conducting computer training through television and other mass communication media and began proceeding with an "Information Technology Supply Project." The main purpose of this project is to choose a "Skill Learning Day" to conduct computer training for the workers and strengthen information technology education for the government officials.[17]

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[17] *Ibid*, pp. 15-36.

4. Education Methodology Development

North Korea implemented various measures after 2000 to improve teachers' enthusiasm and instruction quality in the area of teaching methodology development. Currently, the instruction methods in North Korea consist of either lectures by the teachers or the cramming method. There are self-discovery instruction methods, like experiments, discussions, and lab work, undertaken to a certain extent in natural science or technological fields but in the fields of humanities and social sciences, solutions are always given and all the curriculums are based on the Teachings of Kim Il Sung and Kim Jung Il's sayings, which makes self-discovery based learning virtually impossible.[18]

Even North Korea criticizes itself for the existing teaching. To improve the existing cramming system of education, the government implemented the development of multimedia materials and organized pedagogic workshops for the teachers, teacher's cultural experience presentations by subjects, and discussions on teaching methods.[19] Moreover, they administered a "new teaching method registration" system and awarded the title of "October 8th Model Teacher." The "new teaching method registration" system, implemented in 2000, is a system where the teacher who develops another teaching method, in his assigned subject, can write a paper and submit it for review. Then, the paper is reviewed by the "New Teaching Method Inquiry Committee" and the Education Ministry twice a year and if the paper is

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18 Woo-kyu Cha, "Direction and Strategy of North Korea's Educational Development," in *Grand Policy Plan for Peace in Korean Peninsula* (Research Council on Unification Affairs Conference Sourcebook), p. 398.

19 Dong-chul, "Innovations in Revolutionary Talent Training Development," *Education Newspaper*, February 24, 2005.

selected, the teacher is awarded with the "New Teaching Method Registration." When the registration is awarded, other incentives are not provided but there is a stipulation that if the teacher in secondary or high school institution is under promotion evaluation or obtaining an undergraduate degree, the registration is a required procedure.

The title of "October 8th Model Teacher" is a system created to commemorate Kim Jung Il of giving on-the-spot guidance in the Moobong Secondary School in 2003 and the title is awarded to the teacher with an excellent record. The candidates are selected from each school with the considerations for criteria such as the teachers' length of term, achievements, experience, and assessments from the students and the school. The finalist is then selected from the teachers' contest and the judgment from the Education Ministry. This doesn't provide material incentives either but it does have a positive influence on promotions.[20]

Despite the variety of efforts for the teaching method development, it is difficult for North Korea's education methodology to distance itself from the existing "education by memorizing and cramming." Education's ultimate destination is already predetermined in North Korea because the role of the teachers is not to let the students explore freely with possibilities for answers and think introspectively and critically by themselves. Rather, the teachers are to help the students' thinking process to arrive at a predestined point with their own efforts. Regarding North Korea's group focused education, education starts from a group

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[20] One college instructor who was awarded a title stated that his pay was increased from 2,600 won to 2,620 won after receiving the award. U1, North Hamgyong Province, Instructor of Instructor College (1997-2004), interviewed in November 2005.

focused point of view and it is related to each individual's need to harmonize his intentions with the goals of the whole or basic group.[21]

[21] Hye-jung Jung, "Comparison of North Korea's Groupism Education and Modernity and Thought Education in J. Dewey's Individualism Education," in *Unification Policy Research*, Vol. 13 (Seoul: Korea Institute for National Unification), p. 234.

Ⅲ. The Characteristics of Human Resource Development System

1. Party/State Centralized Authoritarian Human Resource Development System

In North Korea, the state and the party are the sole bodies of education. Workplaces, social organizations, and other various social institutions supervise education besides the educational institutions controlled by the state but the basic education system, its direction, content, and the methods of all forms of education are decided, legitimized and notified by the party. Moreover, from the vigorously regulated management process and the outcome, you can see that North Korea's human resource development's sole body is the state.

In North Korean society, education is conducted continuously throughout all the stages of one's lifetime. Even after the completion of mandatory education, adults work and study simultaneously and receive education from various part-time vocational

education institutions and the reeducation system. The rank and extent of the division between the regular school education system and part-time educational institutions are relatively weak and the classification of school age and non-school age is also not clear. Technique learning networks in factories and workplaces are organized according to production organizations and a system is in place to provide specialized education by skill level. The ultimate goal of the human resource development is to "develop all members of society into a fully-developed communistic human being with a high cultural skill level equivalent to that of a college graduate." These distinctive systematic features have a resemblance to one of the active principles of lifelong education of the vertical horizontal integration principle which integrates the education that takes place during one's lifetime in general.

But increasing educational opportunities and its even distribution is not directly equivalent to the goals of an ideal learning society. Many aspects, like how educational demands of learners are accommodated or how the opinions of various groups constituting the society affect education planning and practice, can be the indicators of the "learning society."

If assessing the North Korea's human resource development system from this aspect, depravation of autonomy in two levels is rather clearly visible. First, the autonomy of each human resource development organization or the teachers is not secured from the state. Second, the opportunity to choose one's preferred education is not given to each individual receiving the education. Juche's singularity, one characteristic that North Korea's human resource development system has, is not close to the ideal model of lifelong education system but is rather like oper-

ating a single gigantic school controlled by the state and the party, which operates the society itself.

According to Watkins, human resource development implies planned and systematic learning activities integrated with individual development, organization development, and career development to improve the efficiency of the individual, organization, and group.[22] If the constituent units in the human resource development theory, individual, organization, and group are substituted with North Korea's human resource development system, the individual, the enterprise, and the state are all visible. Among these, the group occupies the majority of the domain in North Korea's human resource development system and in particular, it is not an exaggeration to say that the domain for individual development is almost nonexistent. Disparity and discord between these three domains are the main problems in North Korea's human resource development system. As the significance of the group, namely the state and the party, becomes too corpulent, there are some instances that occur which deviate from the group's direction as individuals and organizations themselves try to devise methods based on their own understanding.

2. Consolidation of Production and Education

In North Korea after independence, theories and systems of polytechnic education were introduced, especially through education and cultural exchanges with the Soviet Union in the era of industrialization. In North Korea, the term polytechnic education is not

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[22] Watkins K. (1991), Many Voice: Defining Human Resource Development from Different Disciplines, *Adult Education Quarterly*, 41 (4), pp. 241-255.

used directly but the approach that comprehensive technical education advocates is adopted as an important principle for education. Instead of the term polytechnic education, North Korea uses the term "consolidation of education and practice." Consolidation of education and practice means adhering education to practical demands and implies educating the students to have both the knowledge necessary in real life as well as the practical skills in one's field.[23] This is different from the training of vocational skills in specific fields. It includes possessing theoretical basics and broad vision formed through general education.

