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**THE TELECOMMUNICATION SYSTEM IN NORTH
KOREA**

Supervisor

Ch. Prof. Rosa Caroli

Asst. Prof. Vincenza D'urso

Graduand

Paolo Pedrini

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INTRODUZIONE IN LINGUA ITALIANA:

Quando sfogliamo le notizie di cronaca, ci capita ciclicamente di leggere articoli sulla Corea del Nord: le follie legate al giovane dittatore Kim, i campi di prigionia, le minacce dei missili atomici e via dicendo. Ciò che invece non giunge attraverso i media è una chiara figura in grado di descrivere come realmente vivono i Nord Coreani, i vari strati che compongono la loro società, il loro stile di vita e le diverse attività che caratterizzano la loro quotidianità. Non è facile cercare di penetrare con i nostri occhi nel paese più inaccessibile e sconosciuto del mondo. E' un po' come cercare di descrivere una casa scrutando dal buco della serratura, senza però poterci entrare. Qualcosa si riesce a vedere, ma è difficile poter capire nel complesso che cosa ci sia veramente al suo interno. Tuttavia al giorno d'oggi fonti affidabili dalle quali trarre informazioni attendibili sono alla portata di click. Quei confini tanto sorvegliati celano molti segreti ancora, rendendo lo studio e la scoperta sempre più interessante e coinvolgente. La mia ricerca ha come obiettivo quello di presentare e descrivere un elemento penetrato in Corea del Nord solo negli ultimi anni: la telecomunicazione mobile.

La tesi esordisce analizzando la storia dell'introduzione del servizio di telefonia mobile ufficiale e i rapporti internazionali che hanno dato la possibilità a quest'ultimo di svilupparsi nel paese. Cercherà inoltre di dare una spiegazione alla scelta del regime di aver come provider del suo nuovo network una società Egiziana, e i motivi che spinsero quest'ultima a proporre il grande investimento al paese più imprevedibile del mondo. Egitto e Corea del Nord sono due paesi che hanno condiviso amicizie reciproche nel tempo, ma come vedremo questo non sarà di alcun aiuto al CEO della compagnia egiziana, che si imbatte in non pochi problemi che ne mineranno i rapporti d'affari. In seguito analizzeremo come il network

realmente funzioni e quali sono le caratteristiche uniche che lo differenziano da quello degli altri paesi del mondo. Malgrado nelle moderne società digitare su uno smartphone caratterizzi la vita di tutti i giorni, scopriremo come nel paese dei Kim la possibilità di accedere a tale servizio sia un privilegio che solo pochi possono permettersi. Analizzeremo in che modo i Nord Coreani possono usufruire di tale benessere e di come effettivamente il possesso di un telefonino possa modificarne la posizione sociale. Nonostante la grande crescita e la vasta popolarità che la comunicazione mobile ha riscontrato nello stato Nord Coreano sin dalla sua introduzione, il possesso di un telefonino (o addirittura di uno smartphone) non conferisce tutte le libertà e capacità che un utente comune dovrebbe aspettarsi. Il regime di Kim mantiene la presa stretta sul suo popolo, sorvegliando le comunicazioni telefoniche allo scopo di identificare il circolo di informazioni sospette. Come si potrebbe supporre, i Nord Coreani tramite le linee telefoniche locali non hanno alcuna possibilità di comunicare con il mondo esterno e di ricevere informazioni da altre fonti che non siano quelle di regime. Un telefonino rimane così un semplice mezzo per comunicare solamente con amici o famigliari che vivono all'interno del confine. Viene utilizzato anche dai mercanti per scambiarsi in breve tempo indicazioni sul cambiamento dei prezzi nei mercati delle città. La comunicazione mobile, nonostante sia solamente nazionale, ha portato notevoli miglioramenti negli ultimi anni all'economia del paese. E' probabile che sia proprio questo l'obbiettivo del regime di Kim: migliorare sviluppo e il welfare nel suo stato e allo stesso tempo costruire un ulteriore livello di sorveglianza, evitando però di svestirlo del titolo di "paese eremita". Infatti, sono poche le figure che hanno la fortuna di aver accesso alla rete internazionale ed internet. Tra queste persone troviamo non solo le élite diplomatiche di regime e pochi professori universitari, ma anche quei viaggiatori che scelgono come meta turistica proprio la Corea del Nord.

Storicamente, viaggiare a Pyongyang significava dover lasciare alle autorità doganali qualsiasi tipo di dispositivo tecnologico che potesse comunicare o scattare foto furtivamente. Visitare la Corea del Nord era come intraprendere una sorta di viaggio nello spazio tempo per giungere in un luogo lontano distaccato dal mondo reale, senza alcun possibile contatto con l'esterno. Per quelli che non possono immaginare di trascorrere un singolo giorno senza la connettività globale, ecco che le autorità coreane offrono loro un servizio ad hoc. Nonostante sia estremamente costoso, al giorno d'oggi chiunque può portare con sé il proprio smartphone, laptop o tablet e farne completo uso collegandosi ai principali social network direttamente dal cuore di Pyongyang (cosa che non si può fare a Pechino). La rete predisposta per gli utenti stranieri tuttavia, è completamente scollegata da quella locale, rendendo impossibile qualunque tentativo di comunicazione tra i turisti e la popolazione autoctona. Il governo Nord Coreano tratta gli utenti del suo network in base alla loro provenienza e alla loro estrazione sociale, mostrandoci la sua vera natura caratterizzata da alti livelli di censura e tenace controllo. Ad ognuno la propria propaganda.

Ma c'è un lato nascosto della comunicazione mobile in Corea del Nord, ben più interessante ed eccitante. Coinvolge una piccolissima parte della popolazione che riesce ad allacciarsi alla linea internazionale potendo così connettersi con il mondo esterno. Il modo in cui riescono a fare ciò è molto semplice ma allo stesso tempo costoso e pericoloso: usando un telefonino in grado di connettersi con le antenne telefoniche cinesi posizionate al di là del confine settentrionale. Nella seconda parte dell'elaborato analizzeremo proprio questo fenomeno partendo dalle sue origini storiche. Verso la fine degli anni 90, quando la ormai fallita unione sovietica non appoggiava più il regime di Kim Il Sung, il sistema comunista di

distribuzione nazionale collassava, creando un lungo periodo di grande carestia in tutto il paese. Questi oscuri anni sono conosciuti come “La Ardua Marcia”, una fase che sconvolse il paese radicalmente seminando morte e malcontento tra la popolazione, soprattutto quella più povera. La morsa letale della fame, spinse i nord coreani in disperata situazione a cercare fonti di sopravvivenza al di là di quelle di regime. Si formarono le prime attività private e piccoli mercanti cominciarono a vendere la loro merce nelle strade di città e villaggi. Sono gli anni in cui nacque e si sviluppò il mercato nero e il contrabbando attraverso il “poroso” confine settentrionale. Questi difficili anni modificarono la società coreana nel profondo arrivando addirittura a ribaltare il ruolo delle donne nella famiglia. Trafficanti cinesi e coreani entrarono in contatto tra di loro tessendo una rete segreta di scambi che portarono all’interno del confine coreano merce che fino ad allora rimase sconosciuta. Quelli che prima importavano cibo per far fronte al periodo di carestia, ben presto cominciarono a introdurre prodotti di vario genere. La merce che penetrava il confine era severamente proibita dal regime: indumenti di fabbricazione estera, DVD contenenti film e serie televisive Sud Coreane, radio, piccoli lettori CD e telefonini con SIM card cinesi. Proprio con questi nuovi dispositivi illegali i nord coreani cominciarono ad aprire gli occhi alla realtà. Le persone che vivono nei pressi del confine settentrionale poterono collegare il loro telefonino alle antenne cinesi. Questi nuovi dispositivi non solo facilitarono e migliorarono il contrabbando e il mercato illegale, ma consentirono ai nord coreani di avere per la prima volta la libertà di comunicare privatamente con persone al di fuori del paese, senza dover utilizzare le linee monitorate del regime. Al giorno d’oggi i dispositivi che permettono questa incredibile libertà vengono chiamati dai nord coreani “telefonini cinesi”. I pochi fortunati che riescono ad ottenere tale dispositivo contattano i famigliari che vivono al sud, scoprendo tutto ad un tratto la dura verità

che fino ad allora il regime aveva nascosto. In ultima istanza analizzeremo un altro fenomeno sviluppatosi tra la corea del nord e quella del sud: il sistema dei “broker”. Questo fenomeno consiste in una rete di intermediari che facilitano il contatto e il trasferimento di denaro tra due individui situati rispettivamente nelle due coree. Nacque come espediente usato dai rifugiati nord coreani che vivono in altre parti del globo per inviare denaro alle loro famiglie. Scopriremo chi sono questi “broker” e come riescono a creare contatto tra due paesi così nemici. Per aiutarci a fare ciò, ascolteremo la storia di un coraggioso disertore che riuscì tramite questi intermediari a trarre in salvo anche i suoi due figli. Solo con la testimonianza diretta di persone che hanno vissuto questa esperienza si riesce a percepire veramente la pericolosità della fuga e la brutalità del regime nord coreano. Il sistema dei “broker” è essenziale per assicurare il contatto con i propri famigliari e pianificare una eventuale evasione. E’ proprio quello che preoccupa il regime. La leadership nord coreana tiene il pugno di ferro per mantenere il popolo isolato da quello che accade al di fuori del confine e da quando Kim Jong Un è salito al potere la sorveglianza della frontiera settentrionale si è inasprita ulteriormente. Nuovi dispositivi avanzati installati in punti chiave dove i trafficanti e disertori attraversano il confine permettono un monitoraggio preciso e potente. Nuovi corpi di polizia specializzati nel captare segnali radio provenienti dai telefonini sorvegliano giorno e notte le lunghe sponde dei fiumi di confine. Connettersi con il mondo esterno utilizzando un telefonino cinese è pericoloso e può essere letale. Gli agenti arrestano chiunque venga individuato comunicare con l’esterno. I vari metodi di censura e punizione che il governo del Nord infligge a chi non rispetta le regole negli ultimi anni si sono ulteriormente aggravati.

Per compiere al meglio questa ricerca utilizzeremo le varie fonti che sono a nostra disposizione. Nonostante l'argomento Corea del Nord sia poco conosciuto e scarsamente seguito, nel mondo ci sono numerosi esperti che dedicano la loro vita allo studio del regime. Siti specializzati e pubblicazioni di studiosi ci daranno un aiuto a visualizzare in modo completo il contesto in cui svilupperemo la ricerca. Ascolteremo la voce di chi in Nord Corea ci ha vissuto ed in ultima istanza analizzeremo le varie testimonianze di chi dal paese dei Kim è fuggito.

INTRODUCTION

When we browse the daily news, it happens to read articles about North Korea: the craziness of the young Marshal Kim, the desperate situation of people detained in prison camps, the threats of atomic missiles and so on. What does not come through our media is a clear image that describes how North Koreans really live, the different stratus of their society and the various activities that characterize their everyday life. Sure, is not easy to penetrate with our eyes in the most inaccessible and isolated country in the world. It's like trying to describe a house by peering through a door keyhole. You can see something, but it is quite difficult to get a clear picture of what's going on inside. However, nowadays reliable sources to draw reasonable information are pretty much accessible. Those highly guarded boundaries are still hiding many secrets, making the study and its discover more and more interesting and engaging. My research wants to present and describe an element penetrated in North Korea only in recent years: the mobile telecommunication.

The thesis begins by analyzing the history of the introduction of the official mobile phone service and the international relations that have made it develop in the country. It will also try to explain why North Korean authorities chose an Egyptian company as the carrier of the new network, and why the latter accepted to deal with the most isolated and unpredictable country in the world. Egypt and North Korea are two countries that shared mutual friendships and benefits, but as we'll see, this will not be of any help to the CEO of the Egyptian company, who will encounter serious problems that will inexorably decay bilateral collaboration.

Following, we will investigate on how the network actually works and which are the unique characteristics that make it different from other countries of the world. Despite in modern societies typing on a smartphone characterizes everyday life, we discover that in North Korea the access to such service is a privilege that only few can afford. We analyze how North Koreans can take advantage of this new technology and how the possession of a mobile phone can effectively change one's position in the society. Despite the great growth and the huge popularity of the mobile communication in North Korea since its introduction, the possession of a mobile phone (or even a smartphone) does not confer all the freedom and capability that a common user should expect. The Kim regime maintains tight grip on its people, monitoring telephone communications on a daily basis in order to identify the circle of suspicious information. As one might assume, North Koreans through local telephone line, have no chances whatsoever to communicate with the outside world, and to receive information from other sources beside the one of the regime. In practical terms, a mobile phone become just a simple means to communicate only with friends or acquaintances who live within the barbed boundaries. It is also a business tool, used by merchants to quickly exchange market price changes or goods supply information. Indeed, despite being strictly domestic, in recent years the mobile phone network has brought significant improvements in the country's economy. Most likely, that's precisely the aim of the Kim regime: improving development and welfare in his state and at the same time to build an additional layer of surveillance. All of this, without undress North Korea of its title "hermit country". Only few individuals are lucky enough to get access to the international network and the Internet. Among these people, we find regime's diplomats, loyal party cadres, elites and a few number of university professors, but also brave travelers who choose North Korea as their destination.

Historically, travel to Pyongyang meant to leave one's technologic devices to customs authorities. For years, visit North Korea meant traveling the space time to reach a distant place disconnected from the world, without any possible contact with the outside. For those who cannot imagine to spend a single day without global connectivity, Korean authorities now offer them such service. Although being extremely expensive, nowadays anyone can bring their own smartphone, laptop or tablet and make full use of it by connecting to major social networks directly from the heart of Pyongyang without any restrictions (while you can't from Beijing). The foreign user's network, however, is completely distinct from the local one used by North Koreans. The first connects people to the international line, while the second works only within the state borders. What the two lines are not capable of is communicating between each other, giving no possibility to the interaction foreigners-locals. The North Korean government treats users of its network according to their origin and their social background, showing us its true nature characterized by high level of censorship and persistent control. To each, their own propaganda.

But there's a hidden side of the mobile communication in North Korea, much more interesting and exciting. It involves a very small part of the population that figure out how to connect to the international line so they can make contact with the outside world. The way they manage do this is very simple but at the same time very dangerous: they use a smuggled mobile phone to tap into the Chinese antennas deployed beyond the northern border. In the second part of the thesis we explore and analyze this phenomenon starting from its historical origins. After the collapse of the USSR in 1991, aid towards the Kim Il Sung regime started to be insufficient, putting the national public distribution system (PDS) in jeopardy. It was a turning point in the North Korean history, the beginning of a long period of

deadly famine spreading throughout the country. These obscure years are known as the "Arduous March", a serious calamity that claimed the lives of millions, especially the poorest, and scattered discontent among the population. The lethal grip of the famine, pushed North Koreans in desperate situation to find livelihood sources beyond the one of the regime. The first private businesses started to emerge and merchants began to sell their wares in the streets of towns and villages. The biggest part of the people involved in these markets were women, allowing them to empower their position in the society and giving them more wealth than ordinary people involved in state activities. Those years also triggered the beginning of the black marketization and smuggling phenomenon across the northern border. Chinese and North Korean traffickers started to make underground businesses in a network of illegal exchanges introducing into the Korean border goods which until then were unknown. Those who first imported foodstuff to cope with the period of famine, soon began to introduce products of various kinds. Among them it is important to note the most prohibited one, something that push regime authorities to take actions against: foreign-made goods, DVDs containing South Korean movies and TV series, radio, small televisions and mobile phones with Chinese SIM card. Thanks to new gizmos, North Koreans began to open their eyes to reality. People living near the northern border can now connect their phone to the Chinese antennas. These new devices not only facilitated and improved smuggle activities and the illegal market, but also allowed lucky North Koreans having for the first time the freedom to privately communicate with people outside the country, without having to use the monitored lines of the regime. Devices that give this new freedom are called by North Koreans "Chinese mobile phones". The lucky few who manage to get a Chinese mobile phone try contact their families living in the south, discovering all of a sudden, the hard truth that until then the

regime had hidden. Towards the end of the elaborate, we analyze another phenomenon related to the unofficial cross border activities: the "broker" system.

The broker system consists of a network of intermediaries that facilitate the contact and the remittance of money between two individuals located respectively in the two Koreas. It was born as a way used by North Korean refugees living in other parts of the globe to send money to their families. We'll find out who these "brokers" are and how they manage to create contact between two countries so close yet so distant from each other. To help us do so, we will listen to the story of a brave defector who succeeded to escape the propaganda state and eventually managed to rescue his family with the help of these intermediaries. Only with the direct testimony of people who have lived this experience we can really understand the danger and the brutality of the North Korean regime. The "broker" system it is essential to ensure contact between family members to help them out or to plan a possible escape. Something that makes the regime worry. The North Korean leadership applies iron fist approach to keep the people isolated from what happens outside the propaganda state, and since Kim Jong Un took power, surveillance of the northern border has further strengthened up. New advanced surveillance equipment installed at key points where traffickers and defectors cross the border ensure precise and powerful monitoring. New dedicated units were formed to track down people contacting the outside using Chinese mobile phones. State Security agents arrest anyone who is caught while communicating with foreign counterparts. The already harsh punishments for those who commit the crime of international communication with South Korea eventually get worse and more deadly in recent years. We will end up by talking about the various methods of censorship and punishment that the North Korean government inflicts to those who break the rules.

To make this journey inside the hermit country and to fully accomplish this research I tried to use all available sources, including personal experience. Although the North Korea's topic is little known and sometimes too much neglected, in the world there are many experts and observers who devote their lives to the study of the regime. Specialized sites and publications of scholars give us precious hints that help us to get a reasonably clear picture of the situation inside the guarded borders. We will listen to the voice of those in North Korea have lived and, more important, the testimonies of those the propaganda state have fled.