The educational curriculum is widely divided into political ideology education, science and technology education, and arts and sports education and a close connection among the fields is emphasized. Especially in science and technology education, the importance of educating the students with the necessary expert knowledge and techniques in the production domain that they'll be in charge of after graduation is emphasized as well as all the required common general knowledge and techniques in the production sector. In education in the basic science field, the goals are to develop students with abilities to solve technical problems occurring in the industrial fields and to allow them to acquire the basic knowledge for expert education.

Another axis that forms the science and technology education field along with the basic sciences is technology education. This means basic principles of production and technique, applying knowledge of the natural sciences, and basic techniques and knowledge utilized in all industrial sectors. For example, elec-

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[23] Jin-woo Nam, et al., *Socialist Pedagogy* (Pyongyang: Educational Press, 1991), p. 40.

tronics and electrics, general structure and theories of machines, structure and basic theories of electronics and automatic equipment, and blueprint analysis and preparation of simple machine parts are included in this education.

Another axis in polytechnic education in North Korea is educational utilization of labor. This is called "Consolidation of Education and Production Labor" in North Korea. The importance of production labor is emphasized not only for preparing a child to become a future member of society but also for creating current members of the society participating in a practical vocation. In order to utilize the production labor educationally, not only are the educational contents and production connected in general subject classes, but also they implement the labor directly with a subject. The adopted goals of education via production labor are to train students with necessary practical skills and techniques for production, pass on knowledge about production management, and educate them with socialistic ideology regarding labor. However, through the 1970s, material sources, for organizing production practice educationally, drastically waned and the secondary school curriculum itself and education for developing students' basic skills lost their relative importance as an academically-oriented educational curriculum gained ground.

The following <Table 1> compares the importance, classified by period, of secondary school curriculum subjects between North Korea, South Korea, and former socialist countries.

Table 1. Comparison on Importance of Secondary School Curriculum Subjects

Curriculum Subjects / Nation	Language	Social Science (Political Ideology)	Math· Natural Science	Basic Technique (Polytechnic)	Art/ Sports
North Korea (1962)	15.5	7.7	33.7	38.9	4.1
North Korea (1983)	22.8	20.9	39.2	8.2	8.8
North Korea (2001)	25.0	22.5	39.9	6.0	7.5
South Korea (at present)	27.7	18.8	25.9	9.8	17.9
Soviet Union (1957)	46.7		36.8	10.5	6.0
Soviet Union[24]	26.0	8.7	35.9	18.6	10.8
East Germany (7grade)[25]	36.6	8.7	28.6	7.1	19.0

As you can see from <Table 1>, the current educational curriculum of North Korea claims to stand for consolidation of education and production labor but when looking at school curriculum composition, basic technology education is not regarded with much importance.

3. Development of Part-time Educational Institutions

The polytechnic education principle, so-called consolidation of labor and education, not only embodies content and methodolo-

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24 J, Morison, "Recent Developments in Political Education in Soviet Union," *The Making of the Soviet Citizen* (London-New York-Sydney: Croom Helm, 1987). Out of 3rd and 8th graders, this figure is from 8th grade curriculum.

25 East German curriculum contents are quoted from page 74 from *The Unification of German Education* (1995) by V. D. Rust and D. Rust. Military education of 1.93% is included in the Arts and Sports figure.

gy aspects but systematic elements as well. A prime example is the part-time vocational education institution, named "education system of learning while working." The auxiliary workplace educational institution, correspondence school, night school, and home study college conduct vocational education and reeducation in a part-time form.

The prime institution as an auxiliary workplace educational institution is the factory college. It is a higher educational institution attached and installed to factories and workplace. It allows factory workers to perform their duties during the day and after daily work, they receive education related to the factory's technical skills until they complete the training course. In regards to the operation of the college, effectively utilizing technical personnel, technical equipments, along with internal factory resources to develop experts is pointed out as one of the factory college's advantages.[26]

Factory college courses are divided into a main course and a management personnel training course. The main course admits those among factory workplace laborers that graduated from a college preparation course and secondary school and they are bestowed engineers' certificate equal to college graduates after graduation. In factory management personnel training courses, reeducation is conducted with the factory's current managers and laborers. The training period for factory college's main course is 5 to 6 years, 4 to 5 years for the management personnel training course, and 3 to 4 years for tertiary college. Night tertiary colleges and factory colleges are administered by the state through the dispatching of teaching staff. The factory college's

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[26] *Rodong Newspaper*, September 1, 1970.

president and accounting vice president serve concurrently as the workplace's manager and assistant manager respectively. The factory college's teachers are divided into teachers with additional posts and full-time teachers. The full-time teachers are usually dispatched by the government and the teachers with additional posts are composed of specialists who have been working in that factory for a long time. The number of students in the factory college is decided by the state's comprehensive plan effected by the demand of expert officials in that area's workplaces and factories and the curriculum introduced is related to the type of work in the factory. There are relatively big schools with about 500 students but there are a number of schools that have about 20 to 30 students with about 5 faculty members including the principle and vice principle.

The curriculum is divided into major and general curriculums, with major curriculums comprised of manufacturing, transporting, and repairing machines appropriate for factory or workplace area's uniqueness to development of new types of machines and solving technical problems arising in each factory. The general curriculums are comprised of basics in production and science such as mathematics, physics, chemistry, mechanics, and social sciences like history of party struggles and Marxism and Leninism to develop revolutionaries with communistic characteristics.[27] Those who graduate from the factory colleges are awarded with the same technical certificate conferred on those graduates from the general science and technology colleges.

In the factory, accredited educational institutes, like factory col-

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[27] Eun-young Lee, *Research on North Korean Factory College* (Seoul National University Masters Thesis, 1993), p. 90.

leges, offer job training too. This is called the "Job Skill Learning System." This system designates the work group, as the basic unit of job skill learning, it links production closely with training. The Job Skill Learning System is differentiated by the training objectives and workers' skill level.

4. Consolidation of Technical Education and Labor Regulation Training

The two fundamental factors in human resource development in factories are knowledge and technical training and labor regulation training. In a socialist society's human resource development system, the education for, and acquisition of, knowledge and techniques and education of ideology, standards, and attitudes coexist like two sides of the same coin.[28]

Labor regulation training toward the workers is not provided by a separate education program or educational institute but rather by a variety of organizational activities in working environment and daily ideological education. An "aggregate" of daily political ideology education, work performance, and attitude toward life in workplace is accomplished centered on social groups like the factory's party organizations, labor unions, and youth associations, with workers affiliated with work groups as units.[29]

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[28] This is the same case in a capitalist education, and while analyzing American education curriculum, Bowles & Gintis concluded that schools developed tamed labor force by teaching not only knowledge but also appropriate attitude and value of capitalistic production training through subconscious training methods.

[29] According to North Korea's official rules, work group is "not only production's final stage where cooperative operation of fixed production task

Education related to labor regulations and standards is achieved by the nucleus of social groups and the party as a part of political ideology education. The most important factors in North Korea's labor standards are spontaneity and groupism. According to "The Labor Article of Juche," labor's spontaneity is "the standpoint and attitude toward labor by oneself in a position as an owner of labor.[30] This implies that labor is based on being dependent upon the realization of the group's interests and not of external coercion or compensation. The expression of labor's spontaneity represents complying with the factory's labor regulations autonomously and honestly accomplishing one's assigned production duties "by sincerely offering oneself with all the wisdom and passion, whether anyone is watching or not." Another characteristic of North Korea's labor standards, along with spontaneity, is collectivism. A slogan "Individual is for all, all is for individual," is highly representative of collectivism, implies that the group's interest takes precedence over the individual's interest and amalgamating the individual's and group's interests.

Even in secondary schools, the students, or reserve laborers, practice socialistic labor regulations through both general curriculum and extra-curriculum activities. In the general curriculum, content related to labor regulation takes place as part of the political ideology education. The main domains of political ideology education in North Korea's secondary schools are "loyalty to the party and the leader," "education on principles of the Juche

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and technical innovations take place, but also a basic stage where all directly participates on enterprise management and the foot-hold of public ideological education project." Jung-hee Chun, "New Form of Public Technological Innovation Program," in *Laborer*, Vol. 9, May 1964.

30 Jin-kyu Baek, *Juche's Labor Management* (Pyongyang: Korea Rodongdang Press, 1991), p. 22.

Ideology," :education on party's policies," "education on revolutionary tradition," "education on revolution," and "education on communism." Education regarding work ethic and labor regulations are handled as part of the "Education on Communism."

In terms of regulation development, important content areas that are just as important as education content are instruction structure, school regulations, and extra-curriculum activities. According to Bowles & Gintis, the crux in school education that prepares students as laborers is not the information conveyed through classes but rather the formal correspondence of the social relationship between production and education, or in other words, the correspondence between principles and procedures that regulate the workplace and the principles and procedures that regulate school.

In North Korea's secondary schools, the teachers' leadership and the students' subordination are emphasized by strict regulations spearheaded by the teachers, youth organizational activities, and various meetings. Students maintain their own decisive power in regards to studying and life but they are also accustomed to regulations and self-control. Additionally, they are familiar with accepting the authority of superiors and groups and trained to voluntarily reinforce this authority.

5. Education and Production Site Link System

In North Korea's education system, secondary education exhibits the characteristics of consummate education. Recently, some changes have been attempted but traditionally in North Korea, the majority of the secondary education graduates decide

to enlist in the military or look for work. In the case of entering college, except for a handful of "direct students," a majority of students generally enter college after their mandatory term of military service or after work experience, receiving a recommendation from the affiliated organization. Therefore, career decisions are usually made during secondary school graduation or following discharge from military service.

In North Korea, employment is not where workers can freely choose the vocation or workplace as they wish but rather the state, from the labor force placement standpoint, assigns the workplace. Consequently, the labor market, where a majority of consumers and suppliers of production essentials meet and decide on wages and employment and also functions as a resource distributor, does not exist. Instead, the state performs all functions of decisions on prices and volume, distributing resources as procedures of a plan. The concept of labor contracts for hiring laborers does not exist and the labor force is employed through "placement by request."

The so-called "logical placement of labor force"- the labor force placement according to a worker's gender, age, physical condition, technical skill level, and ideological awareness level - is emphasized,[31] but in reality, party loyalty and class origin play as much important criteria for decision making as academic background, eligibility, and practical skills in workplace placement.

The workplace placement process for each group is as follows.[32]

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31 Chang-geun Ri, *Enhancing Development of Labor Management Principle by Our Party* (Pyongyang: Social Science Press, 1992), p. 76.

32 Jong-tae Choi and Kang-sik Kim, *North Korea's Labor and Labor Management* (Seoul National University Press, 2003), pp. 57-60.

In the case of expectant graduates from secondary schools, those not attending colleges or enlisting in military service must submit a resume, career statement, statement of desired vocation, and surety certificate received from the Labor Department of local People's Committee to the school. Then, the school must prepare and submit each individual's evaluation form along with their youth association transfer, military transfer, and certificate of provision suspension to the Labor Department of the local People's Committee. The Labor Department then assigns graduates to workplaces according to the current state of supply and demand of manpower at the industrial sites. In this process, the department "group-assigns" specific secondary school graduates to places that demand substantial labor forces like coal mines, salt fields, railroads and road construction sites.

In the case of college graduates, they are generally classified as cadres for the future. In the case of local college graduates, the local Party's Administration Department and the local People's Committee's Labor Department are in charge of placement. But for graduates from prestigious colleges, the Department of College Student Placement in the Cabinet Office exercises jurisdiction. While the Department of College Student Placement in the Cabinet Office conducts individual interviews of the graduates before workplace placement, the majority of individual's personal background and academic records are considered beforehand and then they are placed in workplaces by each province. Expectant graduates from professional schools are assigned to workplaces by the labor offices of each province and cities under the direct control of the central government.

In the case of discharged servicemen, the workplace placement processes for privates and officers are different. In general, the

privates are assigned to workplaces by the Labor Department of the local People's in one's hometown. There are cases where those select few that were discharged as privates enter college by receiving recommendations from affiliated military units or become party instructors or administrators but the majority of them are group-assigned to special factories, coal-mines, or similar places. Those discharged officers who held ranks of lieutenant or higher are assigned to workplaces as cadres by their hometown Department of Executives of Party in the City and County. But usually, there are many instances where they become instructors of their hometown's factories or enterprises.

After workplace placement, some are thrown straight into production but many are assigned to the manufacturing process after going through the initial training from an "Apprentice School" to acquire the skills needed to perform their duties. If the secondary school graduates are thrown straight into the production site, they generally have a difficult time acquiring skills. Therefore, a short-term technical training process is initiated and the initial training is imposed on those members of the labor force assigned to large-scale factories.

Apprentice Schools and Vocational Courses exist as initial training institutions. The Apprentice School is a technical training institution that trains secondary school graduates and unskilled laborers with specific occupational skills and the establishment and management of the school is in accordance with the "Article Related to Apprentice Schools" (Authorized by the Administration Council as Article 49 on June 30, 1979). The Apprentice School is established when the number of trainees exceeds 60 and a Vocational Training Course is organized when the number is less than 60.