Note on the Romanization of Korean

Both countries North and South Korea differ on the romanization of the language. For this thesis, I used the South Korean convention except for names and places know as they are. So, Kim Jong Un (not Kim Jeong-eun) lives in Pyongyang (not Pyeongyang).



North Korean lady in traditional dress peers into her mobile phone.

NewFocus International, 2013

1 – CHAPTER ONE

1.1. – Introduction

In the first part of the present chapter we will briefly examine the history behind the introduction of the telecommunication system in North Korea. Historically the DPRK (Democratic People's Republic of Korea) is one of the last country in the world where mobile telecommunication penetrated and the first network was introduced only by the end of 2002, by the Thai firm Loxley Pacific. Only few lucky North Koreans could actually be able to connect their phone to it, resulting in a network which one year later had managed to amass just 20,000 subscribers. Various bans of the network, confiscation of devices, and the limitation of the service to high-rank elites only led the first system to its failure after just two years from its introduction. We will focus more on the second network introduced in 2008 that still running to present day. Under the name of Koryolink, the service was created by the collaboration between the Korea Post and Telecommunication Corporations and an Egyptian telecommunication firm called Orascom. Since its introduction, Koryolink network had a substantial growth in revenues and the popularity of the service quickly branched out reaching also remote areas of the North Korean countryside. From an initial subscriber base of less than 10,000, user numbers climbed dramatically, reaching 432,000 in December 2010, one million in February 2012 and probably more than 3 million in 2017.

We will also try to answer the questions why either the Korean government choose an Egyptian provider as the network carrier and why the latter actually accepted to deal with the most isolated and tightly restricted country in this world. What is certain, is that in order to fully

understand the reason of this bilateral agreement it is necessary to deeply describe why they came across each other and the relations occurred over time between them. Despite this incredible expansion and the subsequent success, we will figure out the reason why the Egyptian company and his CEO encountered some serious issues in this regard, resulting in an inexorably decaying of the bilateral collaboration. Making business with the Kim family has historically been a hazardous gamble but it seems that Orascom Tycoon did not learn any lesson.

Although the new mobile network cover the 94 percent of the whole population, for a North Korean getting involved in the mobile telecommunication system and fully enjoy it appear to be a little bit troublesome. Firstly, due to the high cost of the service and the even higher cost of handset is obvious that only the minor, and eventually lucky, part of the population can actually afford it. Secondly, due to the dramatically high level of bureaucracy and the quantity of information requirement, the completion of all paperwork could last weeks or months. Thirdly, in order to subscribe to a new contract, the costumer has to explain to the officer about the purpose and financial source of the purchase. In fact, if someone in North Korea is able to spend such amount of money all of a sudden can be automatically suspected of illegal operations. On the top of that, we have to keep in mind that North Koreans are completely unable to connect to the outside world and the regime tightly control communications to eventually detect suspicious or sensible information which may be against the party. We will also see how bribing officers or dealing in the black market can help an eventual costumer to acquire a cellphone through fast track sources. Corruption is well embedded in the North Korean system giving always a second chance to those who can afford to pay an extra.

When the service was first introduced, rate plans were extremely expensive and only few services were available, but with the expansion of the Koryolink network, prices started to decrease and even the 3G intranet service got more popular. Analyzing a Koryolink brochure we finally discover the apparently wide range of services the network can offer and the different type of subscriptions plans that can be made by potential users. It also notable that to get access to some of the contents provided by the network having a capable device is required, dividing people between those who can afford such a device and who does not.

When it comes to handsets North Korea has many different kinds of cellphones that can be found in both official and unofficial markets (South Korean brands too were spotted in Pyongyang). Even though bar phones models that we were used to see in 90's are the most popular because of their low price, nowadays in Pyongyang or in other big cities smartphones are likely to be seen. We will also see how a cellphone can be an important business tool for traders and a status symbol for young people, something to pressure your parents into buying for you, so you can appear wealthy and cosmopolitan. Furthermore, the North Korean government started to "produce" its own smartphone line but what we discover is the really origin of it and how many of North Koreans are actually able to afford it.

In the final section of the chapter we discover the nature of a second network ran by Koryolink. Nowadays foreign workers and tourists are able to tweet and post pictures in social media directly from Pyongyang (while you cannot from Beijing). This is quite interesting giving the fact that only few years ago, tourist had to leave their phone at the border. Internet access for foreigners, although very expensive, seems to be without any kind of restrictions whatsoever, in perfect contrast with the possibility given to locals. Koryolink, and therefore the North Korean government, is treating the people differently depending on one's nationality

and social rank. As 2017, North Koreans are able to purchase a cellphone and at the same time unable to speak with anyone outside the country and seek any foreign news that comes from the outer world. Everything is blocked.

Can the mobile telecommunication system in North Korea be the starting point of real revolution, or it is just a further level of surveillance which the government can rely on?

1.2. – North Korea’s mobile communication history in a nutshell

The mobile phone communication system in North Korea begin its existence in 2002. The same year, Loxley Pacific ¹ began to physically establish the first mobile telecommunication network in the Pyongyang area. At that time the service it was not accessible to people, indeed, only military and senior Korean Worker Party (KWP) officials were actually able to use it (mainly for duty reasons). The official name of the network carrier was Northeast Asia Telephone and Telecommunications (NEAT&T), which actually was the joint venture between Loxley Pacific (70 percent equity) and North Korea Post and Telecommunications Corporation (30 percent equity), that provided a 2G GSM2 technology granted under a license of 30 years, expanding their coverage range to other major cities including Nampo and the industrial complex city of Kaesong. Network antennas were also dislocated in other provincial towns and along major highways that connect the capital with Hyangsan and Kaesong cities, and between the east coast cities of Wonsan and Hamhung.

¹ Loxley Pacific is a Thailand-based company specializing in telecommunication systems and financial services.

² GSM refers to Global System for Mobile communications which is generally known as one of the most common 2nd Generation (digital, opposed to 1st Generation analog) standards. It is also the mayor radio system used in cellphones.

Despite being a primitive network at the end of the following year the number of subscribers reached 20,000 units³.

During the first year of the premature network, in July 2002, IT (Information Technology) enterprises from competitors South Korean chaebols⁴ reached Pyongyang in order to meet the North Korean Ministry of Posts and Telecommunications. The unusual meeting included representatives of well known Samsung Electronics and LG Electronics which are two of the biggest makers of handsets in the world today. Also members of South Korean communication carriers of KT Telecom (largest land-line carrier in South Korea), and SK Telecom (the most popular mobile phone carrier in South Korea) and representatives of the multinational automotive Hyundai (second biggest enterprise in South Korea) were attending that day. The meeting, although was an exchange between rival counterparts, was approved by South Korea's government and was formed to merge a sufficient amount of asset to compensate the risk of dealing with the enemy Korea. During the meeting in Pyongyang, the South Korean side has succeeded in obtaining the contract in which permits Seoul's companies to introduce the mobile service in the North Korean capital and in the city of Nampo. According to the stipulated contract the South Korean party was supposed to begin their project at the beginning of 2003 with an estimated \$24 million to \$32 million U.S. dollars investment.⁵ Despite the ambition of the project, it was calculated that the network would

³ Yonho Kim, *Cellphones in North Korea*, 2014, US-Korea institute SAIS, pp. 11.

⁴ Chaebol is a South Korean form of business conglomerate. They are typically global multinationals and own numerous international enterprises, controlled by a chairman who has the power over all the operations. The term is often used in a context similar to that of the English word "conglomerate".

⁵ Stacey Banks, *North Korea Telecommunications: On Hold*, fall 2005, pp. 90-91.

provide the mobile phone line only to foreigner and high-level North Korean officials, for a total estimated number of 40,000 users.

However, South Koreans encountered a substantial problem that marked the inexorable end of the whole project. Indeed, the plan consisted by using a specific mobile network technology which the patent was owned by an American company called Qualcomm⁶. The latter, could decide to give or deny the permission on the CDMA technology⁷ which would be used by South Koreans for the planned network business. Therefore, to make it happen, Seoul would need the U.S. government permit in order to fulfill the duty. In the end, Washington decided to put pressure and deny this permission since American military forces were afraid to give such benefit to the North Korean soldiers. South Koreans decided to use the CDMA technology developed by Qualcomm because they already had the same network in their country and therefore gained enough experience to run it properly in Pyongyang too. While CDMA is used by more than 60 million people in the world and is privately owned by a company, GSM is a non-proprietary cellular technology and is widely used by 3 billion people around the world. South Korean party had no other alternative but to acknowledge their limit and give up the deal to another competitor. Indeed, although Washington was able to block the adoption of CDMA technology, Loxley pacific had no stumbling blocks whatsoever on the usage of the GSM patent. Being free to use a non-proprietary technology and with the Korean

⁶ Qualcomm is an American semiconductor and telecommunications equipment company that designs and markets wireless telecommunications products and services. One of the most famous product is the Snapdragon chip that is probably running your handset right now.

⁷ Code division multiple access (CDMA) is a channel access method used by various radio communication technologies. CDMA is an example of multiple access, where several transmitters can send information simultaneously over a single communication channel. CDMA based cellphone does not have the SIM card.

Post and Telecommunications bureau kick start, Loxley was the only one able to adjudicate the deal and begin its business⁸.

Despite the early success of Loxley network, in 2004 North Korean authorities suddenly began to cut the communication network line in the whole country and started to confiscate handsets. The reason of such resolution was a huge explosion at Ryongchon Station in North Pyongyang Province near the border with the People's Republic of China. North Korean authorities used the excuse of the Ryongchon train accident to justify the imposition of the sudden ban and to smash the spreading of smuggled illegal devices along the northern border with China, telling the population that the explosion have been an assassination attempt of the leader Kim Jong Il triggered by a remotely controlled wireless device⁹. In 2003, Chinese mobile operator indeed began aggressively building towers along the North Korean border in order to serve Chinese businessmen and North Korean citizen alike. The notable increasing of illegal smuggled Chinese cellphones use outside of the control of the government of Pyongyang pushed the regime to react with the sudden ban.

After four years of denying the use of any kind of handsets, Pyongyang resumed the service in 2008. That was the year when the 3G¹⁰ service was launched under the name of Koryolink by CHEO Technology, a joint venture between the Egyptian telecommunication firm

⁸ Stacey Banks, North Korea Telecommunications: On Hold, fall 2005, pp. 91-92.

⁹ South Korean and U.S. intelligence believed that it was an accident between two trains carrying gasoline, possibly donated by China to alleviate the ongoing North Korean fuel shortage. It has been suggested that the cause of the accident may have been a miscommunication related to the changes in train timetables due to Kim Jong Il's itinerary to China. Hundreds had been killed and around 3000 had been injured during the disaster.

¹⁰ 3G, short for third generation, is the third generation of wireless mobile telecommunications technology. This is based on a set of standards used for mobile devices and mobile telecommunications use services and networks that comply with the International Mobile Telecommunications-2000 (IMT-2000) specifications by the International Telecommunication Union. 3G finds application in wireless voice telephony, mobile internet access, fixed wireless Internet access, video calls and mobile TV.

Orascom, that owned the 75 percent, and Korea Post and Telecommunication Corporations, that owned only the 25 percent. Despite its early life, Koryolink service entered in the North Korean market really quickly and this time with the W-CDMA technology that does not have any U.S. proprietary patent. During the first year, only 1,700 users purchased the service but the popularity had a fast increase reaching 91,000 at the end of 2009, one million subscribers in February 2012, over two million in May 2013¹¹ (*Figure 1.1*) and roughly 3 million in 2016. Koryolink network succeeded in serving almost 94 percent of the whole population even if only the 14 percent of the country was actually covered by communication signal. That's because the majority of the North Korean area is mountainous and sparsely populated. It was reported that Koryolink serviced managed to fully cover the Pyongyang capital city, other 14 main cities and 86 towns around the countryside by the third quarter of 2011¹². That was the real beginning of the mobile telecommunication system that still lives nowadays in North Korea.

¹¹ Source (*figure 1.1*): 38 north: A closer look at the explosion of cellphone subscribers in North Korea, Yonho Kim: <http://38north.org/2013/11/ykim112613/>(*Figure 1.1*).

¹² Yonho Kim, *Cellphones in North Korea*, 2014, US-Korea institute SAIS, pp. 11-12.

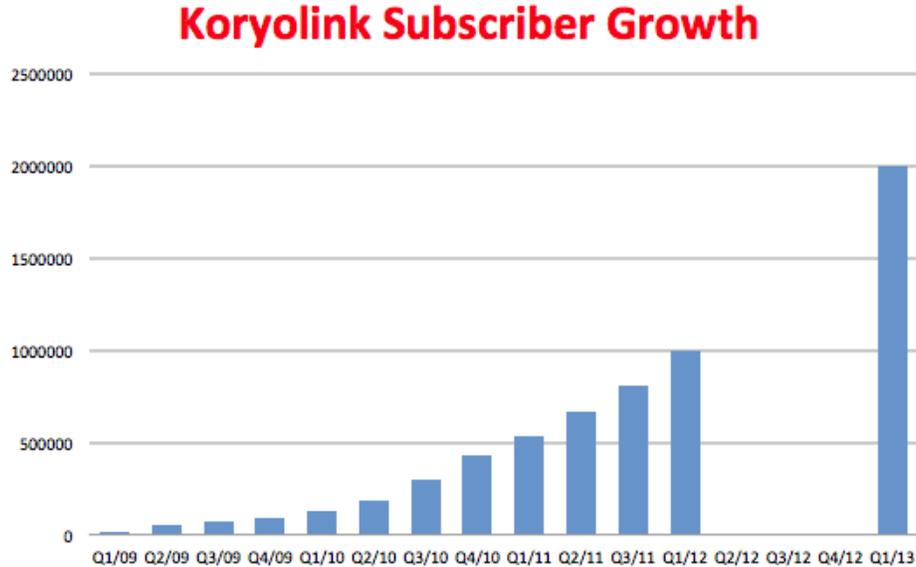


Figure 1.1: Koryolink subscriber growth by the years

The growth of this new network has an incredible progress, if we think that the totalitarian regime has relied heavily on isolating people from each other and control the spread of information as a measure to control the society. Naguib Sawiris, who was the time chairman of Orascom and still he is, proud of Koryolink’s success during an interview he stated:

“When we first acquired the license in North Korea, people thought the service will only be provided to a few privileged individuals. We are very proud today to witness our subscriber base in North Korea increasing at a growing rate, emphasizing the right of the North Korean citizens in DPRK to communicate.”¹³

¹³ Orascom Telecom Media & Tech Holding (OTMT), “Koryolink Reaches Two Million Subscribers,” Press release, May 28, 2013. Seen throughout NK News: <https://www.nknews.org/2013/05/koryolink-hits-2-million-subscribers/>

As Sawiris stated, the impact of the wireless communication was considerably strong. Undoubtedly, it was the first time that communication reached a reasonable amount of people, given the fact that a small percent of the meager 1 million landline phone network was accessible to North Korean costumers on a total of 25 million people¹⁴ and antennas for wireless handsets are way easier to install and they are not as pricey as years ago¹⁵. Around 2011, in Pyongyang almost the 60 percent of citizens aged 20-50 used cellphones regularly. Among those, youngsters between 20 and 30 years old considered cellphones as a necessary item to feel more cosmopolitan and eventually helps to get a girlfriend.¹⁶ It is also probable that such cases are quite common only where the usage of handset is more dense, for example in major cities or in the capital. Is not rare to find foreigners traveling in Pyongyang and other big cities saying that is common to spot mobile phone among students or workers. A friend of mine, that went on a visiting trip in North Korea during August 2016, said that is not so rare seeing people talking on the phone walking the streets and shops of Pyongyang. The group guide, which was a North Korean woman in her 40s, confessed that her cellphone was really important for her job, communicating the movement of the group of tourists with other guides¹⁷.

¹⁴ Alexandre Y. Mansourov, The Nautilus Institute: “*North Korea on the Cusp of Digital Transformation*”, November 2011, pp. 1.

¹⁵ Koryolink made a contract with Chinese company Huawei for the supply of mobile telecommunications antennas.

¹⁶ Conference about North Korean telecommunications held in John Hopkins School of Advanced International Studies: Cellphone in North Korea telecommunication revolution. 6:12 <https://www.youtube.com/watch?v=8bG6DfRwgrk>

¹⁷ A special thanks to Davide Ansalone who shared his experience with me.

Even though Koryolink, and therefore North Korean authorities, imposed restrictive policy towards eventual users, the popularity of cellphones increased anyway. As it happened for the first network, the 3G service launched in 2008 by Koryolink was restricted only to the upper social stratus like senior officials and their families and officially recognized traders. Even if it sounds bizarre, Party cadres and workers at state-run military factories were not able to purchase the service due to security issues. Another problem that eventual costumers had to face was the limitation of the supply of handsets, that therefore it was to be expected considering the scarce exchange sources of North Korea. Few wealthy or people with special connections could rely on second track sources to get a cellphone by paying an extra. In an interview a woman who defected from Hoeryong¹⁸ confessed that she obtained a cellphone device around 2009 only because she bribed officials, which was the only way she had because the network was not available for women. She also reported that at that time, the only group of costumers able to purchase the service were official of the Party and the military, as well as rich traders.¹⁹ Indeed, even if in later years the North Korean government adopted less restrict policies against the spreading of cellphones, the ability to afford such an expensive device completely depend on the amount of wealth a certain costumer personally had (with an exception for individual's security clearance problems). For those who are not able to purchase cellphone nor to subscribe for a contract because of their status in the society, there is a chance to get involved only by bribing officers²⁰. The latter, are military

¹⁸ Hoeryong is s city near the Chinese border in the northern east part of North Korea along the Tumen river. It is also the location of one of the prison camps reported by defectors. (camp n° 22)

¹⁹ Yonho Kim, *Cellphones in North Korea*, 2014, US-Korea institute SAIS, pp 13.