Currently, the Apprentice School is generally operated internally in workplaces above the third class enterprises. Most secondary school graduates are assigned to duties after going through the Apprentice School. The school system is diverse, with 6-month, 1 year, and 18-month programs. For those occupations in local enterprises having difficulty operating because of the small number of laborers, the state establishes the Apprentice Schools at the provincial level and trains the labor force in appropriate fields. In particular, the Apprentice Schools in sectors like local industry, local construction, services, and city management combine several fields and are organized at the regional level. For newly operating factories, they either establish independent Apprentice Schools or organize Apprentice Schools with other factories possessing similar manufacturing processes and develop experts necessary for operations.

The class scale of Apprentice Schools within the factories depends on the number of secondary graduates, or new labor force, assigned to factories but usually several classes are established with about 20 students per class and sometimes divided according to their functions. The principle of the Apprentice Schools is generally served concurrently by the manager of the factory or workplace but a permanent principle is placed if the school is established as a categorical or regional school. Generally, there is a vice-principle in charge of political studies and a teacher in charge of general studies. Usually, there is one technical instructor, in charge of general studies and not involved in production, for each subject and some instructors do teach two classes. Technical instructors are usually college graduates or factory college graduates appointed internally by the factories.

The education period is mostly one year and the theories and

practical exercises are conducted simultaneously in a variety of rather diverse forms, depending on the factories. The main training objective for Apprentice Schools is to develop standardized operation motions based on technical regulations and standard operation methods in a relatively short period of time. The main contents of education are basic knowledge and skills, standard operation methods of appropriate occupations and technical regulations, the structure of machine installation and operating fundamentals, and labor safety regulations.

There is a short-term training course called the Vocational Training Course for secondary school graduates, discharged servicemen, and housewives, who do not go through the Vocational Technician School and go directly to the factories or workplace. In this course, basic skills such as safe technical regulations and standard operation methods are taught by intensive lectures and apprenticeship practices. The workers that complete the Vocational Training Course are assigned for duties after passing the skill level assessment exam.

Ⅳ. The Current State of North Korea's Human Resource Development System

1. The Current State of Education Infrastructure Expansion and Recovery Effort Through Mobilization

One of the most important features in North Korea's human resource development system is that the state collectively supervises all stages of the planning and management of human resource development. However, this doesn't mean that the state secures and distributes all human and material resources necessary for human resource development. According to Article 44 in the Education Act, the cabinet and local administrative agency can allot support projects, submit requisites for material and technical basics in training institutions, to institutions, enterprises, and groups. Institutions, enterprises, and groups in charge of support projects must assist appropriate training institutions with materials, technical skills, and manpower.

Systematically mobilizing the educational zeal of people and the community by the state was the key to completing the public education system and free mandatory education system in such a short period of time immediately after liberation, a condition without the foundations of pre-existing materials and manpower. In a situation of being unable to secure enough funds to establish schools after liberation, the North Korean people collected contributions and support to establish schools. The amount came up to a huge sum, about half of the annual education budget.[33] People not only made contributions but they personally made and laid bricks to build the school structures and were directly involved in making teaching tools and furniture like desks and benches. People helped establish schools via "contributions if one had money, labor if one had the strength, and knowledge if one had the knowledge." North Korea's first higher educational institution, Kim Il Sung University raised funds through organized mobilizations such as the people's "Patriotic Contribution Campaign" and through people's "voluntary" participation.

This method of creating a system of public education continued not only in the early establishment process of the new socialist society but also in the continuous process of public education expansion and the creation of the system of factory colleges as well. The reason for establishing 39 factory colleges in 1960, compared to just 37 colleges in total in 1959, was achieved largely through attempting to heed the maxim of "not burdening

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[33] In 1949, national budget was 19.7 billion won and the education budget was 2.08 billion won. Compared with this, the contributions donated by the North Korean people were 950 million won in 1948 and 1.03 billion won in 1949. Hyang-kyu Lee, *The Formation of Socialist Education in North Korea, 1945-50* (Seoul National University Doctors Dissertation, 2000), p. 109.

the country while mobilizing and utilizing all possibilities, potential energy, and reserves to the maximum."[34]

This method of securing scarce material resources necessary in establishing schools and expanding education opportunities by combining educational zeal and mobilization was utilized as an important strategy to overcome the total crisis in education after the financial crisis in the 1990s. Recently, many in North Korea state that, "we must not spare anything for future generation's education even if we are in a dire situation and we have to starve"[35] and they devote all their efforts in rebuilding the education system. By promoting projects such as large-scale repair and maintenance projects on educational institutions, especially from kindergartens to colleges, they are concentrating on improving educational environments and the quality of teachers through enhanced teaching methods. While various school renovation projects, such as reconstructing and repairing experiment practice rooms, repairing teaching tools and instruments, painting buildings, school field cleanup, paving roads, and creating gardens are started or undertaken. They are not supported by the

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34 For example, in Sinuiju Engineering College, New-term Preparation Committee, composed of 19 workers from local institutes and workplaces, organized and operated support projects to establish a new college. Light Industry Committee, Sinuiju construction workers were in charge of renovating 4 classrooms and supported about one work group's productivity for building a school. They also worked "two extra hours voluntarily" for this project. Sinuiju textile factory, Sinuiju paper factory, and pulp factory selected 1 to 2 members and sent about 20 workers to the college construction site. On September 1, 1960, Sinuiju Engineering College was established by renovating 3 buildings of Sinuiju lex factory and it was composed of 7 classrooms, Party history research room, library, and offices. *Rodong Newspaper*, September 2, 1960.

35 *Gyowon Newspaper*, January 1, 2001.

budget from the central government but rather proceeded by the inducement of aid from factories, workplaces, and collective farms and voluntary participation by the students' parents.[36]

From the summary of testimonies by a North Korean refugee, a former teacher, it appears that the rebuilding of schools' current education infrastructure is completely allotted to students' parents and local citizens. The following testimonies demonstrate the reality of education infrastructure recovery through the mobilization of the students' parents:

> In the 1990s, if chairs or desks were damaged, the Department of Education was naturally responsible for their repair but that was rarely done during that period. In my case, if a class window broke, I picked a parent who could be asked to block the window. Therefore, I sent out the announcements individually. I ask if any mother can help with the broken window in the classroom and someone sends a vinyl cover. There is a parents' meeting if a desk is broken. Through the parents' meeting, we decided on an agreement that students must fix their own desks.[37]

> As the situation got worse during the 1990s, the government was far from sending the budget. Desks, chairs were worn-out and the government was supposed to replace them like before, right? However, the government was unable to do so. When my kid entered school, the teacher told us to replace the desk and chair. She was telling us that the equipment must be replaced individually. So individually, the parents asked the carpenters to build some desks. The size was determined by the school.[38]

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[36] *Gyowon Newspaper*, June 1, 2004.

[37] C2, North Hamgyong Province Elementary School Instructor (1984-1996), interviewed in November 2005.

[38] H1, North Hamgyong Province College Instructor, interviewed in November 2005.

This method of relying on parents for dealing with the costs required for school facilities and management continued even after the financial crisis. Especially after the July 1st Market Management Reform Measure, "Independent Benefit Plan" and "Self-rejuvenation" were being emphasized not only in factories but in educational institutions as well, the "School Maintaining Project" relied not on government's budget support but on the ability of educational institutions to secure budgets. This is in contradiction to the traditional North Korea's socialist education principle that the government is responsible for providing people with free education and if this reality is not improved, the perception that "education is a free service by the teachers and voluntary service by the parents and not by the government"[39] will proliferate.

This reality is identical when it comes to human resource development in the factories. The government regulates training structures, policies, and contents but it is unable to support the securing infrastructure necessary for human resource development in individual factories. North Korea makes it clear that by the main principle of training in factories, each factory's manpower requirements are primarily trained independently within factories and workplaces and national labor force training institutions merely supplement these efforts.[40] The government assigns the labor force to each factory and provides a system framework for human resource development. Additionally, it acquires the essential material and human resources for corresponding factories so they can undertake independent training systems and the government

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[39] H1, North Hamgyong Province College Instructor, interviewed in November 2005.

[40] Chang-geun Ri, *Enhancing Development of Labor Management Principle by Our Party* (Pyongyang: Social Science Press, 1992), p. 115.

evaluates and recapitulates the results. In the case of the vocational training carried out by the workplaces themselves, it is not fully delegated to each factory, but just as in the case of the school education, the government cannot entirely supervise and regulate it. This is North Korea's appropriate position of compromise between the education principle, "the government's total responsibility for education," and the limitations imposed by the reality of the government's inability to handle this responsibility by itself under current and past adverse conditions. Securing material and human resources in managing workplace's training systems, the elements related to practical operations remain under the autonomy of each workplace.

The state develops training structures and core policies and acquires necessary resources for training system management by organizing public's educational zeal and inducing voluntary participation. This is evidenced by the fact that human resource development can be accomplished without large budget investment in each unit. However, on the other hand, the substitution of public education investment with people's educational zeal created barriers to long-term budget investment, consequently resulting in limiting the qualitative development of the training system. Moreover, in the current situation where the general economic conditions of the people and the community are declining, if the appropriate support is not secured from the central government, this situation can result in qualitative deterioration of the system.

2. The Decline of Polytechnic Education

After the mid 1960s, polytechnic education, especially the basic technology education and practical training, became a nominal

program caused by the escalation of political education and destabilization of the economic conditions. Currently in North Korea's secondary schools, not only is the time spent on and the relative importance of basic technology and the practical training curriculum considerably lower when compared with other socialist countries or South Korea, but instructions itself also are not administered with a great deal of substance. The opinions of a young North Korean refugee on North Korea's basic technology curriculum in secondary schools are clearly reflected through the following statement:

> Practical training was maybe just about once a week. You need to know the basics when you work in the society. You know, like you needed to know how to smooth a plane. We just did basic, you know, carpentry practices. This is the most disregarded, not a class, just for the basic knowledge for the students.[41]

Basic technology and practical training curriculums are unable to provide the students with the training for even the very basic extensive skill levels needed to perform the duties immediately in their workplaces after graduation. The main underlying cause is the shortage of equipment, materials, and teaching tools necessary to administer practices and experiments in these curriculums. According to the testimony of a North Korean refugee, an ex-teacher, the teachers had to personally obtain the equipment or teaching tools necessary for experiments and practices because the central government was unable to provide them with any since the 1980s. This was the same case for higher educational institutions and supplementary vocational training institutions within the factories.

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41 H2, Hamheung City Secondary School Graduate (1986-1991), interviewed in November 2003.

> In actual practical applications, the facilities were not well-equipped to practice computer skills in factories, workplaces, or college laboratories. I learned with modern techniques but the facilities had deteriorated and even college laboratories didn't have proper laboratory equipment and we couldn't do any appropriate experiments, which led to us forgetting all that we learned. All the learning just ceases and there is a big gap between applying the skills and the reality.[42]

The production labor, part of the secondary school curriculum, was moving away from the polytechnical education's intention of cultivating fully-developed human beings through the merging of labor and education. The goals of the production labor that is utilized in secondary schools are to make the students aware of the value of labor and foster required skills and attitudes, via practical experiences from on-site training, that is essential for the future workforce. However, the current ongoing production labor is not a process of on-site training for educational purposes but just functions as a simple supplementary labor force. A North Korean refugee, an ex-teacher, assesses the production training conducted in secondary schools in the following way:

> We are mobilized in the farms, for the actual secondary school curriculum, for two months. This is done without pay. For real experience, we should go on a field trip for 3 days and learn how the crops grow. However, that kind of learning is non-existent. The students actually become farmers.[43]

Manual, menial labor, which disrupts education, is not only

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[42] L1, Construction Workplace Associate Director (1992-1992), interviewed in June 2003.

[43] C2, North Hamgyong Province Elementary School Instructor (1984-1996), interviewed in May 2005. The author asked the question on the subject.

unable to attain any educational effects, combination of curriculum contents and practices offered by North Korea's education principles, but instead leads to problems in respect of maintaining consistency because of the effects of one to two months of interruption to the normal school curriculum. Because of these problems, some secondary schools exempt the senior students, with excellent grades to attend college, from production labor. This is not just a loss of educational significance in production labor but beyond this, it is a factor which impedes education. It also shows the reality that the exemption of production labor acts as a positive reinforcement in the educational curriculum.

3. Problems of the Factory Regime[44]

There are various supplementary higher educational institutions, like on-site training systems and factory colleges, which are vocational training systems within the factory, but operating the tense production process simultaneously with developing a long-term systematic labor force is not easy for individual factories. From this, an incompatibility of purposes arises between production and vocational training within the factory.

Statistical data cannot be provided but the participation rate of

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44 In this paper, the notion "Factory Regime" is cited from Burawoy's notion. According to Burawoy, factory regime acts as two political tools. First, organization of work itself has the political and ideological effects. In other words, while transforming ingredients into useful goods, people reproduce the experiences between particular social relationships and themselves. Second, organization of work, or labor process, as well as special political and ideological apparatuses of production exists that regulates production relationships. M. Burawoy, *The Politics of Production: Factory Regimes under Capitalism and Socialism* (London: Thetford Press Ltd, 1985), pp. 7-8.