²⁰ Bribing play a big role into North Korean economy system. Corruption is so big and spread that even the government cannot control this phenomenon, embedded in every part of the society, from

cadres who accumulate wealth by accepting money under the table or exploiting their high position to their advantages. As we will see later in the present research, the phenomenon of unofficial markets will gradually increase people wealth especially in the capital and in big cities, helping the rising of a new class of people rich enough to afford the service. Among this new social group, wireless cellphones have become a status symbol and sign of prosperity, something to be proud of as well as a useful tool to make a better living. Traders engaging the market is an example. It has been reported that cellphones are a great way to exchange market information such as currency exchange rates or price of goods. Always carrying business between cities and rural areas, wireless service for some people began to be not only useful but kind of indispensable even in small villages where unofficial traders often deal. People living in rural areas and trading goods such as farm products or gold trading activities, stated that they can no longer imagine doing business without the commodity of wireless communication.²¹

Everything has been possible thanks to the ambitious and rather risky investment that an Egyptian company decided to make. But what are the reasons that led such a distant country tycoon to make those irrevocable decisions?

1.3. - Why Orascom?

The Orascom Group is an Egyptian conglomerate founded in the 1959 by Onsi Sawiris. His three sons run respectively the three main divisions: Orascom Telecommunications, Orascom

the bottom to the top. North Korea is ranked 175 out of 177 (as the maximum level) countries in corruption perceptions index.

²¹ Conference about North Korean telecommunications held in John Hopkins School of Advanced International Studies: Cellphones in North Korea telecommunications revolution, 12:05
<https://www.youtube.com/watch?v=8bG6DfRwgrk>

Construction, and Orascom Hotels and Development. The history of bilateral businesses between Sawiris and the Kim family started in 2007 following a 115 million U.S. dollars investment with Orascom Construction to refurbish the Sangwon Cement Plant, anticipating a building boom that would accompany a relaxation in diplomatic tensions between North Korea and other countries. The following year Kim Jong Il agreed to a deal to finish the iconic 105-story Ryugyong Hotel in Pyongyang, better known in the media as the “Hotel of Doom.”²²

The CEO of Orascom telecommunications, Naguib Sawiris, is well known for making money in difficult business climates such as Africa and Iraq²³, always searching for high-risk, high-reward opportunities. After a resounding failed business negotiation with Cuba and Burma, Sawiris wanted to plan a \$400 million deal with North Korea to provide the 3G service covering 94 percent of North Korean citizens. In exchange, to Orascom would be granted a four-year exclusive contract and 25-year license. Finally, in April 2008, Pyongyang announced that the existing telecommunication ban would be lifted in order to let the service run at full speed. In January 2010 Kim Jong Il, personally hosted Sawiris in Pyongyang and a video of the meeting has been transmitted even in the state TV channel.²⁴ (*Figure 1.2, 1.3*)

²² The story behind this hotel is quite interesting. Constructions began in 1987 and as of 2016 the building remains unopened and completely empty. The Ryugyong hotel was intended to be completed in June 1989, but due to its cost (2 percent of total North Korea’s GDP) and structural problems faced 16 years of inactivity. Work on the building started again in 2008 with the help of Orascom Group.

²³ The Egyptian tycoon Naguib Sawiris has ground billion dollars thanks to the construction of a true empire in the telecommunications sector which has operated in authoritarian countries, from Zimbabwe to Pakistan. In Iraq, he earned something like the 10.000 percent of the initial investment.

²⁴ Here’s the TV state announcement of the meeting: the video is in Korean: 록화보도 위대한 령도자 김정일동지께서 에집트 오라스콤전기통신회사 리사장을 접견하시였다
<https://www.youtube.com/watch?v=MV5ZYUDnYTE>



Figure 1.2: January 2010, Kim Jong Il and Sawiris holding hands. On the left the Leader's brother-in-law Jang Song Thaek



Figure 1.3: Kim and Sawiris at the table of deals

It is pretty unusual seeing Kim Jong Il personally receiving a foreign visitor, and is even more rare to find a photo of him holding hands with someone. Kim Jong Il was also the most mysterious and closed leader, in 17 years of dictatorship he never held a single public speech. Now the question is: how could an Egyptian entrepreneur enter into the good graces of an unattainable and autocratic dictator family as that of the Kim?

North Korea and Egypt are special allies and their long relationship started long time ago, around the late 70s. Whereas the U.S. government was allocating aid on Egypt²⁵ after the peace treaty with Israel signed between Sadat and Begin in 1979, Egypt and North Korea were starting to form friendly link that still exist nowadays. Especially the relations strengthen up when Kim Jong Il started to deal with Hosni Mubarak.

²⁵ This is an interesting fact, U.S. and North Korea were together at the same time dealing with Egypt. U.S. government was giving aid to Egypt who spent money to buy soviet type arms from North Korea.

Before rising to power in 1981, he was already commanding the Egyptian air force ready to face the fourth Mideast war with Israel in 1973. Mubarak managed to convince Korean ally to send expert pilots to train Egyptian fighters. In addition to this, when he finally became president, began to import Soviet-era ballistic missiles from Pyongyang and Kim technicians over the years managed to train Egyptian military industry to assemble rockets without any external help. Between 1983 and 1990 the North Korean leader Kim Il Sung hosted the Egyptian president, sign of the brotherhood that was creating between the two dictators.²⁶ Years of cooperation in weapon deals, training for Egyptian pilots and the investment on ballistic missiles factories were the strong foundations that characterized the bilateral relationship between the two countries. The North Korean embassy based in Cairo was even a further link for regional arms sales that permits the Kim family to expand their network. The Egyptian hereditary succession too its was believed that could come from Kim Jong Il idea.

The deal with Orascom, then, represents long-time cultural and business ties to North Korea. Furthermore, part of the cement deal that we mentioned before, included using North Korean low salary workers in Arab countries²⁷, can be considered as s potential bargain chips

²⁶ North Korea and Egypt: friends with benefits, Donald Kirk. <http://www.pri.org/stories/2011-02-08/north-korea-and-egypt-friends-benefits>

²⁷ North Korean's foreign currency hunger also passes through the exportation of slave. See interesting videos about the topic on you tube such as : North Korean Labor Camps - VICE NEWS – Part 1 of 7 <https://www.youtube.com/watch?v=awQDL0nkdI> or Cash for Kim: North Korean forced laborers in Poland <https://www.youtube.com/watch?v=SPjKs8NuY4s>. Another big network of exploiting people to make money abroad is the trafficking of women for prostitution purposes in China.

in the eventuality that North Korean authorities jeopardize Orascom's investment with another ban on telecommunication network.²⁸

With that said, it's obvious assessing that the Kim family and Orascom share a strong relationship with solid foundations, giving others competitor, interested in the North Korea's Telecommunication market, no chances whatsoever to penetrate the business. Orascom, also through other previous "bad" investments²⁹, reinforced his position and took the lead on what it was the biggest money investment did on the North Korean ground. That leads us to ask ourselves another question: given the high level of risk, why did Orascom decide to enter North Korean market in the first place with another big investment?

First, we already know that Orascom Telecom's CEO reputation is known for making profits from risky markets where other providers are fear to tread. Chairman Sawiris said that the North Korean venture was "in line with Orascom's strategy to penetrate countries with high population and low penetration by providing the first mobile telephony services"³⁰. Indeed, in the case of North Korea the population was around 25 million and the penetration of mobile service before Orascom's deal was exactly equal to zero. Is pretty easy then to imagine the potential of an investment of this proportion, in a land where anyone else can make competitiveness and be a real rival in the business of telecommunications. In fact, profits did

²⁸ Joint U.S. Korea Academic studies, Emerging voices vol. 22, Peter Nesbitt, 2011

²⁹ With "bad" investment I actually mean real donations. We have to remember that Orascom's investment in completing the Ryugyong Hotel's facade did not generate any profit. Orascom invested more than \$180 million for the immense restoration of the building and in the summer 2012 Sawiris made his plan public to relocate the Koryolink headquarter in the hotel. However, the monster pyramid hotel remains to date the tallest unoccupied building in the world. Although Orascom's investment in the Ryugyong hotel is compensated by mining rights, raw materials, commodities, and commodity exchanges, it is not clear whether the deal was fair for Orascom or even profitable, given the international sanctions against North Korea

³⁰ North Korean Economy Watch, Orascom Telecom Receives First Mobile License in DPRK, Werner, 2008: <http://www.nkeconwatch.com/2008/01/31/orascom-telecom-receives-first-mobile-licensen-dprk/>

not wait to emerge, and with its record of subscriber growth, Koryolink has shown a steady increase in revenues. There's no comparison that can be made between the growth of Koryolink and other subsidiaries of Orascom. The interesting data I found about Orascom Telecom Holding revenue of the first quarter of the 2011 are astonishing.³¹ (Figure 1.4) Koryolink had a sudden increase of profits for about 185 percent in just one year, proving that Sawiris view of investment in North Korea was promising for the future. Other subsidiaries did not even come close to the growth of Koryolink, and this trend turned out to be not only temporary but also reflected in following years.

Subsidiary	Represented 31 March. 2010 ² US\$ (000)	31 March 2011 US\$ (000)	Inc/ (dec)
<u>GSM</u>			
Djezzy (Algeria)	412,524	438,585	6.3%
Mobilink (Pakistan)	272,262	275,383	1.1%
banglalink (Bangladesh)	99,653	126,210	26.6%
Telecel Globe (Africa)	24,172	24,646	2.0%
koryolink (North Korea)	9,029	25,761	185.3%
Total GSM	817,640	890,585	8.9%

Figure 1.4: Consolidated revenues of Orascom Telecom's subsidiaries between 31 March 2010 and 31 March 2011

³¹ Find the original PDF in the following link: http://www.rns-pdf.londonstockexchange.com/rns/8801G_-2011-5-18.pdf

In less than 2 years after its launch, in the second quarter of 2010 Koryolink revenues reached \$10 million and in the third quarter of 2013 gained more than \$80 million. (*Figure 1.5*)



Figure 1.5: The skyrocketing revenues of Koryolink network

As we can see in the graph above (*Figure 1.5*) some data are missing. In fact, it's impossible to find any related data from Orascom about Koryolink subsidiary company revenues of the second half of 2012 and from 2014 to present day.³² Even though we don't have firm evidence, we can suppose that the trend will follow this rising, giving the fact that the

³² In November 2011 Orascom Telecom was split into Orascom Telecom and Orascom Telecom Media and Technology Holding (OTMT), this because one year before, WIND TELECOM, the ally company of Orascom Telecom, announced that it had signed an agreement with the Russian VimpelCom to combine the two groups, creating one of the largest mobile telecommunication carrier by subscribers in the world. When the 75 percent of the Koryolink ownership was transferred from Orascom Telecom to OTMT revenues data and other related information became more difficult to find. In the second page of the last revenue PDF emitted from Orascom Telecom (note n°25) the executive CEO reported about the union with its parent companies. Even if the name of the Egyptian company running Koryolink changed in OTMT, to make it less confusing I will continue to call it Orascom for the rest of the elaborate.

penetration of mobile phone in the population was still only 6.5 percent in 2014³³ and Koryolink network as we underlined before manage to reach 94 percent of the North Korean population. The potential of the investment can become even bigger in future years. According to some expert in the sector, the number of subscribers can even reach 5 million units, which is almost one fifth of the whole population, calculating at least one cellphone each household.³⁴ However, this rosy outlook depends on how quickly Koryolink service will be rolled out to lower income customer segments, particularly the rural poor. Koryolink's operational performance has already reflected this challenge. In fact, even if the number of subscriber is rising, Koryolink saw the revenue from each subscriber, or average revenue per unit (ARPU), fall from the 25s to the 14s in just one year³⁵ (*Figure 1.6*), and remain in the low 10s by the end of 2011, as it introduced new tariffs and products designed to supply the needs of lower-end subscriber segments. The new marketing strategy led to an increase in sales outside Pyongyang that reached nearly 50 percent in September 2010. Koryolink admitted that the drops in ARPU typically take place when enlarging the consumer base through the expansion to lower-end market segments.³⁶

³³ CIA world Factbook accessed in October 2016:

<http://www.indexmundi.com/g/r.aspx?t=0&v=4010&l=en>

³⁴ Yonho Kim, *Cellphones in North Korea*, 2014, US-Korea institute SAIS, pp. 46.

³⁵ Annual report, Orascom Telecom. Page 26 of this document:

<http://www.gtelecom.com/documents/10157/24707/annual+report+2010.pdf>

³⁶ Ibid. Also referred to International Telecommunication Union (ITU), *Mobile Cellular Subscription 2000-2012*. North Korea is the 57th voice of this document: http://www.itu.int/en/ITU-D/Statistics/Documents/statistics/2013/Mobile_cellular_2000-2012.xls.

Operational Data				
	December 2009	September 2010	December 2010	Inc/(Dec) Dec. 2010 vs. Dec. 2009
Operational Data				
Subscribers	91,704	301,199	431,919	n.m.
Market Share	100.0%	100.0%	100.0%	0%
ARPU (US\$) (3 months)*	24.5	15.2	14.6	(40.4%)
MOU (YTD)	239	320	316	32.4%

* Based on the official exchange rate between the US\$ and the North Korean Won (KPW) of KPW 135 as sourced by Bloomberg.

Figure 1.6: Average Revenue Per Unit index (ARPU)

But as we may imagine the biggest problem to face in order to reach lower class segments are not only the high cost of tariffs plans, but rather the immense cost of handsets. Even though some lower income subscribers manage to find a way to obtain a handset, this may not be a sustainable trend, unless the North Korean government change its pricing policies to accommodate more buyers.

Regarding this issue, Orascom has shown some dissatisfaction with the North Korean government, as its business expands in the country. In fact, Orascom's exclusive right were not applied to the sale of handsets, which could have generated hundreds of millions of dollars in profit.

The decisions of the regime then, are closely linked to the future and the success of Orascom in North Korea, and despite is owning a majority stake (75 percent of Koryolink) Sawiri's company has to deal with one of the most tough dictatorship in the world, which has the last word in decision making (at least on the Korean territory). Indeed, beyond minor trouble regarding ways to improve profits of Koryolink, Sawiris now has to deal with the dark side of his high-risk investment mania, a problem that could mark the end of this long partnership with the Kim family: get his profits out of North Korea.

1.3.1. - A silent divorce?

The first official sign of tightening of the relation between the Egyptian company and the North Korean government, came in 2015. Sawiris' Orascom appeared to be finally confronting the issue that it has always been the cause of concern of all foreign companies seeking business in the Kim's country: the real value of the North Korean currency. This issue is also one of the worst disease that afflicts Kim's dictatorship. North Korean government is indeed completely dependent from the foreign currency in the country, brought in from all over the world, from U.S. dollars to Japanese Yen. High ranking officials defectors says that 3 up to 4 billion dollars are sitting in underground vault in North Korea³⁷. This is one of the reason why the regime has managed to stay in power this long. Indeed, the value of the North Korean Won is recognized only in the territory of the state and near the border where Chinese smugglers use the currency for the Korean black market business, while among the

³⁷ About this topic, money & power in North Korea, I highly recommend to watch this very interesting documentary: Money & Power in North Korea. The hidden economy documentary <https://www.youtube.com/watch?v=pKYBu9xlfac>

international community is valued as wastepaper³⁸. As a matter of facts, the only way Kim has to be able to buy goods in the international market is by using foreign currency, gold or other commodity exchange. This is why Orascom is concerned about its assets on the Korean sole. First, to be able to get back money in Egypt Orascom needs to have the authorization of the Korean government, and second, it has to try to exchange the money at a reasonable exchange rate. At the end of March 2015 Orascom said that it was waiting before the compilation of its latest quarterly financial report while it attempted to figure out with North Korean competent authorities the real value of its cash held in the country. The central issue was indeed the exchange rate of the won and all the rules on money transfers. Orascom had something like 767 million U.S. dollars in assets in North Korea at the end of 2014 and the majority of the latter, about 585 million, was being held in cash (*Figure 1.7*).³⁹

³⁸ See the documentary on footnote 37

³⁹ The PDF of the last Orascom Consolidated Financial Statement of 2014 released on April 2, 2015 (*Figure 1.7*) is available on the official website here:
http://otmt.com/Files/Uploads/FinancialResults2/21_Consolidated%20Financial%20Statements%20December%2031st,%202014.PDF



Saleh, Barsoum & Abdel Aziz

95c Merghany Street
Heliopolis,
Cairo, 11341
Egypt

Tel: +20 (2) 24 619 909
Fax: +20 (2) 24 619 904
www.deloitte.com

Other matters

- We draw attention to note (4) of the accompanying consolidated financial statements which describes in more details that the net assets of Koryolink (subsidiary Company) in North Korea equivalent to US\$ 767 million of the Group's consolidated net assets amounting to US\$ 1,101 million as of December 31, 2014. Koryolink assets also include cash balances denominated in North Korean currency equivalent to US\$ 585 million and are reported within non-current financial assets in the consolidated financial statements. The Group's management is currently undergoing discussions with the Korean party regarding the distribution of Koryolink's retained earnings and the rate to exchange the cash balances into foreign currencies and to distribute dividends, given the current circumstances and restrictions imposed on cash transfers from the local currency into foreign currencies and on exchange rates in North Korea. In the view of the management the indications of these discussions are positive and indicate the use of the official exchange rates announced by the Central Bank of North Korea.