North Korea's factory laborers in technical on-site training is extremely low. It is not an exaggeration to say that the systematic training system stated in North Korea's labor-related laws is not actually in effect. According to the testimonies of North Korean refugees, a majority of the laborers have not received any separate technical training besides safety training. However, there were many who stated that they received regular technical training for two hours a week from foremen or experts and others who stated that they received the technical training before duty for 30 minutes everyday. From this, we can speculate that there is a big disparity between each factory in terms of training structures, methods, and standards. The following statements from North Korean refugees demonstrate the reality of actual technical training within the factory:

> There are some people who are annoyed about the once-a-week technical training and some don't even participate. They don't participate zealously every week because they'll just study when the test comes up. Even the work group leader himself defers training and rarely does he start training on time.[45]

> New workers' training is just working together and learning by watching. There isn't any special training just for them. They just tell us that this person is coming to work in this operating team today. When that person comes to work, the director tells me to go work on the machine with him today. He just sits down and watches me do the work. Then, he knows after watching. After about 15 days, he learns by working together and I begin to trust him.[46]

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[45] K1, South Hamgyong Province United Enterprise Worker (1979-1998), interviewed in May 2003.

[46] K2, North Hamgyong Province United Steel Enterprise Worker (1981-1999), interviewed in October 2005.

You can deduce from the above statements that the postponement or cancellation of weekly regulated technical training because of work situations is a common occurrence. There is a stipulation that one must prepare for an aptitude test to acquire a skill level through the technical training system but there are many workers who do not know their own skill level. Generally, North Korean factory's on-site training is not a special technical training or in specialized form but is conducted in a way where the newcomer watches and follows the veteran workers' actions and learns the skills.

This reality is not much different in part-time educational institutions such as factory colleges. The laborers who attend educational institutions go to class for about 4 hours almost everyday after work and the "studying is burdensome and exhausting" that there are many instances where they leave educational institutions. On top of that, some repeat the process of taking leave of absences and going back to school several times. There are laborers who think that attending a factory college is worthwhile but in most cases, half of them are voluntarily attending and the other half is forced to attend. Because one of the evaluating factors of the "Three Revolution Red Flag Movement" conducted by North Korea's factories is the rate of the engineer and assistant engineer, in many cases, young laborers are suggested to attend without the consideration of an individual's aspirations or goals.[47] Consequently, the general assessment is that the education quality of factory colleges is not the finest compared to normal colleges.

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[47] It is difficult to generalize, but one North Korean refugee stated that about 70% of the workers attending factory colleges "by force." Also, generally those workers attending factory colleges are exempt from duties and other social labor, which are benefits that work as inducements.

The reason that the factory's training system is not as effective as planned is caused, structurally, by the instability of the production process in North Korean factories. Under the socialistic economic system, limitations of supplies lead to uncertainty in labor process. In a deficient economy, business managers compete to secure supply resources such as labor, raw materials, and facilities. Businesses search and stand in line for scarce resources. Businesses, if possible, accumulate resources which, in turn, aggravates the scarcity of resources. If the businesses are unsuccessful with these strategies, they substitute one input for another or worst of all, modify the output of production according to the input that can be utilized. These methods of production and of manufacturing lead to instability such as the alteration of the sequences in manufacturing processes and reassignment of working processes. The challenge to achieve the planned output triggers the phenomenon of a sudden onrushing production and the output is typically accomplished strenuously during the last quarter of the scheduled time.[48]

North Korean factories not only possessed the instability of socialistic manufacturing process but after the full-scale rivalry between socialist countries in the mid 1950s escalated, the "storming" and "fluctuation of production"[49] significantly inten-

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[48] M. Burawoy, *The Politics of Production: Factory Regimes under Capitalism and Socialism* (London: Thetford Press Ltd, 1985), trans. Bum-jin Jung, *Politics of Production* (Seoul: Park Jong-chul Press, 1999), p. 210.

[49] Kim Il-sung pointed out in September 1959 during Hwanghae Steel Mill Party Committee Expanded Meeting that the reason production fluctuates is because production is not stabilized. Kim Il-sung, "Let's get a firm grip in solving all problems and concentrate our efforts (1959)," *About Socialist Economy Management 1* (Pyongyang: Korea Rodongdang Press, 1970), p. 194. But this production fluctuation is not an abnormal condition in a socialist planned-economy system where resource shortage and accumulation, and

sified. The "storming" implies a phenomenon in which the production is slow in the early months or quarter but at the end of the month or quarter, when the output reports are due, the production is accomplished altogether at one time. The fluctuation of production is a phenomenon in which a big disparity between production outputs occurs periodically and this repeats itself in a regular cycle. After the full-scale socialist rivalry erupted, "storming" with the terms "Battle" and "Onrush" became customary not only to reach the production output goals but to win the title of "Chollima Work Team," that is to say the excellent work team or complete the Great Leader's on-the-spot guidance by the due date.

Storming practices mean the laborers and technicians lack any room mentally or in terms of time to thoroughly analyze their duties. This ultimately brought an "impeding effect in technical innovation movement by going back to the obsolete methods."[50] Furthermore, storming practices functioned as an important factor in the unstable operation of a factory's training system.

Fluctuation in education maintained the same cycle as the fluctuation in production and moved in the opposite direction. When the production was at its highest point, the participation rate in education was at its lowest and when the production was slow, the education proceeded regularly. Conducting the training in such a situation, where human and material resources needed for education were not supported from the outside but had to be

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compromises and transactions between agents in the economy are common. Rather, it is a normal condition which continued to exist during the industrialization process.

50 Yeon-chul Kim, *North Korea's Industrialization and Economic Policy* (Seoul: Yeouksabipyong (Review of History), 2001), p. 308.

supplied from own within the factory, meant the instructors, who were skilled experts, and students, who were inexperienced laborers, had to be away from the regular production process. In other words, a situation in which the training conducted to improve the productivity was at odds with increasing short-term production. Even for the factory itself, accomplishing the immediate production output goal had the priority over long-term human resource development. In terms of managing technical training system, the factory is being cautious about "the propensity to incline toward current production and neglect technical training and not establishing a regular training system within the workplace itself."[51] But in reality, mobilizing the students of apprentice school in production frequently occurs because factory managers do not consider them as students but as a labor force.