Figure 1.7: From Orascom's quarterly financial report of 2014. Released on 2nd April 2015

As we can verify in the report above, Orascom has a considerable amount of cash, but again, it is not actually held in foreign U.S. currency. If the Egyptian company calculate the digit using the official government exchange rate (of about 130 North Korean Won to the U.S. dollar at the time of writing) the result would be something around 76 billion North Korean won. But in the black market, the exchange rate values the won much more cheaply. Even though rates in the market are subject to large and sudden fluctuation and is quite impossible to define it precisely, around 8000 won are required to buy a single dollar, destroying the value of Orascom cash sitting in Pyongyang of about 9.5 million U.S. dollars (and not 585 million as stated in the financial report). In their official report, Egyptians economist are really optimistic,

but when it comes to international affairs is difficult that the North Korean government use the official rate. Since the loss would be too large and unacceptable, it is therefore totally understandable the level of caution with which Sawiri's men led the negotiations at this point.

We also have to mention that international sanctions against North Korea, to impede the nuclear and missile proliferation activities, had a significant impact on Orascom business by restricting the import and export materials needed to maintain and develop the Koryolink network. Sanctions were designed to freeze North Korea foreign bank account and undermine financial transactions weakening the potential value of the Korean currency⁴⁰ and therefore also the ability of Kim to doing business with his counterparts. If international sanctions are not going to stop in the future, Sawiris' business could reach a point of stall without any chance to recover the damage dealt. Indeed, North Korea government at that time announced a plan to attempt again to launch satellites, which is without any doubt negatively seen by the United Nations.⁴¹ If all these stumbling blocks weren't enough to worry the Egyptian company about the ongoing negotiations with Kim, at the end of June 2015 Orascom made an interesting discover that amplified its concerns: The North Korean government is now running a rival cellular network.⁴²

⁴⁰ North Korea is the most sanctioned country on the planet, and U.S. has one of the biggest history of sanctions programs. Here's one example dated 1 August, 2016 from the Department of the Treasury of United States: <https://www.treasury.gov/resource-center/sanctions/Programs/Documents/nkorea.pdf>

⁴¹ An interesting CNN article about North Korea's space race: North Korea's space race: Satellite launch imminent, official says. Will Ripley and Tim Schwarz, CNN 2016
<http://edition.cnn.com/2015/09/23/asia/north-korea-space-center-ripley-schwarz/>

⁴² Posted by Martyn Williams on the website northkoreatech.org : New cellular carrier is run by local ISP, say source <http://www.northkoreatech.org/2015/07/08/new-cellular-carrier-is-run-by-local-isp-says-source/>

This clamorous revelation came as a surprise and it has been mentioned in the Orascom's quarterly financial report dated 23 of June 2015, and as we can see in the (Figure 1.8), the Egyptian company was also blaming the problem caused by insistent impediments of international sanctions mining the financial operations of the subsidiary.⁴³ Regarding the new cellular carrier wholly owned by the North Korea government to compete with Koryolink, is apparently run by a local Internet service provider situated in the city of Pyongyang. Is called Byeol (별), which stands for Star in Korean language, and is providing the population with a wireless service. While Koryolink target both citizen and foreigner, Star offers only land Internet line connections to foreigner in Pyongyang, at a rate of 660 dollars for a 1Mbps line with unlimited data, but not wireless service⁴⁴. North Korean authorities, as always do, were not clear about the reason why they started a new competitor network in the country. As we can see in the final part of the introduction of the financial report (*Figure 1.8*) Orascom said that "management is looking for solutions to the obstacles and its effect through continuing discussions with the Korean party including merging the subsidiary Koryolink with the second local telecom operator wholly owned by the North Korean government". A fusion of the two telephone carriers under the same name seems a distant solution though, and even more difficult is to imagine an eventual collaboration with Orascom. Indeed, it would not explain the reason why Pyongyang's authorities would have managed to develop such new network in total secrecy. Maybe, the North Korean government final goal is to own a fully working

⁴³ The PDF is available from the webpage page here (page 2,3) : http://otmt.com/Files/Uploads/FinancialResults2/22_IFRS%20Consolidated%20Financial%20Statements%20for%20the%20period%20ended%20March%2031st.%202015.PDF

⁴⁴ Posted by Martyn Williams on the website northkoreatech.org : New cellular carrier is run by local ISP, say source <http://www.northkoreatech.org/2015/07/08/new-cellular-carrier-is-run-by-local-isp-says-source/>

national network (like Koryolink) without any cooperation with a foreign company. If this supposition is true would certainly sign the end of Egyptian business in the Kim's country.

The subsidiary is facing financial and operational obstacles due to the following reasons; firstly, because of the international sanctions imposed on financial transactions and transfers, the import and export of goods and services, including goods and services required to operate, maintain and develop mobile networks which has resulted, lately, in increasing severance of long term restrictions on the ability of the subsidiary to transfer realized profits to the Group, secondly; the absence of a free-floating currency exchange market in North Korea, whereas the Group's management has no exchange rate available other than the official exchange rate announced by the Central Bank of North Korea which is being used by the Group's management in translating the subsidiary's financial statements, however, the currency exchange is not available at such official rates unless a prior approval from the authorities is obtained, thirdly; the North Korean Government, a shareholder in the subsidiary, has launched a competing telecom operator wholly owned by the Government. In the view of management the existence of such obstacles and restrictions did not affect the Group's ability to control the subsidiary's activities, in addition management is looking for solutions to the obstacles and its effect through continuing discussions with the Korean party including merging the subsidiary "Koryolink" with the second local telecom operator, wholly owned by the North Korean Government. According to the Group's management there is an initial consent from the Korean party regarding merger. This may lead to the presence of possible future solutions for some of the obstacles according the management's estimates.

Figure 1.8: A portion of Orascom's financial report details problems in North Korea, 23th June 2015

Unfortunately for Sawiris the time goes by without good news from his Korean counterpart and Orascom's efforts to get its profit out form Pyongyang have been unsuccessful. Even with its option limited, Orascom entered merger talks to combine Koryolink with the new carrier, the North Korean government has agreed to move in principle but so far nothing happened. The hot Egyptian summer of 2015 passed really slowly for Sawiris and this long, silent and anxious waiting led to a dramatic statement that can be found on Orascom's financial report⁴⁵

⁴⁵ The original PDF is available on the official webpage here (page 2): http://otmt.com/Files/Uploads/FinancialResults/45_Stand-alone%20financial%20statements%20for%20the%20period%20ended%20September%2030th,%202015%20E.PDF

(Figure 1.9) of the 16 November of the same year: “In the group management’s view, control over Koryolink’s activities was lost”. At this point Sawiris could do nothing but hoping that Korean authorities explained clearly their intention about the future of the collaboration. In a Statement Sawiris said:

We are very proud of the success of our operation ‘Koryolink’, we have around 3 million people today carrying our phones in the DPRK. We are still hopeful that we will be able to resolve all pending issues to continue this successful journey.⁴⁶

Basis for Qualified Conclusion

As disclosed in more details in note (11) to the condensed separate interim financial statements, the company has modified the accounting treatment of the investment in CHEO Technology JV (Koryolink) to be investment in associate instead of investment in subsidiaries. In the group management’s view, the control over the subsidiary’s activities was lost, due to the increase of the severity of financial and operational obstacles and the futility of the negotiation conducted by the management of the Group and the Korean side to the expected results that would remove some of such obstacles according to management estimates. Thus the investment in CHEO Technology JV (Koryolink) was measured at cost which represented the value that expected to be recovered by the company from its investments in the future.

In light of the aforementioned we were not able to verify the recoverable amount at the balance sheet date and we were not able to perform other alternative procedures with this respect.

Figure 1.9: A portion of Orascom’s financial report with findings of the effective loss of the control on Koryolink Subsidiary, 16 November 2015

Then, since Orascom’s control over Koryolink is lost, is this the very end to the long and friendly relationship between the Egyptian tycoon and the Kim family? Well, as we may

⁴⁶ Martyn Williams, How a telecom investment in North Korea went horribly wrong, on networkworld.com: <http://www.networkworld.com/article/3006273/telecommunication/how-a-telecom-investment-in-north-korea-went-horribly-wrong.html>

imagine, the most plausible reason why North Korean played the game of silence about this issue is because it cannot afford to pay back the amount of money Orascom is requesting either it doesn't want to. On the other hand, Sawiris mania of risky investment led him to try to play his game in an environment where anyone else even think about doing business in, maybe driven by the confidence and trust he built with the Kim's family over time, maybe galvanized by the early success of his creation.

In the time when I'm writing this paper neither news on opening of the North Korean government to the Egyptian company, neither further Orascom's statements about the financial issue resolution can be found on the web, leading to the conclusion that Sawiris telecom investment in North Korea just went horribly wrong.

1.4. - Domestic cellphone: Get involved!

As we have investigated the history and analyzed the structure of the company behind the mobile network in North Korea, we can dive more deeply to describe how it actually works and how North Koreans are able to purchase and use this service in daily life.

As we can imagine the bureaucracy to get involved in the network is really different from other countries and the entire system is tightly controlled and monitored. In the previous part of this elaborate we already said that at the beginning, when the service actually become operative, only high officials and party cadres were able to subscribe. But for an instance lets imagine an average Pyongyang citizen that saved enough money to be able to afford a handset and wants to get a Koryolink SIM card.

The whole process behind the simple act of purchasing of a cellphone it has been extremely complicated since the beginning of the introduction of the mobile network and may differ a little according to the city in which is performed. As the first step, potential customers are supposed to visit the Communication Superintendent Bureau to get a certain application form by issuing a payment in Chinese yuan or U.S. Dollars (100 yuan or 16 dollars).⁴⁷ It is also possible to obtain this application at the Ministry of Post and Telecommunication or in the Communication Technology Management Office (CTMO) which is usually collocated only in the capital or in big cities. In any case, if the applicant is not a party cadre neither have special connection in the reference office, the “processing fee” it has to be paid categorically in foreign currency.

The second step is characterized by the obtaining of another approval document from the police and municipal office.⁴⁸ If the eventual user is employed, the form it has to be further registered with an official stamp from workplace or municipal administrative office. In order to do this, the applicant have to explain to the officer where he or she has managed to acquire the amount of money needed and the purpose of such purchase. In the case the applicants wants to skip this step or conceal some confidential information a bribe is likely to be paid to the officer or their superiors.⁴⁹ A defector interviewed by Daily NK explained that:

⁴⁷ Part 1 of the Rimjin-gang report on Digital and IT Conditions in North Korea, issued by Asiapress. Editor Ishimaru Jiro, 2012. Relevant information about application to purchase cellphones at page 4 of this pdf available on asiapress.org: http://www.asiapress.org/rimjin-gang/pdf/PART1_North_Korea_IT_report_Rimjin-gang.pdf

⁴⁸ Ibid. pp. 4.

⁴⁹ Yonho Kim, *Cellphones in North Korea*, 2014, US-Korea institute SAIS, pp. 16.

“one stick of cigarettes would not be enough for that, so you’d need to take a bottle of decent alcohol, too. The applicant who goes there empty handed gets caught up in this and that condition, and does not get approved. And because it is very expensive to get just one stamp, anyone who struggle to make a living can’t even imagine it.”⁵⁰

Bribing is a widely-spread phenomenon around the country and especially among people employed in the state, officers are always looking to another source to improve their small salary. They find any excuse to gain money, for example they ask for an extra to speed up the whole time-consuming application procedures.

Indeed, when the second step is completed and the applicant received all the documentation needed, it is possible to finally go to the mobile phone store to get one’s handset. To get all the identification documents confirmed the eventual user have to wait a period of two weeks up to one month before the handset can be finally purchased⁵¹. In the early years of the introduction of Koryolink another problem that applicants had to face was the limited supply of handsets, and to obtain a cellphone in a reasonable period of time an extra 50 dollars “expediting fee” was likely to be paid.⁵²

As we just noticed, the adventure that North Koreans have to go through in order to completing all the officially necessary paperwork is extremely long and a little bit tricky. It is easy to assume, therefore, that due to this slow procedures, an unofficial fast track service

⁵⁰ The full article is available on the website Daily NK, Cellphones still a rich man’s game, Kang Mi Jin, 2014: <http://www.dailynk.com/english/read.php?num=11930&catald=nk01500>

⁵¹ Part 1 of the Rimjin-gang report on Digital and IT Conditions in North Korea, issued by Asiapress. Editor Ishimaru Jiro, pp. 6.

⁵² Yonho Kim, *Cellphones in North Korea*, 2014, US-Korea institute SAIS, pp. 16.

offered by “fixers”⁵³, who are usually close related to officials, started to emerge. A defector interviewed by Amnesty International pointed out:

“Officially it takes six to eight month to get a mobile phone, I didn’t want to wait, so I just bought it off unofficial channels. Originally it would cost 150 U.S. dollars, but I paid twice as much. I did that because official channels were complicated, and there was a lot of paperwork. It was also necessary to visit government and security departments.”⁵⁴

As the defector said, this method might be more expensive, however, a large number of defectors who purchased a North Korean mobile phone confessed they went through such fast tracks.

Now, the question arises: how do “fixers” manage to get a reasonable number of SIM cards and devices for sale (in the black market) despite the terrible and long procedure that must be made to even get just one phone? And in order to do that, how do they get around the law that says individuals can only get one license each? The process is quite simple and straightforward. They basically try to get large numbers of mobile licenses first by offering a small gift of cash or food to poor people living in rural areas, asking them for their personal information. Intermediaries then uses this information to register the telephone at the reference office. Through this method, they take possession of third parties personal details and phone license and they resell it with handsets at a higher price to others who might

⁵³ Fixers is just the name used by several scholars interested in the topic and gave to people and traders trafficking in the black market. Fixers are often related to officials of the party.

⁵⁴ Amnesty International, Connection Denied, March 2016, pp. 28.

otherwise have to wait for months to obtain a mobile phone. This illegal way to get cellphones started to become more common as the demand of handset raised quickly among people. According to defectors from Pyongyang deregulations of this kind are likely to happen even in the capital, some applicants have been able to obtain both cellphones and numbers on the same day.⁵⁵ Although this kind of unofficial activities could be punishable by the law, state authorities seemingly rarely intervene due to the close relationship between these fixers and officials. In addition to this, a defector reported that the government allocates a certain quota to the “mobile phone business people”, and ordinary people are not able to access it:

“Most of the business people are the wives of the member of the Worker Party, wives of the police or the State Security Department officials. They sell the quota out and make money. The “mobile phone business people” told me about this quota. They told me that each city, province is allocated a certain number of phone subscriptions given a certain period of time.”⁵⁶

It is noteworthy that defectors who went through these methods to get a mobile phone reported they paid for their handsets using foreign exchange, like Chinese yuan or U.S. dollars. This business is possibly one of the way for the North Korean state to collect foreign currency, thereby preventing some of the individual accumulation of foreign currency savings as gained through the booming black market trade. This is facilitated by ensuring that sales of handsets are carried out by a group of “fixers” who are closely related to officials which leads

⁵⁵ Yonho Kim, *Cellphones in North Korea*, 2014, US-Korea institute SAIS, pp. 16.

⁵⁶ This defector, a woman in her 40s who left North Korea in 2014, was interviewed by Amnesty International in Seoul, on 19 May 2015. Source: Connection Denied, March 2016.

us to understand the reason why the government does not intervene to suppress this underground businesses.

1.5. - Rate plans and top-up cards

In this part I will mention prices of rate plans in North Korea. Since talking about prices in the North is quite controversy for various reasons, before starting it is appropriate to mention again the various exchange rates of the North Korean currency. At the time of writing the official exchange rate given by the government is set around 130 won per dollar, however, in the black market to buy a single dollar around 5,000 to 8,000 won are needed⁵⁷. The difference is substantial for locals but in any case, does not afflict foreigners (tourists, diplomats, traders, etc.) since they are not supposed to use the North Korean currency in the country but only euros, dollars or other foreign money. Indeed, for North Koreans it's a crime to give foreigners local currency but sometimes they will change it under the table against strong currencies like Chinese renminbi U.S. dollars or euros.⁵⁸

As we already seen, North Korea has now two major network providers and most likely nowadays the process to get a Koryolink SIM card is faster and less elaborate than before, considering the government trend to lower the price of subscriptions and handsets to attract more and more costumers.⁵⁹ For the latter reason though, as we have seen in the previous

⁵⁷ See the second chapter of this work at 2.4. "Salaries in North Korea?"

⁵⁸ A special thanks to my friend Diego Bouzo Schneider, who shared with me his experience in North Korea. He went in North Korea in the summer of 2011, making him one of the last foreign visitors in the country during the Kim Jong Il era.

⁵⁹ In the late 2010, Koryolink introduced new tariffs and products that were specifically designed to cater to the needs of lower-end subscriber segments. In February 2011, with the objective of

part, Koryolink prices of rate plans changed very often and testimonies from defectors coming from different cities are sometimes contradicting. As an example, an interviewed defector from Hoeryong said that a monthly telephone call service was something like 12,000 won in 2009, when prices were really high. In later years, defectors from other major towns paid around 3,000 won every three months.⁶⁰ In first years of Koryolink subscribers growth, rate plans also varied based on the type of handsets the subscriber purchased making reports on Koryolink rate plans price even more conflicting and difficult to verify.

The average mobile phone rate plan give the costumer 200 minutes and 20 text messages every month according to the majority of defectors testimonies. If the costumer exceeds those 200 minutes, the phone get disconnected from the line and he or she has to extend the call time purchasing a pre-paid card so called top-up card.⁶¹

There are different kinds of this cards available in different amount of additional minutes and their price may vary depends on when and where they are purchased. According to defectors top-up cards are really expensive, and not many North Koreans can afford them considering the fact that the possession of foreign currency is required in order to buy one. Ironically enough, these pre-paid cards are so expensive that if one needs to call more than 200 minutes per month is more convenient to buy two phones with the standard rate plans instead topping up one's phone for extra minutes.⁶² North Koreans that were doing business

maximizing foreign currency revenues, Koryolink introduced "Euro Pack" bundles, which offered incentives of free off-peak calls and value-added services for paying in euros.

⁶⁰ Defectors were interviewed by US-Korea institute SAIS, and he reported testimonials in: *Cellphones in North Korea*, 2014.

⁶¹ Yonho Kim, *Cellphones in North Korea*, 2014, US-Korea institute SAIS, pp. 16.

⁶² Conference about North Korean telecommunications held in John Hopkins School of Advanced International Studies: Cellphones in North Korea telecommunication revolution <https://www.youtube.com/watch?v=8bG6DfRwgrk>

with their phones confirmed that contrarily to their expectations is cheaper working with more devices at the same time acquired illegally.⁶³ This is one of the method used in order to save as much as possible and to be able to do business in North Korean market trade. They also said that most of average users made every effort to use their phone sparingly, making their calls as short as possible, so they would not have to purchase a top-up card. Things change a little if we analyzed higher society ranks. It is interesting that, as certainly happen in other fields too, North Korean officials do not hesitate to assert their position and take advantages to make their subordinates into charging their bosses' phones with top-up cards for free. At NewFocus International website, a defector reported that officials are commonly say comments in front of their subordinate like "It's hard to make decent phone calls, I really need a top-up". In this way, they are tempted to buy top-up cards for their superior with their own money to have as an exchange a better treatment, at the price of being unable to buy extra minutes for one's device. This is another example of bribery in North Korea that effectively came into existence thanks to the introduction of mobile phones.⁶⁴ While superior officials are able to talking on the phone for a quite long time showing off their wealth, subordinates and other people always try to get conversation as short as possible to quickly hang up. As we have seen, having a mobile phone in North Korea is a privilege for few lucky, but in terms of allocation of call time the difference between poor and rich is even bigger.

Beside telephone calls and messages service it is appropriate to mention about internet traffic and data rate plans. Although we already analyzed the penetration of Koryolink 3G

⁶³ We have to remember that one can subscribe to Koryolink network only once, and in order to make another subscription for a second phone has to use a false name or borrow the name from someone else.

⁶⁴ NF New Focus, Topping-up a North Korean cellphone, 2013. Original article here: <http://newfocusintl.com/north-korean-cell-phone/>

service, it's obvious but at the same time necessary to remember that the North Korean internet is actually, to all intents and purposes, an intranet without the possibility to receive nor send any data abroad⁶⁵. During my research, I ended up browsing some Facebook pages related to tourists and photographers traveling to North Korea. Looking for data and useful images I came across an interesting page called DPRK 360 where I found a picture of a Koryolink brochure uploaded on the 8 October 2016 (*Figure 1.10*). In the comments below the author was asking for someone to translate it, and without any further hesitations I decided to do it.⁶⁶ Besides giving us a perspective of how to connect to the domestic 3G service, this voucher is really recent and as a result helpful in order to figure out the actual price of the Koryolink service in North Korea.

⁶⁵ The World Wide Web without restrictions is available only to foreigners who are traveling in North Korea and to some government officials working as diplomats or university professors. Koryolink antennas, indeed, are totally capable to connect to the international line, but Koryolink SIM cards for North Koreans can only have access to the domestic intranet.

⁶⁶ At the end of this elaborate is possible to find my translation in English of the brochure (appendix 1).

different kind of plans the new customer can choose from. It's noteworthy that this table is divided in two parts, payments with local currency and payment with foreign currency. Some scholars think that Koryolink service was available only by using foreign exchange in order to increment the government savings of hard currency, but this brochure is showing that is also possible to get involved using only Korean won too. It also shows that user who decide to choose the local currency payment method have to pay a quite high fee every quarter of a year⁶⁸, but it's very likely that even the foreign currency payment method works in the same way (even if is not written). The system is quite simple, once the user purchase his/her own Koryolink SIM card, it is necessary to put credit in it, because in order to get the access to Koryolink services is mandatory to pay in advance. The first two plans (local currency) provide the user with a scarce amount of available data, about 100MB usable within one month. The remaining 3 plans (foreign currency) have higher subscription fees, higher monthly fees but overall, they provide the user with a reasonable amount of usable data per month, up to 5GB. When the initial amount of data is completely over, for every fixed unit of KB used in addition, the service will charge the corresponding cost decreasing the user credit from the SIM card. In the case in which the SIM card runs completely out of credit the disconnection from the network is likely to happen. Customers are also being able to check their remaining balance on the SIM card by typing a certain code.⁶⁹ The third item it's about the method whereby the user can either sign up nor deactivate the service plan, which works in the same way, by texting a specific code to the 555 Koryolink network number. The second page of the

⁶⁸ My translation. The original source: 내화부류는 가입자들이 분기료금 (2 850 원)을 지불하고 잔고로 축적되는 내화를 리용하여 자료통신봉사를 받을수 있는 부류입니다.

⁶⁹ My translation. The original source: 가입자들은 *900*# 눌러 요금상태를 확인할수 있으며 월사용료를 지불하지 않으면 가입한 봉사에 대하여 임시 중지상태에 들어가게 됩니다.

brochure explain how to turn on the data reception on the smartphone by guiding the user in setting the Access Point Name (APN). It is interesting that at this point is mandatory for the user to write a self-explanatory name with the reason why and one's intent to connect to the national network.⁷⁰ This part also shows how to reach available service contents by displaying various homepages address including the Rodongshinmun (the state newspaper) and TV broadcasts homepages. Finally, the last part of the brochure it's about troubleshooting and Koryolink reminds the user to turn off the data reception on their phone when is not needed to save credit.⁷¹ Even though the 3G service provides only intranet access, it is interesting to see how the Koryolink network manage to satisfy costumers giving them enough contents to ensure new subscriptions. Is also noteworthy that some of the contents we just analyzed, are media services providing videos and interactive portals, which suggest that in North Korea is already possible to find a considerable number of devices (like smartphone) capable of such operations. In conclusion, we also have to add that despite Koryolink is offering flexible rate plans, with different cuts and data options, many North Korean still cannot afford to sign up for it.

In this section, we examined various method that potential customers can use in order to subscribe and get access to the Koryolink service. After describing which contents Korean users are able to purchase, we can now explore the variety of handsets that can be actually found in North Korea.

⁷⁰ My translation. The original source: 이름항목을 선택하고 국가망열람 사용자의 의도에 따라 자체로 알아볼수 있는 이름을 써넣습니다.

⁷¹ My translation. The original source: 자료통신봉사를 사용한 후 반드시 아래의 경로로 자료사용을 해제하여야합니다.이요구사항을 지키지 않으면 요금이 계속 삭감됩니다.

1.6. - Handsets and gizmos

Contrarily to what we may think, in North Korea there are many types of cellphones available in the market, including Android powered smartphones. Cellphones for Koryolink subscribers come in a variety of forms as it does in other countries, such as the bar model, folding model, sliding model and touch screen phones. As we might imagine cheapest bar phone is the most popular one, considering the fact that it was the first type of handset that penetrated the North Korean market and the most affordable one, but still quite expensive in relation to the overall cost of living in North Korea.⁷² At the beginning even simple bar type of phones were extremely pricey but according to a defector from Pyongyang around the year 2010 it was possible to find bar phones at the price of 300/400 dollars⁷³. A defector interviewed by Asiapress reported about a reasonable variety of different models available in official shop at different prices. She then stated that North Koreans sometimes gave these devices some nicknames such as “fatty” for a F61 model that cost 250 dollars, and “handsome guy” which is a 270 dollar price F106 phone.⁷⁴

Nowadays it is easy to find these lower quality models at the price of 150 dollars with the subscription and activation fees included in the price. Interestingly enough, the folding type was one of the most expensive, costing more than other type of mobile phones just because was really popular, convenient and good for showing off. The first available touch screen phone introduced in North Korea was called “touch” and it was surprisingly less

⁷² Part 1 of the Rimjin-gang report on Digital and IT Conditions in North Korea, issued by Asiapress. Editor Ishimaru Jiro, pp. 7.

⁷³ Cellphones in North Korea a Telecommunication Revolution, conference in SAIS University: <https://www.youtube.com/watch?v=8bG6DfRwgrk>

⁷⁴ Part 1 of the Rimjin-gang report on Digital and IT Conditions in North Korea, issued by Asiapress. Editor Ishimaru Jiro, pp. 7.

expensive (around 360 dollars the small one and 390 dollars the bigger one)⁷⁵. Defectors reported that cheap touch screen phones that are usually imported from china are really unreliable and easily broke down. In addition to this they always turn off or activate when stored in pockets, explaining why they were less expensive. That's not a surprise giving the fact that the state could not invest enough money buying good quality phones from other countries. However, touch screen phones became more popular when the quality of the device itself also rises⁷⁶ Here is an example of phones available in the official North Korean market in May 2014, both of them are labeled with the name Pyongyang (평양). (*Figure 1.11*) (*Figure 1.12*)⁷⁷

⁷⁵ Ibid.

⁷⁶ A brief introduction to North Korea mobile phones. NF New Focus, 2013. The original article: <http://newfocusintl.com/a-brief-introduction-to-north-korean-mobile-phones/>

⁷⁷ Photos: Aram Pan. Original source available on the Facebook page: www.facebook.com/dprk360



Figure 1.11: A typical North Korean bar model phone



Figure 1.12: A folding model phone. On the screen is visible the word Victory.

The majority of cellphones are Chinese brands. Only few upper level official of the party or rich North Koreans living in Pyongyang use Japanese or western models such as Nokia. It is not a secret that The Ministry of Post and Telecommunications try to imports the cheapest handset on the market for its population. Indeed, differently from modern and up to date societies, North Koreans are not completely aware about the latest models and the average level of quality of modern cellphones.

Apparently, the biggest amount of handsets imports consist in Huawei and ZTE products from China. Among Huawei cellphones introduced from in official Koryolink shops are available the

T1 and T3 which are folding and sliding respectively, as well as the bar models ZTE and T95. Among touch screen phones, and therefore android devices, the T107 and E850.⁷⁸ Even though the listed cellphone models are physically produced and imported from China, many defectors pointed out that most of those handsets legally sold in Koryolink shops are re-labeled “Made in North Korea” once arrived into the country.⁷⁹

Beside legal and therefore controlled Huawei handset, in North Korea other brands are smuggled into the country through informal sources and then sold in black markets. Some defectors actually reported that in the street of Pyongyang South Korean brands like Samsung and LG are also likely to be seen. They also pointed out that South Korean cellphones must be fixed in order to be able to connect to the Koryolink network but if any handset of this kind are detected by officials, they are confiscated on the spot (if you are unable to bribe them).⁸⁰

A really bizarre story I found on the web about those smuggled phones tells about a Samsung smartphone that was lost in South Korea and then remotely found in Pyongyang. A South Korean man posted on his Facebook page a screenshot from Google’s Android Device Manager that shows the phone in the North Korean capital exactly in Seungri Street (승리거리, Victory Street) with a location accuracy of 75 meters. (*Figure 1.13*)

⁷⁸ Ibid. pp.17.

⁷⁹ Ibid.

⁸⁰ Ibid.

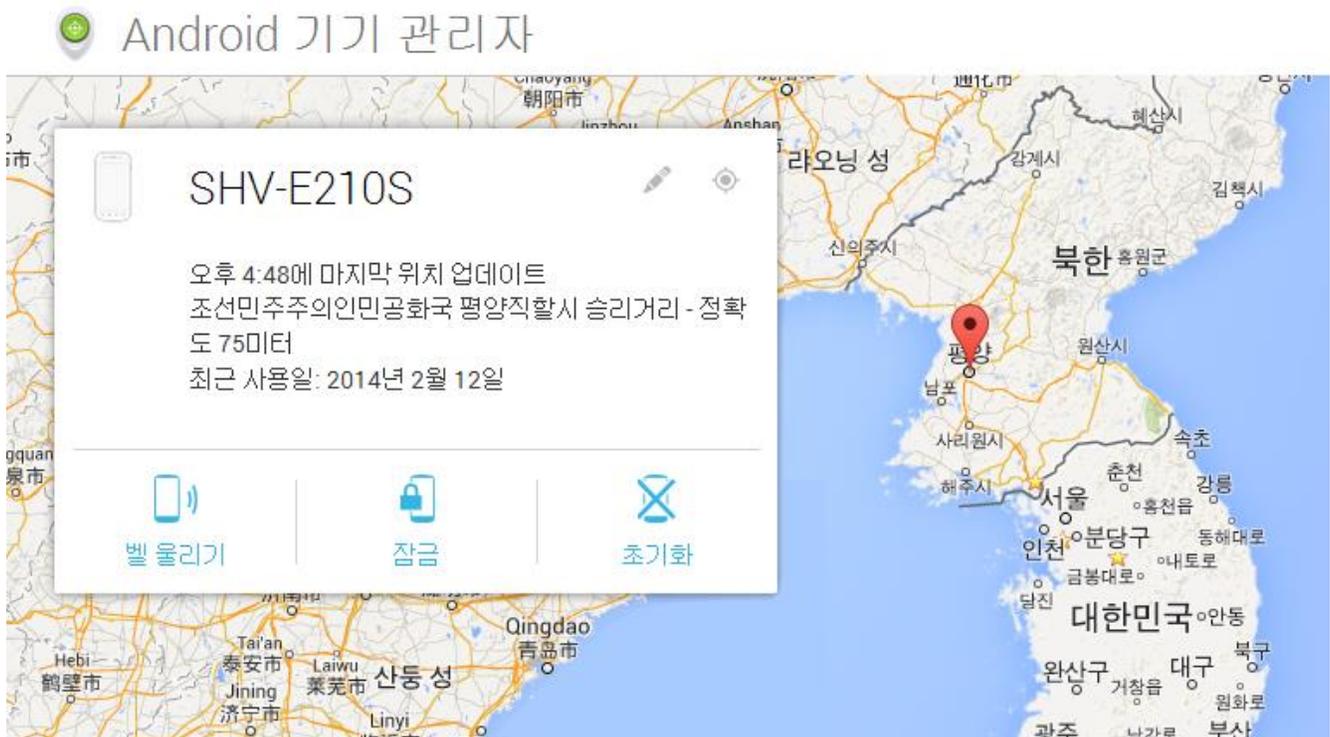


Figure 1.13: Google's Android Device Manager screenshot. Stolen Samsung Galaxy S3 tracked in Pyongyang

It is possible to read SHV-E210S which is the model number of the Samsung Galaxy S3 that is sold in South Korea.

This article was also reported by the Korean Herald⁸¹ and what is really interesting is that in order to run the Device Manager of Android devices an internet connection is required. This case might be one of those South Korean cellphones that are available in Pyongyang's black market. Indeed, the Samsung Galaxy S3 is equipped with W-CDMA antenna and therefore if equipped with a local SIM card and fixed properly could be able to connect to Koryolink

⁸¹ Here the original article in Korean: '제 갤럭시가 월북했어요' GPS 추적 사진 화제, 2014 <http://www.koreaherald.com/view.php?ud=20140227000987>

network. The smuggle of stolen South Korean devices through China reaches not only North Korea but also other Asian countries such as Mongolia.

The North Korean government unsuccessfully tried to solve this smuggling issue several times. Firstly, by enhancing the import of cheap handset made in China, to push the supply of controlled and legal handset in Koryolink's shops. Secondly by decreasing the price of the devices constantly. As the problem persisted and the domestic demand of wireless phones were quickly rising, in the 2013 North Korea government finally started to introduce in the market the first devices that is said to be completely made on the North Korean sole.

The news was released by the KCNA⁸² (Korean Central News Agency) in August 2013, Kim Jong Un visited the factory in Pyongyang where North Korean cellphones are supposed to be made. In the KCNA picture (*Figure 1.14*) is also possible to see the latest cellphone on the North Korean market at that time, it is said to be an Android based AS1201 smartphone called "Arirang"⁸³. Actually, as we can see in the two photos below, workers are not working on the device itself. It seems that they are just checking papers and the gadgets inside the box. Despite North Koreans media are reporting that the Arirang cellphones are made right in the factory, they are probably made by a Chinese manufacturer and then imported to the

⁸² The KCNA in the state news agency of North Korea. It portrays the vision of the Workers' Party of Korea and the North Korean government. The headquarter of the KCNA is in Pyongyang and its site is one of the really few North Korean websites existing nowadays (28 in total). The website is full of interesting news and pictures of the marshal Kim activities. Korean, English, Japanese, Chinese and Spanish languages are available. (Only in South Korea is blocked by the government). <http://www.kcna.kp/>

⁸³ Arirang in the name of the most popular Korean folk song (story about a young couple who are torn apart by an evil landlord, intended to represent the division of Korea), often considered as the unofficial national anthem of Korea (North and South). Arirang song is even in both South and North Korean UNESCO Intangible Cultural Heritage List, introduced respectively in 2012 and 2014. In North Korea Arirang gives also the name to the Grand Mass Gymnastic and Artistic Performance taking place every August in Pyongyang. In the South, Arirang name is widely used, one of the major TV channel is called as such. The Arirang phone to deserve that name must be a real revolution (at least for the standards of the North).

“May 11 Factory” where they are apparently inspected and relabeled before going on sale in Koryolink’s shops. Below, photos of the visit show Kim touring the called “11 May Factory”⁸⁴ and talking to officials.