During the period of industrialization, the factory's vocational training and socialist competition movement proceeded together. Developing laborers' skill level by promoting political awareness was chosen over developing and importing new technological skills. Represented as the "Campaigns for new Inventions," this process was an attempt to enhance technical innovations and production efficiency based on laborers' experience, creativity, and spontaneity. But there were also several unexpected results brought on by North Korea's political and economical state and the dynamics of the factory system. The problems in the extensive accumulative system, a simple enlargement of the manufacturing process, and not the technology development and import of new technologies through capital investment, played an important factor in causing the economic crisis in North Korea. Moreover, in the course of socialist competition movement, the attempt to

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[51] Kim, *North Korea's Industrialization and Economic Policy*, p. 112.

closely link the technical training, technology development, and political awareness wasn't much of a success. Neither was the effort to create ideal laborers, in demand by the state, by providing sample cases of model laborers with not only high skill levels but creativity and political awareness to regular laborers through various forms of technical and political training.

The technology development currently in North Korean factories is conducted not by the work organizations composed of regular workers but by separate work groups[52] or organizations composed of several workers with high training and skills. The reality that a majority of workers are repeating simple skills, distant from individual or collective skill development or innovation, demonstrates that the network of mobilization, training, and technical training, like the "Campaigns for New Inventions," didn't bring particularly fruitful results.

Another factor causing the factory's vocational training system not to operate properly can be found at the level of the actors involved. To North Korean workers, labor is accepted simply as spending time to support a living. North Korean workers typically describe the meaning of their careers or ways they conducted themselves at work in the following manner:

> There is a plan but you don't have to complete it and there can be problems with your quality of work. I saw a team leader getting scolded by the shop director because he made a big mistake but there is no worry that you'll be fired. You can screw up but you can just accept the criticism and there is then forgiveness so there isn't any psychological burden unlike here in South Korea where

[52] According to the statement from a North Korean refugee, this organization of work in some workplaces exists as an "innovation team" or as an independent technical department.

> you can get fired and have materialistic penalties. Additionally, if you're tired, you can go to a sanitarium or convalescent home for a month and rest. About 5% of workers in the factory don't come to work regularly, like me. It was the same before the famine.[53]
>
> In the North, they give out money and food as long as you come to work. A worker, who learned other skills, comes here and can't read any blueprints, can't design any machines, so he just does odd jobs. That's why the country is having a hard time. That's why there are many who live idly.[54]
>
> In North Korea, the laborers work not for money, not to feed their family, and routinely go to work at 7:30 and go back home at 5:30. You just do what the operation director tells you to. Just do what you're told.[55]

For such workers, labor is nothing but a repetitive, boring daily life which must be merely endured not enjoyed. Once in a while, if a worker sees a positive meaning to his work, there is a possibility of a successful political career by joining the party. Workers are not ambitious about attending college but they do aspire to becoming a party member.[56] Becoming a party member is the only way for "a low-class worker like me" to become "a hero." Compared to this, a person having a career and attributing significant meaning to his job skill development or self-development through job training is very rare:

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53 K3, North Hamgyong United Enterprise Worker (1983-1997), interviewed in February 2004.

54 K4, National Economy College Graduate (1980-1983), interviewed in June 2003.

55 S1, North Hamgyong Factory Worker (1987-1999), interviewed in February 2004.

56 H3, North Hamgyong Coal Mine Worker (1988-2003), interviewed in February 2004.

> People really don't have the ability to actively deal with something. People are trained to be passive, so they're unable to be active. They don't know how to do anything else besides what they're told to do. North Koreans are accustomed to the habit of living reluctantly. That's why when they are ordered to work, they feel difficulties. Coming here (South Korea) and going to work, this place doesn't operate by force or organized discipline. If a person doesn't work, he feels the obligation and responsibility, which leads to people not coming to work late or going to hospitals, unlike in the North.[57]

The reason North Koreans have a passive attitude about their own career development is because the improvement of productivity through skill development of each worker, other than the political meaning of satisfying the government's policy, doesn't provide any substantial incentives. It is very difficult for North Korean workers to leave their assigned occupation and factory to search for another vocation. Additionally, it is almost impossible to be promoted to a position like chief engineer for workers other than college graduates, so the skill development through training systems within the factories is not a particularly attractive option to the workers.

4. The Problem of the Link System Between School and Production Site

Under the socialist economy, the focus on proprietorship by the government sector affects the labor market and enterprise efficiency in two major ways. First, since the state has the power to distribute labor to workplaces, the state exercises an important regulating authority on linking human capital and material capital to

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57 L2, Worker (1984-1991), interviewed in June 2003.

each worker. Second, school graduates are generally assigned to work units where their lifelong labor service takes place. For the price of safety by showing up for work and performing one's work to the minimum standards, the workers are restricted in developing, accumulating, and exchanging their labor service. The outcome is that the incentives to improve the skills by the workers don't exist. Those workers with more skills and motivation are not employed efficiently. Because the investment is not utilized efficiently and quality is not compensated, the incentive to accumulate the technological transformation through human capital investment decreases and suffers from loss of innovation.[58]

This feature is demonstrated in the link system between North Korea's school and production sites as well. Basically, North Korea's labor force placement is influenced not by the function of supply and demand of labor force but by the central government's "plan." The plan regarding labor force training and placement is predictably characterized as mid-to-long term but because of the potential for change in economic and industrial conditions, a gap between the plan and the actual demands of the labor force inevitably occurs. For this, one North Korean refugee expressed, "national production plan cannot even be adjusted, and talent development is planned according to the government but paper plans are prevalent."[59]

Furthermore, in North Korea, substantial job training for one's duties occurs after job placement. A regular secondary school is

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58 Byung-yoo Jun, Il-young Lee, Yeon-chul Kim, and Moon-soo Yang, *North Korea's Market and Business Reforms and Labor Incentive System* (Seoul: Korea Labor Institute, 2004), pp. 19-20.

59 H1, North Hamgyong Province College Instructor (-2001), interviewed in November 2005.

not divided into departments and because opportunities for diverse education don't exist outside the general curriculum, general secondary school students do not have many opportunities to discover their own talents.

Moreover, a person's inclinations and skills are considered during the vocation and workplace placement process but because there isn't much freedom to liberally choose their vocation and workplace according to their wishes, the labor force placement framework, the link between school and workplace, has a crucial structural flaw. As a result, the workers, assigned to workplaces without regards to their talents and wishes, lose the motivation not only for skill development but also for the labor itself. The following testimony from a North Korean refugee is an example of the effect of this process:

> When I worked in North Korea, to be honest, I worked because I had to. In South Korea when people work, they have a career in mind. However, in North Korea, once you are assigned to a factory, you have to work there, whether you like it or not, until death. I wanted to do something different.[60]

In addition, in cases regarding the high-quality human resources who graduated from a college or cadre training institution, there is a "transaction" at work between actors during the placement process. These transactions usually take place when they are related to the influential members in the party and even if the person has the skills in the subject area for placement, there are instances when the person is ousted from the transaction and assigned to a position that is unrelated to his major. The follow-

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60 K2, North Hamgyong Province United Steel Enterprise Worker (1981-1999), interviewed in October 2005.

ing case is one such example:

> All the positions were full already in the hotel division. Even if you're from the training institution, you're assigned by the provincial government and people want to be assigned to those places. Therefore, only those children with influence and talent can attend. So I was assigned to a knitting factory.