Figure 1.14: Kim Jong Un visiting the 11 May factory on August 10, 2013

Although the Arirang smartphone could be too expensive for the masses and being only affordable by elites, the North Korean government keep “producing” it and release new upgraded versions. In a South Korean web article experts say that the first generation of Arirang smartphone has only five applications that can be used. North Korea emphasizes that it has smart functions such as a game called “Tetris”, an electronic calculator, a dictionary and a biographical dictionary.⁸⁵ It is also noteworthy that even through this kind of devices the

⁸⁴ The factory it is said that manufactures high-tech goods including LCD TV panels. Kim Jong Il also visited the factory with his son in 2011: Kim Jong Il visits ‘LCD TV Factory’, Martyin Williams, 2011 <http://www.northkoreatech.org/2011/07/30/kim-jong-il-visits-lcd-tv-factory/>

⁸⁵ My translation. The original source: "북한 아리랑 핸드폰을 통해서 실현될 수 있는 어플 (애플리케이션)은 불과 5 개 정도 밖에 안된다 이런 이야기죠. 5 개는요, 게임이 있습니다. 아주 단순한 옛날의 테트리스라는 게임이 있고요, 전자계산기, 사전이 하나 있고요, 인명사전 등 다섯

government give the users the chance to read all the speeches and collected readings of various leaders made in years by putting an encyclopedia of the party.⁸⁶ Even if it is an Android based device, is obvious that the Play Store of google application does not exist on the smartphone since it is impossible to have access to the internet. In order to install a new application on the system it is necessary to physically go to a Koryolink store and ask for it.⁸⁷

A second generation of Arirang smartphone was also spotted by foreigners visiting North Korea. It is only necessary to go to a Koryolink shop hoping the supply of those handsets is not over. According to some pictures of lucky visitors that could be able to actually put the hands on the second generation of Arirang phone, it is identified by its model number shown in the “About” screen as “AP121” and is also running an updated version of Google’s Android operating system. Version 4.2.1 is a variant of “Jelly Bean”, which first debuted in 2012 (while the first generation of Arirang phone was 4.0.4 “Ice Cream Sandwich”, that came out in 2011). The phone shown in the photo below (*Figure 1.15*) is connected to a cellular network called “46706”. This is the ID number that all cellular networks transmit, and in this case, 46706 is used by the network Koryolink offers to North Korean citizen only.⁸⁸ Users of this phone can call other local numbers and access the internal intranet. The second

가지가 실현될 수 있는데. 북한은 이걸 가지고 스마트폰 기능이 있다고 강조하고 있습니다."

이성은 2013 The article: <http://www.voakorea.com/a/1728367.html>

⁸⁶ This feature is well explained by Will Scott (a computer science student who taught in Kim Il Sung University of Pyongyang) in a video where he shows the application installed on a tablet devices: <https://www.youtube.com/watch?v=zuxlLLeKZZ8> (Explanation of the application at 16:55)

⁸⁷ On YouTube, a foreign user of the first generation of Arirang smartphone made a review video of it: Koryolink Arirang AS1201 (North Korea's Smartphone) – Review <https://www.youtube.com/watch?v=ClaAerv6w0Y>

⁸⁸ My translation. The original source in the Japanese blog: 2014, 端末の状態を表示した画面ではネットワークが 467-06 となっており、北朝鮮国民用の PLMN 番号に接続されていることが分かる。(PLMN stands for Public Line Mobile Network). 北朝鮮で新たなスマートフォン Arirang AP121 を販売中、中国の ThL W200 がベースに <http://blogofmobile.com/article/25357>

network, the 46705 is used only by foreigners and allows international calling and internet access but not the ability to call local numbers.

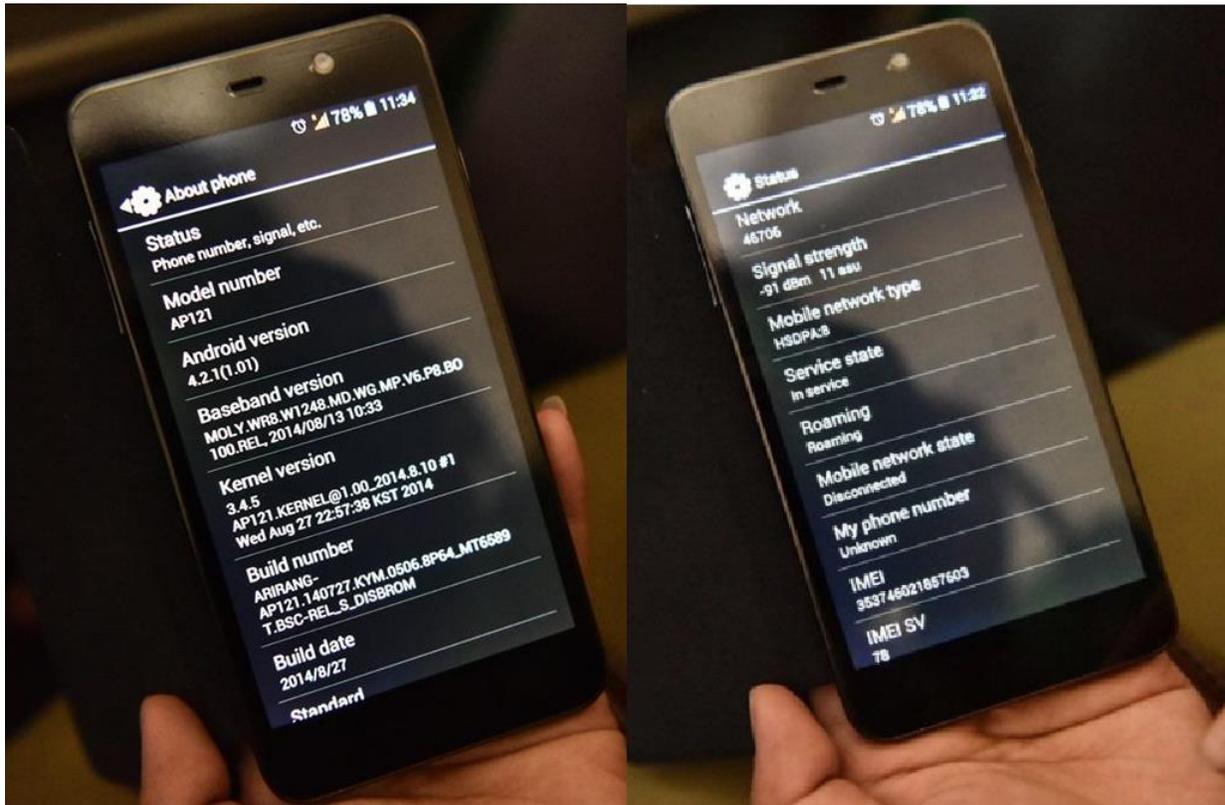


Figure 1.15: Arirang smartphone spotted in October 2014

Another interesting picture of the Arirang smartphone (*Figure 1.16*) reveals the inside of the phone where it situated dual SIM card slots and the slot for a micro SD memory card. Is also notable the red Koryolink SIM operating in the device. The fact that there is a dual SIM card slot made me thinking a lot. Why should a North Korean factory produce a device with such characteristics? These features, despite being useful, are not very suitable to the Koryolink network system. Is quite hard to imagine a North Korean make use of them considering the existence of only one network carrier (just those who work in the unofficial

market and needs two SIM cards for underground businesses, which are indeed the last people the state wants to help). The question automatically rises then: why would the North Korean government produce a cellphone with a pretty useless feature? Where does the phone really come from? Indeed, this is one of the case when North Korean media report an obvious falsity about the product's origin. The evidence is well verifiable in the pic below.



Figure 1.16: Similarities between Arirang phone and the Chinese THL W200 spotted by a Japanese blog

The Arirang phone on the left appears to be almost identical to the W200 handset produced by a Chinese company called THL⁸⁹⁹⁰. Both phones seem to share even the same positions of screws, lugs for the rear plastic cover and the bottom double speaker of the phone. It's quite easy then assuming that the North Korean cellphone factory is just a place where stocks of Chinese phones are stored and re branded, leaving all the levels of the productions in already well equipped Chinese factories. Experts believe that North Korea has not secured the relevant technologies required for producing smartphones, including microprocessor units.

An interesting video that I found on YouTube, shows a group of foreigners in Pyongyang asking to their guide to check her phone.⁹¹ Interestingly enough, is exactly the second generation of Arirang smartphone, the AP121 full of North Koreans apps including some dictionaries, games and even a mosquito repellent application. When one of the tourists asked the question if the phone is made in North Korea she answered after a little bit of hesitations that is branded Arirang, but it is very likely that she does not know the real origin of it. What is sure is the high social position which North Koreans who can afford to buy Arirang smartphones come from. North Korean tourist's guides are accurately selected by the regime considering the high level of loyalty they have towards the state.

Even though is not possible to fully use all capabilities of such a smart device without a real internet connection, this phone is the proof that nowadays in North Korea it is possible to

⁸⁹ THL (Technology Happy Life) company's factories are settled in Shenzhen and it exports smartphones in several countries in the world included Europe through different intermediaries and online market such as Amazon.

⁹⁰ This similarity was spotted by a Japanese blog. The original source in Japanese language: 2014 北朝鮮で新たなスマートフォン Arirang AP121 を販売中、中国の ThL W200 がベースに
<http://blogofmobile.com/article/25357>

⁹¹ The YouTube video about the Arirang Smartphone: North Korean Smartphone
<https://www.youtube.com/watch?v=xfk0mPADJXY>

find Android smartphones that are not too different from the devices that are surrounding us in everyday life. However, this should not distract us from the true reality that characterizes the major part of North Korean population. Pyongyang does not represent the welfare of the population and this kind of advanced devices are truly a fortune that only few privileged can afford.

1.7. - What about foreigners?

As I started to write this thesis on North Korean communication system, parents, friends of mine or simply acquaintances often asked me questions about it. Most of them are not aware of what is really going on in that part of the Korean peninsula and almost all of them believe that North Korea is a dangerous place where you should not go. Sure, I definitely cannot blame them. However, they also ignore the fact that going to North Korea is no more impossible (at least if you are not a South Korean passport holder) and as years go by the number of foreigners taking a trip to Pyongyang has dramatically increased. It is not one of the most popular destinations for sure and in order to get there a special visa is needed. To obtain it, the eventual tourist needs to buy one of the few travel packages offered by very few agencies reachable through their web pages. Every year around 1500 western visitors are traveling in North Korea and for those who cannot imagine to spend a single day without an internet connection, Koryolink offers them the service.

Back in the days, anyone who wanted to get into North Korea for tourism had to leave one's cellphone in China or at the international airport of Pyongyang. For years, a trip to North Korea it meant traveling the space time getting into a black hole separated from the world, not

being able in any way to communicate with the outside. Later in years, it was possible to get into the hermit country with one's devices accurately checked by official personals after the arrival and before the departure. But now, everyone is free to bring in one's smartphone, laptop, camera or other devices and make a full use of it during the stay in North Korea. I left this part for the end of this chapter because is not directly related to North Korean people, and indeed does literally not, but is useful for us to fully understand how the North Korean government threatens its people (and what deprives to them) differently from foreign visitors.

As we have already mentioned previously, Koryolink provides two distinct mobile networks, one for local users and one for travelers and foreign workers. For North Koreans is possible to have access to the national intranet and to place phone calls to another local phone equipped with a local SIM card. Instead, Koryolink SIM card for foreigner is only able to use global internet and making international phone calls. What the two line are not capable of is communicating between each other, giving no possibility to the interaction foreigners-locals.

For a tourist getting involved in the Koryolink network is not difficult but it is necessary to follow few steps and prepare oneself to a relatively quite high rate plan fees.⁹² The only place where it is possible to buy a SIM card for foreigners is the Pyongyang airport. After checking all the documents and devices of every member of the group, it is possible to go in the Koryolink shop to rent a local SIM card or a USB internet modem. Tourists reported that completing the practice takes a quite long time and every document such as the passport are obviously required. It is mandatory to fill all the modules with identification information that enables the government to track the costumer down in the eventuality of sensible data

⁹² I found the information about rate plans for foreigner on travel agencies official websites selling travel package for North Korea trips. Both the sites share exactly the same prices also verified from travelers. Koryo Tours website: <http://koryogroup.com> Uri Tours website: <http://uritours.com>

transfers. Travel packages to get in North Korea are available in different forms, from budget weekends short trips to longer 10 days' journeys⁹³. If the traveler is visiting North Korea for a weekend or a short period of time and wants to make phone calls from his/her W-CDMA phone it is possible to rent a prepaid SIM card (also nano SIM is available) and there are three options:

- 50 Euros for a prepaid balance worth 30 Euros, valid for 14 days.
- 75 Euros for a prepaid balance worth 55 Euros, valid for one month.
- 100 Euros a prepaid balance worth 80 Euros, valid for two months.

The local calling rates (between phones loaded with local SIM cards) is 0.2 Euros per minute and 0.2 Euros per SMS or MMS. Is noteworthy that both caller and recipient are charged at the same time for a call, putting the total cost of the phone call to 0.4 Euros per minute.

Koryolink provides also service for those foreigners who are actually resident in Pyongyang (like teachers, students, diplomats or traders), or travel there frequently and it is also possible to buy a Koryolink SIM card for a monthly fee. If one wants to get this type of plan 50 Euros fee has to be paid just for the activation of the SIM card. In addition to this, the monthly fee of around 800 North Korean Won (govern gives foreigner the official exchange rate which is roughly 140 KPW to 1 Euro as November 2016) gets the user 200 free minutes and 20 free SMS (same as a local SIM card designed for North Koreans). Calling charges for

⁹³ Travel packaged for North Korea trip are quite expensive. The cheapest options of three days and 2 nights are still almost a thousand U.S. dollars. Both long and short stays are well planned and choreographed and the group is tightly controlled by officials. Is not possible to leave hotel room or walk alone without tour guides.

a monthly plan are 4.2 KPW per minute for calls, 2.8 KPW for SMS, 7 KPW for MMS and 10 KPW per minute for video calls. Even in this case both caller and recipient has to pay. International phone calls are also permitted with this SIM card and the rates per minute are as follow:

- U.S.: 5 Euros / 700 KPW.
- China: 1.4 Euros / 200.2 KPW.
- Mongolia: 1.73 Euros / 242.2 KPW.
- Russia: 0.68 Euros / 95.2 KPW.
- France: 0.38 Euros / 53.2 KPW.
- Germany: 1.58 Euros / 221.2 KPW.
- England: 1.4 Euros / 200.2 KPW.
- Switzerland: 0.38 Euros / 53.2 KPW.
- Poland: 1.58 Euros / 221.2 KPW.
- Iran: 0.98 Euros / 138.2 KPW.
- Egypt: 0.68 Euros / 95.2 KPW.

Both of these plans, the monthly one and the short-term SIM card, will provide foreigner with the possibility to place domestic calls on the foreign Koryolink network. The latter connects all North Korean institutions that have an international phone line, such as Pyongyang international hotels, foreign embassies and other government offices. Tourists companies that fully tested the line were pleased and reported that the reception is good in Pyongyang, other major cities and major highways.

Unlike the voice and message plans the access to the 3G internet service is a little bit pricier, but allows you to Tweet or Instagram your pictures directly from your smartphone in

Pyongyang. Unfortunately, the internet service is only available on SIM cards with the monthly plan.

- The activation fee is 75 Euros.
- 10 Euros per month enables 50MB of internet data.
- Each MB thereafter costs 0.15 Euros.

Another internet plan is available for laptops or tablets by renting the mobile internet USB modem.

- The activation fee is 150 Euros and three types of monthly planes are:
- 150 Euros per month for 2 GB, overage fee of 0.05 Euros per MB
- 250 Euros per month for 5 GB, overage fee of 0.04 Euros per MB
- 400 Euros per month for 10 GB, overage fee of 0.02 Euros per MB

In a nutshell, according to this information if a traveler wants both international phone calls minutes and 3G internet data the cheapest plan cost around 80 Euro plus 120 Euros for a 50MB internet data.⁹⁴

Here in Italy I always purchase a plan that includes at least 2GB of data traffic which is the minimum amount that allows a youngster like me to make a full use of a last generation smartphone at the price of 10 Euros. A little calculation reveals that a similar contract in Pyongyang would cost around 450 Euros.

What is really interesting to note is that while you cannot connect to social networks like Twitter or Facebook in China, you can from North Korea. While in China internet connections

⁹⁴ The same cost is also reported by Will Scott who is a computer science graduate student of the University of Washington and shared his experience of teaching computer science in the Pyongyang University of Science and Technology. Here is the video of the speech he held: Computer Science in the DPRK [31c3] <https://www.youtube.com/watch?v=zuxlLLeKZZ8> (talking about the cost at 5:20)

is censored in some ways, the Koryolink foreign network appear to be completely free from restrictions. It is possible to get access to American sites like Facebook, Twitter, Instagram and all of the major social media sites including South Korean ones. What is not really recommended is to attempt to access one's financial institution (like online banking) from North Korea because the bank will be probably block your account due to the North Korean IP address.