During the placement process, if one is assigned to a position unrelated to his major, even though he is a high-quality human resources or special field worker, it is not easy to change his position, even with his talent being taken into consideration. Consequently, there are instances where new knowledge and skills have to be acquired that are unrelated to the professional knowledge and skills acquired from higher educational institutions.

Initial training institutions like the apprentice school are part of a system that teaches skills in a special field to preliminary workforce members, those without appropriate job skills to perform any duties, and structurally supplements problems that are caused by the lack of vocational training in the secondary education system and unilateral placements. However, this also has limitations because it generally operates in initial training institutions within the factories after the completion of job placements to various factories and workplaces.

In short, efficient labor force placement is difficult under the link system between school and workplace because the positions are chosen and assigned without the development process of individual's job skills in secondary schools. Additionally, individuals go through the job training process in the training center while being assigned to a specific position and the system is organized so that changing a position is difficult except in special circumstances.

Ⅴ. Conclusion: Policy Commentary

As you can see, North Korea's human resource development system has several features in the political and contextual aspects and actual management aspect.

First, while the state determines and comprehensively manages the main policies and systems, the actual resources necessary for educational institutions are secured not only from the national budget but from public mobilizations as well. This strategy was effective in expanding the human resource development system in a short period but in actuality, it functions as a restriction in qualitative development in the human resource development system.

Second, the contextual feature in the North Korean human resource development system is that it applies the principle of polytechnic education, which is linking the labor and school system. But in reality, because of poor practice conditions and train-

ing course's lack of importance in secondary school's basic skill and practice curriculums, it is managed without being given much importance. Additionally, the production labor that is conducted as part of the training process has deteriorated from having educational importance through on-site practice to just having a role in replenishing the labor force.

Third, although various on-site training systems, factory colleges, and auxiliary part-time educational institutions were established as human resource development systems within the factory, human resource development is not actually operating smoothly because of agent related causes such as instability of the manufacturing process and work culture, and lack of incentives for developing skills.

Fourth, labor force training and placement is processed through a "plan," but in reality a significant gap exists between the plan and the actual demands of the labor force. Furthermore, aptitude development does not take place in secondary schools and initial training for duty ensues after the assignment of positions. It is difficult to freely select the vocation and workplace during the vocation and workplace placement process and it is also difficult for the efficient labor force placement to occur because of intervention of "transactions" among the actors.

These features in the North Korean human resource development system bring the following implications in inter-Korean exchange and cooperation in the human resource development system sector.

First, the first step toward inter-Korean exchange and cooperation in the human resource development system sector must be the

support given to North Korea to reconstruct and modernize North Korea's human resource development system infrastructure that was destroyed after the financial crisis. Currently, North Korea's human resource development system is not operating conventionally to the point that it is even losing the advantages of the socialistic human resource development system such as equality and the advantages arising from central state control. For a start, you can probably take the teaching aids, support of educational program, and dispatching specialists into consideration.

Currently, support given to North Korea in the field of human resource development is in operation with the focus on "emergency relief" of "children" but the future target subjects should be expanded to include juveniles and adults. Additionally, qualitative exchanges must be considered through developmental aid and mutual exchanges. In particular, developmental aid strategy and tasks should be established, with the principle of participatory development reinforcing the ability to organize operations to help beneficiaries decide the value and priorities themselves. Moreover, the support should not take the form of diminishing aid but rather contribute in establishing the infrastructure of labor force development sector.

Additionally, early exchanges and cooperation in the field of human resource development must be done without obvious political issues and should start off in the areas where North Korea feels are necessary. For example, one can think of the exchanges and cooperation in the IT sector, where North Korea places significant emphasis in their labor force development.

Second, in terms of the labor force development projects by domestic businesses that made inroads into North Korea such as

the Kaesong Industrial Complex, the special characteristics of North Korea's human resource development system and the features of North Korean workers' attitudes to labor and workplace culture should be considered. With regards to vocational training and the North Korean labor force, the educational program utilized by South Korean businesses should not be employed directly to North Korean workers. Rather, considering the dynamics of the agents and the entire factory system, including the education and the ideological system, the training should be conducted in stages.

Third, in the case of domestic businesses that entered North Korea, appropriately checking North Korea's regulations regarding companies' human resource development while securing essential base and conditions in labor force development will be one of the paramount problems related to labor force development for businesses planning to enter North Korea.

Especially after the the economic adjustment measures in July 1, 2002, the expansion of autonomy of businesses and lower units in the state's planning process and the changes in which the control of state and party over the workers is partly relocating to the director are taking place.[61] We can assume that these changes will affect laborers' strategies of resistence and management strategies of managers regarding human resource development. Nevertheless, North Korea will not relinquish the state's supervision and control related to human resource development in factories, and likewise, all matters related to workplace manage-

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[61] Suk-ki Lee, "North Korea's Economic System's Features and Crisis After 1990s," in *South-North Korea History Development and North Korean Economy* (Hanshin University Academy Social Science Research Institute, 2004).

ment. It will further maintain its control regarding inter-Korean economic exchanges and the entrance of South Korean businesses into the North Korean market. Therefore, in regard to human resource development in factories, businesses being able to secure autonomy independently are the key factor that will have an effect on success or failure.

Fourth, it is necessary for the businesses in the North Korean market to give incentives and encouragement for individual skill development and job skill improvement amongst their North Korean staff. In North Korea, the enticements for labor force improvements took a political form such as community mobilization and competition campaigns but their effectiveness declined remarkably in factories, especially after the financial crisis. The problem of providing effective incentives and stimulants to improve workers' techniques and job skills will be the most important factor in human resource development.

Some people usually point out the enticing effectiveness of financial incentive in wages but it is necessary to focus on the positive effects of human resource development itself other than financial enticements. The state and organizational structures are the center of North Korea's human resource development system and because there isn't much room for "individual development," the majority of North Korean workers are indifferent to issues such as personal skill improvement and career development. Human resource development should not just focus on a worker's present duties but should instead focus on linking it with future duties and development of the learner within each worker and by doing so, the effects of the job training itself should be maximized.