If a traveler wants to catch instant and unfiltered pictures of the life in North Korea Instagram is the perfect tool. Is really popular among visitors and tour agencies and thanks to Koryolink network is now possible to share travel experience directly from the heart of Pyongyang.⁹⁵

Only in few cases the government shut down the 3G internet service provided for international travelers as a whole, or either blocked some sites or applications. One example came in June 2015 when the country blocked the access to Instagram and with it other main photograph sharing application and sites.⁹⁶ Such restriction it is said to be related over the fire at the Koryo Hotel on the 11 June. Is one of the two biggest and most active hotels dedicated to foreigners in Pyongyang.⁹⁷ It has been reported⁹⁸ that government security agents were

⁹⁵ This is a really revolution considering the fact that North Korea is without any doubts the most strictly controlled country of all time. An example of an Instagram page showing pictures from inside the country shared through Koryolink network is the Uri Tour Travel Agency page: <https://www.instagram.com/uritours/>

⁹⁶ Source northkoreatech.com: Instagram block adds speed bump to DPRK's Internet access, Martyn Williams, 2015 <http://www.northkoreatech.org/2015/06/23/instagram-block-adds-speed-bump-to-dprks-internet-access/>

⁹⁷ The hotel hosts UN officers and business men dealing with the North Korean government. Most of them are Chinese African or Middle East traders. Even though the government tried to stem the leakage of the news with the block of Instagram some photos of the accident are still available in some media sites: Blaze breaks out at Pyongyang tourist hotel, Julian Ryall 2015 <http://www.telegraph.co.uk/news/worldnews/asia/northkorea/11669784/Blaze-breaks-out-at-Pyongyang-tourist-hotel.html>

trying to block people taking picture of the building ablaze. Indeed, the regime always try to hide any negative information both inside and outside the country to give less space to those always criticize regime's moves. Although the fire was visible in any part of the capital and rumors were spreading, state media never officially reported the accident.

In any case, despite some isolated cases, the internet service for foreigners works really fine since its launch in 2013 and became instantly useful to journalists, business people and tourist in the country (even though someone miss the days not being reachable feeling the essence of true time traveling vacation). Only few lucky fellows from the Pyongyang elite or university professor are able to get access to this top-level network, probably those people that are already used to international diplomatic missions. The real losers in this network game are the vast majority of North Korean people, unable either to speak nor to get free information from the outside world, but in this regard, we will talk in the next chapter of this work.

1.8. - Conclusions

In this chapter, we have examined the structure that characterizes the legal system of the mobile communication in North Korea. We have investigated how such a system develops and grows by analyzing the various steps of its history. The importance of the knowledge about the company that runs the network also gave us the basics to better understand what is really going on in the country and maybe helped us to better imagine the near future of it.

It is also possible to directly call this Hotel via landline: Koryo Hotel, Changkwang St, +850 2381 4397.

⁹⁸ Source northkoreatech.com: Instagram block adds speed bump to DPRK's Internet access, Martyn William 2015 <http://www.northkoreatech.org/2015/06/23/instagram-block-adds-speed-bump-to-dprks-internet-access/>

Peering into the country with our eyes is a difficult task. Therefore, in order to understand how the mobile communication system really effect the life of those who have the fortune to experience it we have tried to look at it through the sight of North Korean defectors. We have described how locals are able to subscribe to the Koryolink network and the absurdly complicated adventure that has to be accomplished, occasionally by bribing. The various type of handsets, the way in which they are obtained and the secret behind the unofficial markets also give us a picture of the sub-society that lives around this new business. We also have seen the double nature of the currency that runs activities in North Korea, taking particular attention to the role of both local and foreign money. In the end, we have discussed about the difference in which North Korean government is treating its people differently from foreign guests, giving us a prospective of the real situation and letting us think about what is really happening in that distant land that everyone seems to forget.

Every element we touched in this chapter are designed to give us the necessary basic notions to proceed in our research. The next chapter will highlight a completely different side of this variegated network, discovering the sinister life behind the apparently promising present and hopeful future of North Koreans.

2 – CHAPTER TWO

2.1. – Introduction

The previous chapter, besides giving the basic notions to better understand the present situation of the official mobile telecommunication system, gave us some clues regarding the possibilities and freedom North Koreans have when using the national line. For locals having a working phone capable of connecting to the network does not mean having the freedom of free communication that we might expect. Let's take international phone calls as an example. We have seen that only foreigners, few officials of the party and some university professors have the possibility to place international phone calls freely. North Koreans that want to contact a family member living in the South, people outside the country or a coworker dealing in China, can do anything but use alternative methods beyond the Koryolink network. Historically, for most of them, placing an international phone call meant going to a local post office to make the call through the few number of landline present in the country. Using this method is obvious that it is nearly impossible to make unmonitored conversation. Even if the caller is able to bribe an officer in order to make a longer and private call, using the national landline network is always a risk giving the fact the conversation is completely trackable and all information about the caller are registered. Not a really recommended method if you want

to tell someone your plan to defect, for example. We have to remember that sensible anti-revolutionary thoughts, if detected, can lead to harsh punishment by the authorities.⁹⁹

Then, if official North Korean cellphones are exempt of such a service and the access to the landline phone are completely under surveillance by the regime, how do North Koreans manage to make international phone calls?

Simply, by using a smuggled foreign phone loaded with smuggled foreign SIM card. Chinese, to be precise. Therefore, in order to do that it is necessary to be close to the Chinese border, close enough to receive the signal from Chinese antennas placed just outside the country. If you have the right device, enough balance in the SIM card and you are close enough to the border to reach Chinese signals, voila, here you have a perfect device to call the outside world right from North Korea.

Before starting our analysis about the system behind this unofficial usage of smuggles cellphones and how North Koreans manage to obtain such devices, let's take a look at the history that permitted its development.

Everything began in the late 90's, the darkest period of North Korea, when the tragic famine was spreading in the whole country (known in the country with the name Arduous March, *고난의 행군*).¹⁰⁰ The regime agricultural mismanagement, floods and the collapse of

⁹⁹ In North Korea, crimes can be distinguished into two different categories: ordinary crimes and crimes of political nature. Here an interesting study on the North Korean penal code and the attitude toward law. At page 11 an explanation of the duality of the penal code in North Korea: The North Korean Penal Code, Criminal Procedures, and their Actual Application, by Kim Soo Am <http://repo.kinu.or.kr/bitstream/2015.oak/915/1/0000720104.pdf>

¹⁰⁰ The Arduous March (the great famine) was a central event in the country's history. A turning point that forced the regime and its people to change in fundamental and unanticipated ways. Occurred from 1994 to 1998 the great famine killed hundred thousand of people, died from starvation or hunger related illnesses, with the deaths peaking in 1997. The number of people perished will probably never be known with absolute certainty. Some NGOs put the number as high as 3 million

Soviet Union led to the food shortage, food that was needed for the survival of the people. The state rationing system crumbled, forcing millions of North Koreans to make whatever they could to sell or barter informally for survival.¹⁰¹ At the time of the famine and also in later years, the state-owned economy has been largely replaced by a diverse array of private economy activities. Such activities are usually associated to the often labeled “black market” or also “gray market” because it is illegal yet tolerated. It was estimated that the 78 percent of the total income of the average North Korean household comes from private activities of this kind.¹⁰² The time the unofficial market economy started to grow, traders who smuggled in food also began to bring into the country a large variety of other goods.

It was the first time that in North Korea was actually possible to buy foreign clothing, DVDs of foreign television dramas and movies and also mobile phones and Chinese SIM cards. This type of mobile phone not only facilitated the development of unofficial trades but also enabled North Koreans to make private conversation calls with people outside the country without being monitored by officials of the regime.

whilst the North Korean government in confidential communications with certain foreign guests put the figure as low as 250,000. The famine stemmed from a variety of factors including the mismanagement of the North Korean government and the loss of soviet support that caused food production and imports to decline rapidly. In additions, the devastating flood of 1995, described as being “of biblical proportions”, destroyed arable lands, grain reserves, harvests and social and economic infrastructure. As a part of the state campaign, words such as ‘famine’ and ‘hunger’ were banned because they implied government failure. Citizens who said deaths were due to famine could be in serious trouble with the authorities. The time of the famine was also the period when the largest number of defections was registered. See also North Korean Famine on Wikipedia: https://en.wikipedia.org/wiki/North_Korean_famine. An interesting paper about personal histories of hunger in North Korea: Sandra Fahy, Mapping a hidden disaster, Personal histories of hunger in North Korea <https://hazdoc.colorado.edu/bitstream/handle/10590/5438/C024508.pdf?sequence=1>

¹⁰¹ North Korea’s black market becoming the new normal, Grew out of famine, Reuters, Oct 29 2015: <http://www.reuters.com/article/us-northkorea-change-insight-idUSKCN0SN00320151029>

¹⁰² Andrei Lankov, *The real North Korea, life and politics in the failed Stalinist utopia*, Oxford University Press, 2015. Pp. 84.

2.2. – Black market breakdown

To analyze the system behind the growing phenomenon of smuggle between China and North Korea, it is necessary to deeply explore the history that led the beginning of it.

Historically, for the most part the economy of North Korea is run by the government, that includes imports, exports and manufacturing. As we might expect from an all-round communist regime, private trades are illegal but that does not stop it from happening. In fact, labels such as “collectivized” are kind of anachronistic way to describe the modern economy of North Korea, that now heavily relies on private person to person market system where everyone is free to get profit selling and buying private goods. We will also discover that this unofficial way to do business can not only be found in low social ecosystem but indeed is also embedded in the upper social stratus and high-rank world of the country. But why the government lost its control over the economy and let black markets to spread? The answer is simple: because the state could no longer provide for the people in the way it once could.

When North Korea was founded in the August of 1945, the country was almost food self-sufficient for many years. The government ran the socialist Public Distribution System (PDS) and farmers began to collect the majority of their harvest with the purpose to redistribute it to the people. During the first decades of the new government under Kim Il Sung dictatorship North Koreans were not starving at all and older Chinese people living near the border with the country have been known to report that they were envy of living standards of North Koreans in 1960s and 1970s.¹⁰³ If this trend is now completely turned upside down, back in the days North Korean economy was performing decently well and was even stronger

¹⁰³ Daniel Tudor & James Pearson, *North Korea Confidential*, Tuttle Publishing, 2015, pp.16.

than the South Korean capitalistic example referring to the GDP per capita index. Between the year 1953 and 1956 Kim Il Sung regime implemented a plan to boost the economy¹⁰⁴ that pushed the country to an annual growth rate of 42 percent, and the period after the Korean War was still maintaining this trend that started to slow down only around the year 1973.¹⁰⁵ That incredible performance was also due to particular circumstances, for example the colonizing Japanese (1910-1945) helped out to industrialize the northern part of the peninsula while using the southern part as an agrarian area.¹⁰⁶ For this reason, Kim Il Sung regime had quite superior infrastructure to guide the country prosper economy, relying on the galvanization of the people to rebuild the divided nation. In addition to this, North Korean regime, and therefore Kim Il Sung ability as smart diplomat, was double playing with both Chinese and Soviet blocks to get aid as much as possible. This diplomatic game happened during the Cold War years when Kim Il Sung managed to play both Beijing and Moscow against each other while at the same time gaining the maximum possible profit. This strategy was decisive in order to help domestic economy and increase the people food ration we previously mentioned.¹⁰⁷

¹⁰⁴ In 1996 Kim Il Sung launched the Chollima Movement (천리마운동 千里馬運動), which was a Stakhanovite movement aimed to push the output of North Korean industry. The Chollima is a Flying horse adopted from the Chinese mythology and represent the fastest creature that workers are supposed to follow by working harder and harder (the name itself means: horse that can run 1000 li in a single day). The winged horse is one of the most used and loved symbol in the nation. It can be easily seen around North Korea especially in the capital. A big number of statues and posters of a Chollima are used to glorify that time and interestingly enough the Koryolink logo itself is a white Chollima on red background. See also Chollima movement on Wikipedia: https://en.wikipedia.org/wiki/Chollima_Movement

¹⁰⁵ International Socialism, Was the North Korea economy in crisis in the 1950s? Kim Ha Yong, June 2006: <http://isj.org.uk/was-the-north-korean-economy-in-crisis-in-the-1950s/>

¹⁰⁶ Daniel Tudor & James Pearson, North Korea Confidential, Tuttle Publishing, 2015, pp.16.

¹⁰⁷ Without being conscious North Korean people were eating not only domestic product but also aid coming from other countries. They believed that it all came from the grace of Kim Il Sung, which

The situation started to change only in 1991 when the USSR collapsed. At the beginning, Kim Il Sung regime managed to survive thanks to the increasing amount of aid coming from China and thanks to the people that kept trusting the regime. However, after its collapse, the Soviet aid became to be insufficient and soon after completely ceased putting the economy of the country in a delicate situation. In addition to this, Kim Jong Il economy mismanagement further weakened the agricultural sector and the amount of food distributed by the state gradually diminished.¹⁰⁸ Last but not least, in 1994 and 1995 a series of devastating floods destroyed around 1.5 million tons of grain and rice both in crop lands and in reserves, because many of them were store underground. Floods affected almost 30 percent of the country and North Korea lost an estimate 85 percent of its power generation capacity due the damage to infrastructure such as hydro-power plants¹⁰⁹, coal mines, supply and transport facilities. Later years, even deadly droughts of 1996 and 1997 worsened the already dramatic situation.¹¹⁰

was not entirely wrong. In rural area of the country it is still possible to see farmers using sacks marked "USAID" and traders making activities in unofficial markets are aware that North Korea is dependent by foreign aid. They use radio to get information about coming aid that usually push the price of rice down.

¹⁰⁸ The Public Distribution System (PDS) decreased the amount of food by 10 percent in 1987, another 10 percent in 1992 and later years began to completely break down. The system distributed food to people according to their political positions and their level of loyalty to the state. While the World Food Program consider 600 grams of cereal per day to be a survival ration, the regime steadily decreased portions to reach the minimum of 128 grams per day in 1997. See also "North Korean PDS" on Wikipedia.

¹⁰⁹ About 70 percent of power generated in North Korea came from hydro-power sources. The serious floods of 1994 and 1995 damaged hydro turbines in the Yalu River, and sadly this kind of power source were affected also by droughts of 1996 and 1997, creating energy shortages throughout the country at that time, severely cutting back railway transportation which resulted in coal supply shortages to the coal-fueled power stations which supplied the remaining 20 percent of power in the country. See "Arduous March" on Wikipedia.

¹¹⁰ Ibid.

The aftermath of such disaster was a deadly famine that claimed the lives of around 500,000 North Koreans between the year 1994 (When Kim Il Sung died) and 1998¹¹¹. This calamity is known among North Koreans as the “Arduous March” which is the name given to a legendary hypothetical campaign of anti-Japanese guerrilla fighters led by Kim Il Sung. Kind of interesting that the greatest failure of the regime is depicted in such terms. Indeed, the scale of such disaster was so big that left a profound mark in the history of the nation. This horrific starvation though, not only happened rural areas where farmers were living, but affected North Korea society as a whole. It was reported that mass starvation and deaths were spreading in towns and cities too. What really led the spread of this curse was indeed the failure of the government to sustain the population in that hard time and the mismanagement of economic agricultural sectors. Even the elite were totally involved, even professors at Pyongyang’s prestigious universities and other upper class households had to turn to private market activities, simply to get what was needed in order to survive. Was the first time that high stratus of the society in North Korea was literally forced to engage low-level jobs just to make a living. Some of them even started to sell what they had in their houses in stalls in exchange for some food and other primary goods, forming what would eventually become the primary source of livelihood of the North Korean society.¹¹²

The turning point that triggered the beginning of the marketization phenomenon was indeed the great famine. Through the socialistic food distribution system, the North Korean state was able to feed only the core elite, leaving the rest on its own. People rapidly had to

¹¹¹ The number of people killed during this period is highly controversial. Different sources claim different numbers, from 200,000 up to 3 million victims. It is likely that the real number will never be known.

¹¹² Daniel Tudor & James Pearson, *North Korea Confidential*, Tuttle Publishing, 2015, pp. 19.

learn and adapt to live in complete autonomy, something that fortunately helped North Koreans to slightly improve their living conditions.¹¹³ The tragic consequences of this terrible period are still palpable nowadays in the country. Even if the condition dramatically improved and they are starving no more, they are still malnourished, hungry and the Arduous March left people with physical side effects. Historically South Koreans were shorter than North Koreans, but nowadays the trend is exactly the opposite. Is one of the few nations where the average high of the population gradually decrease in the last 50 years because of the lack of sufficient nutrition such as animal protein.¹¹⁴

Luckily enough the spreading of such marketization phenomenon helped North Koreans out, making their lives more stable and tolerable, avoiding the risk of being griped again by another murderous starvation. As we will see later on, the major part of the people involved in these markets are women, allowing them to empower their role in the society and giving them ironically more wealth than men involved in state activities. Nevertheless, talking about money, wealth and salary in North Korea is quite controversy since the existence of different realities makes the Korean system one of a kind.

2.3. – Deal with it!

It was the first time in North Korean history that such marketization started to play a relevant role for all the social stratus of the country. The government of North Korea has a difficult

¹¹³ Ibid.

¹¹⁴ Conference at Chicago Center for International Studies held by Andrei Lankov: The Real North Korea: Life & Politics in the Failed Stalinist Utopia, minute 48:45 <https://www.youtube.com/watch?v=417kBcy9mSI>. I highly recommend to watch the entire video for a clear prospective of the state of North Korea in present day. Also, see: The real North Korea: Still poor and malnourished but starving no more, pp. 133.

relation with this new duality of its economy because it is a double-edge sword. Can this new order be destroyed? Or is it really necessary for the survival of the regime? Let's try to give an answer to these questions first.

For an instance let's imagine that the government wants to get rid of the new economic order and establish the old and dear socialist system. As we will discover, the result would probably be the outbreak of another famine with the further failure of the food distribution system. Furthermore, the already disappointment circulating among people could become a serious problem for the stability of the regime. If the complete shut down or the excessive pressure on the marketization system would be devastating, the government has no other alternative but implicitly admit the existence of it.

Indeed, for the first time, in 2002 Pyongyang's harsh attitude toward the growing market economy started to change taking a more forgiving direction and on the 1st of July the government introduced a set of measures that are well known as the "2002 reforms" (while in North Korea as the "7.1 measures", from July 1).¹¹⁵

The first notable change introduced with such reform was the rising of consumer prices. The already defunct Public Distribution System was selling kilos of rice at the ridiculous price of 0,08 won each. After the reform the same kilogram would be sold at the price of the actual market level, skyrocketing from almost free of charge to 44 won per kilos.¹¹⁶ In addition to this, also the level of wages had to increase to counterbalance the rising of costs, in fact they did, but relatively less as expected. The second big change introduced with this reform was turning the management of companies controlled by the state to a more private and

¹¹⁵ Andrei Lankov, *The real North Korea, life and politics in the failed Stalinist utopia*, Oxford University Press, 2015. pp. 121.

¹¹⁶ Ibid.

independent administration.¹¹⁷ Managers had more power, freedom and were actually allowed to take advantage from the market acquiring materials needed to the production level and then use it again to resell the finished product.¹¹⁸ If we consider the socialist nature of the totalitarian regime, that was without any doubt a big news, and moreover a sign of renovation. Last but not least, with the 7.1 measure the “Farmers Markets” (농민시장 the only type of official markets known at the time) became “General Markets” (종합시장), a place where not only foodstuffs and other agricultural products were sold, but also industrial goods were allowed too.¹¹⁹ Even if this last change could be imagined as a kind of revolution towards a more capitalistic vision by the government, it actually just changed the name of the market. As we already underlined, private activities were beginning to spread in early 1990s and traders did not change anything within the job they were doing for years. Thus, the 2002 measures and policies clearly indicated that Pyongyang was starting to acknowledge and accept the so called “de-Stalinization from below”¹²⁰, which is the phenomenon signing the slowly rising of the capitalism in North Korea.

Even if Kim Jong Il’s policy of tolerance towards such marketization seemed to characterize the future government line, soon the North Korean authorities started changed

¹¹⁷ That was probably an attempt to release the pressure on companies and factories that were suffering chronic oblivion and mismanagement due to the strict state laws that did not permit a fare development.

¹¹⁸ Andrei Lankov, *The real North Korea, life and politics in the failed Stalinist utopia*, Oxford University Press, 2015. pp. 122.

¹¹⁹ Sino NK, After the collapse: the formalization of market structure in North Korea, Peter Ward 2014: <http://sinonk.com/2014/06/09/after-the-collapse-the-formalization-of-market-structures-in-north-korea-1994-2010/>

¹²⁰ It is not difficult to understand why professor Lankov coined such terminology. In North Korea, the marketization system started from the weakest social stratus. The state, even if tolerate widely the spread of the market economy, does not fully recognize its existence. Therefore, this phenomenon did not start to grow following government decisions.

direction, being afraid of a political destabilization. Later in years the regime implemented a series of reforms aimed to curb the spreading of informal markets that were started to deeply change the country. The first step of such inversion of attitude took place in October 2005. The government tried to make markets useless by announcing the full restoration of the old and dear Public Distribution System with some modification in it. First, the regime assured that everybody in the territory of North Korea, from the upper elite to the lower social stratus living in rural areas, would be issued standard rations of food as it happened during the govern of Kim Il Sung. As expected, such rations would be sold at the ridiculous price of only 44 won per kilogram (at the time the actual price of the rice had already reached 800-900 won in the market).¹²¹ In order to give the monopoly of the food distribution to the state once again, North Korean authorities declared the prohibition of private trade of rice and grain. From a certain point of view, this disclosure on the ban of private trade was the official admission of the existence of something that has to be shut down or at least controlled by the regime. Unfortunately for the North Korean population the restored Public Distribution System did not work as it did during Kim Il Sung era, and the result was that only a small part of the population received food rations. The consequence of such inexorable failure pushed again people to get involved in private activities to make a living, and markets started again to sell food, such as grain and rice, as it did before the reform of 2005. As we already discovered analyzing the history of early 1990s, if the Public Distribution System is not restored in full being able to give the entire population the required amount of food for living, there is no possibility for the regime to impose a complete prohibition on market trades. It is a matter of

¹²¹ Andrei Lankov, *The real North Korea, life and politics in the failed Stalinist utopia*, Oxford University Press, 2015. pp. 123.

life and death. At this point, even officials and police forces were unwilling to physically force the crackdown of markets as they were with all the probabilities engage themselves in order to make a living. The regime once again faced the reality of being unable to completely shut down the phenomenon, remaining with the sole option of trying to regulate it with less prohibitive and more forgiving reforms.

Indeed, another attempt by the regime to limit private activities was introduced in the following year. In 2006 the North Korean government prohibited adult male to engage the market. During the Kim Il Sung era, in fact, men were expected to be employed by the state, as part of the military corps or in state ran companies. Even if a lot of state factories were absolutely unable to produce, male adults in any case had to reach the working place as they were forced to do so (making them easily controlled by North Korean authorities).¹²² The consequence of this regulation made women (already major part involved in private activities) the real protagonist of markets that characterizes following decades and in some terms also empowered their social status as we will see later on. In the end, also the 2006 regulations were not effective and the state recognized that only an enlargement of restrictions to the female part of the population was indeed the only tool available at the time.

One year later North Korean authorities announced a regulation regarding the minimum age in which market trades were allowed. In other words, women under the age of fifty were completely cut off from tolerate market activities in order to reduce the scale of unofficial business. With such regulation, the regime gained nothing but disorders among the

¹²² Andrei Lankov, *The real North Korea, life and politics in the failed Stalinist utopia*, Oxford University Press, 2015. pp. 124.

population, and in some occasion the spread of riots.¹²³ Young ladies were used to bring with them older acquaintances to avoid the regulation giving police officers or other market supervisors no chance whatsoever to impose such ridiculous restrictions.¹²⁴ The regime could do nothing but accept the fact that market system was undoubtedly driven by an autonomous force that led the inefficacy of yet another attempt to control the people working within the market.

If such regulations on workers did not led to any satisfactory results, the North Korean government tried again, and this time by announcing a regulation on market business hours. In late 2008 North Korean authorities officially notified that the private market would be allowed to operate only three days a month starting the following year, meaning that an absurd 90 percent of trades would becoming illegal in a relatively short period of time. The absurd yet desperate attempt, as expected, ended to be completely forgotten by both traders and supervisors and the market ecosystem remained as operative as before.¹²⁵

Even though the regime seems to have strong will toward the possibility to control the market apparently, there's nothing that authorities can do in order to restore the old system. An interesting number of attempts characterized the decades between 1990 and 2010, proving that the regime was therefore completely aware of the existence of the problem. North Korean authorities at this point could either surrender and accept the unequivocal

¹²³ Riots in North Korean are really rare, and easily suppress in short time. People are not free to move in the country without a travel permit, making them unable to join riots in another region (on the liberty of movement see also the Report of the detailed findings of the commission of inquiry on human rights in the DPRK of 7 February 2014 at page 100).

http://www.ohchr.org/Documents/HRBodies/HRCouncil/CoIDPRK/Report/A.HRC.25.CRP.1_ENG.doc. Lack of communication is another reason why riots are not effective in North Korea.

¹²⁴ Ibid, pp. 125.

¹²⁵ Ibid.

reality or desperately try one last time to deliver a fatal blow to the growing unofficial economy.¹²⁶

On 30 November 2009, North Korean government decided to implement the largest currency reform ever implemented before. It was a truly and exceptional failure that proved the completely inadequacy of the government ability to control the market phenomenon through economic regulations. Therefore, the situation was so clamorous and delicate that foreign media even expect a possible collapse of the entire system.¹²⁷

The ultimate aim was to destroy the market once and for all, wiping out all the illegal accumulate savings, and thus capitals, of black markets operators and reviving the socialist economy of the Kim Il Sung era. At the same time, benefit loyal people legally employed by the state companies or working within the military corps.

The plan was announced to the public on the 30 November as North Koreans discovered that current banknotes would go out of circulation soon, replaced with new currency bills. The maneuver was design to delete two zero digits from the North Korean won. Basically, a new 10 won banknote would correspond to the old 1000 won. Such a move could even be considered not as crazy as it seems, other countries adopted currency reforms of this type as well but the North Korean case was different for many reasons. First of all, the period that the state gave the population to exchange the old banknotes for the new one was extremely short. As always happened with other major reforms, this time too North Koreans had as much as few days and no previous warning whatsoever in order to acquire the new

¹²⁶ Ibid.

¹²⁷ BBC argued that this reform could even unsettle the leadership of Kim Jong Il and put an end to the North Korean dictatorship: Currency reform may unsettle North Korean leadership, Marcus Noland, 2010 <http://news.bbc.co.uk/2/hi/8500017.stm>

currency or spend the old one before it turn wastepaper. But that was of course part of the plan, catching people with large amount of North Korean won currency off guard.¹²⁸

Secondly, the exchange operation was limited to a certain number of places, making people rushing in mass toward authorized checkpoints.¹²⁹ On top of that, the regime fixed a limit of exchange at 100,000 old won per person (that's equivalent to a mere 30 U.S. dollars at then going exchange rate)¹³⁰. The first outcome of such crazy maneuver appears to have been the people anger against officials of a severity not seen in North Korea for a long time. Even though the ceiling of 100,000 won per individual was raised to 150,000 won in cash and 300,000 won in bank deposit, it appears that this did not stop the public discontent. Some media even reported that in Pyongyang some people burned piles of old banknotes in protest against the redenomination.¹³¹

The move predictably set a wave of panic in every social stratus. From household in rural area to elite families in Pyongyang, especially those involved in private economies activity. Indeed, people saw their savings being completely deleted, compromising the market activity that required a substantial amount of cash in order to make business. People never

¹²⁸ Andrei Lankov, *The real North Korea, life and politics in the failed Stalinist utopia*, Oxford University Press, 2015.

¹²⁹ Moving to another region is quite troublesome for an average North Korean. It is impossible to leave one's region without a specific permit of transit and transportation are quite inefficient and unreliable. This policy to control the people movements was determinant for the regime in order to avoid uncomfortable eventualities such as riots and mass protests. Nowadays the authorities seem to be more forgiving and moving between cities is no more a big of an issue.

¹³⁰ The limit of quantity exchange was the perfect recipe in order to completely destroy all illegal savings of the unofficial traders. If one had more than 100,000 won in savings, all the money over that amount would be worth as much as zero.

¹³¹ If this is genuinely true it tells a lot. On old North Korean bills, there is the stamp of Kim Il Sung face, meaning that burning such banknotes implied burning the greatest symbol of the nation. Such a crime would definitely be punished with death sentence: on Daily NK, Endless confusion from bad policy, Lee Sung Jin, 2009:

<http://www.dailynk.com/english/read.php?cataId=nk01500&num=5740>

fully trusted the local currency because the government pursued sudden and absurd measures even in the past¹³² and so those with the opportunity kept their savings in foreign currency (most of them are officials conducting business with Chinese counterparts).¹³³

Beside all this, the 2009 currency reform had one impressive characteristic, that marked the total failure of the project. In fact, North Korean authorities decided that the loyal part of the population (those who were officially employed by the government in state-run companies or in military corps) would receive wages in the new currency without any changes in figures.¹³⁴ To be more clear, if a state-run company worker was usually payed 3,000 won per month, after the reform would still be paid the same amount of 3,000 won per month. In this way, the government gave a huge advantage to those legally employed in the economy by increasing their wages dramatically, while at the same time damaged those who were involved in private economic activities. On top of that, prices in markets decreased a hundredfold giving official salaries hundred times more purchasing power. The price of the rice was officially fixed at the level of 22 new won per kilogram, instead of the pre-reform level of 1,800-2,000 won.¹³⁵ The resulting calculation is not difficult: official salaries and wages increased by an absurd 10,000 percent, resulting in a tsunami of inflation that increased exponentially costs of goods in North Korea.¹³⁶ (*Figure 2.1*)

¹³² Residents do not really believe in what the authorities say because they had a similar experience in 1992. The people deposited 20,000 won, but the banks gave only 4,000 won back the following year.

¹³³ North Korea Currency Reform: What Happened and What Will Happen to Its Economy? Scott Snyder, The Asia Foundation. Pp. 3.
<http://www.asiafoundation.org/resources/pdfs/SnyderDPRKCurrency.pdf>

¹³⁴ Andrei Lankov, *The real North Korea, life and politics in the failed Stalinist utopia*, Oxford University Press, 2015. pp. 129.

¹³⁵ Ibid.

¹³⁶ Source Marcus Noland/PIIE through BBC News, 5 February 2010:
<http://news.bbc.co.uk/2/hi/8500017.stm>

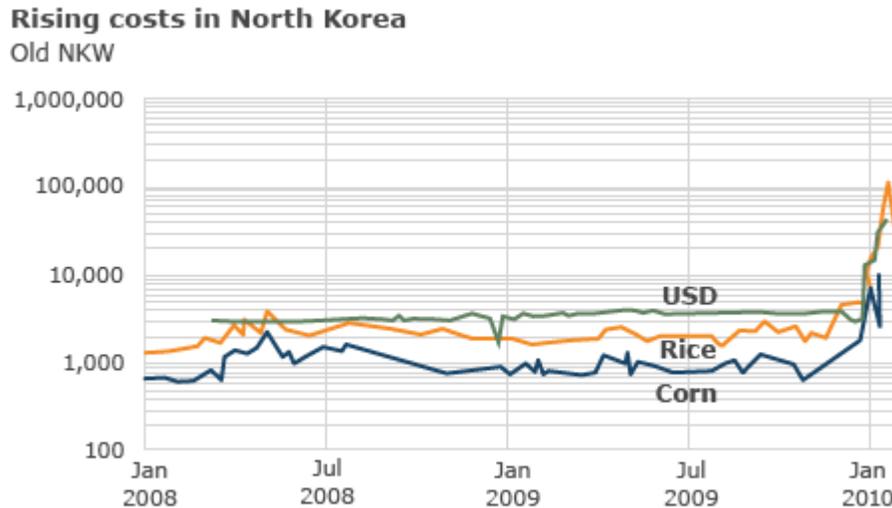


Figure 2.1: Rising cost after 2009 currency reform

North Korean government for a while tried to curb this problem limiting the market price of primary goods such as food products. Even if authorities put the maximum price for rice at 22 won per kilogram, for understandable reason the market completely ignored those regulations as the inflation started to speed up. For the same reason as it happened during other reforms police forces tried to enforces those rules, but the strength of the market rules won again as products disappeared rather being sold at a price that was hundred times below the real market value. At this point the regime decided to shut down markets to punish transgressors and all those engaged in private activities. That was one of the biggest causes that led to the mass discontent even in higher social stratus. Indeed, on January 2010 hard currency shops where the elite and new rich could buy quality goods, were closed as well. Highly privileged group of the population too had some trouble obtaining the necessity for living (also because

the Public Distribution System was not reintroduced yet).¹³⁷ With that said, it is normal to expect that even the elite began to express their dissatisfaction, that might be one of the most dangerous causes of concern for the state. Indeed, regime stability is linked to the welfare of the upper hierarchical ranks and especially those directly connected to the Kim family. In the history of North Korea is not easy to find times where high member of the elite criticizes decision took by the government especially while talking to foreigners. After the 2009 reform, even some North Korean diplomats did not hide their discontent. It's natural understand why the rumor of an imminent collapse was circulating in many media of different countries. Sign that yet another attempt by North Korean government aimed at smashing the marketization was indeed not only a spectacular failure but also jeopardized the stability of the regime.¹³⁸

However, in the end, everything returned as usual with no substantial differences. Few months after the currency reform, market began again to work at full speed, meanwhile within the Pyongyang elite sphere no crisis whatsoever mined the stability of the system. It is rare to see public apology from the regime in North Korea, but eventually to calm the turmoil, that was the case. Kim Jong Il, in a meeting with official of the government and other local village leaders stated:

¹³⁷ Andrei Lankov, *The real North Korea, life and politics in the failed Stalinist utopia*, Oxford University Press, 2015. pp. 131.

¹³⁸ Ibid.

“regarding the currency reform, I sincerely apologize as we pushed ahead with it without a sufficient preparation so that it caused a big pain to the people”.¹³⁹

Kim Jong Il.

Contrarily to what the regime was expecting, the 2009 reform did not carry North Korea back to the Stalinist country of Kim Il Sung era. All the absurd restriction on private activities trades were lifted once again marking the failure of the anti-marketization campaign that characterized those years. Markets were fully operative while supervisors intervened only against traders smuggling goods highly politically dangerous such as illegal mobile phones or South Korean media devices. The price of grain and rice, finally, reached the pre-reform price and traders were allowed to work without any restrictions whatsoever. Therefore, the government again implicitly admitted that North Korea could not survive without the existence of the market and as we have examined any attempt to castrating such unofficial economy can harm the stability of the regime.

In the end, the absurd mistakes of the state in those years were soon forgotten as the daily life of North Koreans started again to follow the rhythms of late 1990s. Kim Jong Il dictatorship was near to its end, and soon after, his son started to tolerate more market activities even though they remained not officially endorsed. After all, those tolerations were

¹³⁹ Even though the failing currency reform of 2009 surely passed through Kim Jong Il desk, is obvious that the blame for such mistake had to fall on another person. There were widespread rumors that Park Nam Gi, that time high-level official responsible for economic policy, was arrested and then executed for his counter-revolutionary activities and espionage. See also: North Korea Currency Reform: What Happened and What Will Happen to Its Economy? Scott Snyder, Center for U.S.-Korea Policy. Asia Foundation: pp.4
<http://www.asiafoundation.org/resources/pdfs/SnyderDPRKCurrency.pdf>

crucial in order to help the population out and making their living condition gradually improving during following years.

2.4. – Salaries in North Korea?

During my research about North Korea I came across several problems regarding the understanding of money and prices. One of those problems was figuring out how people actually manage to live in relation to what they earn and the real value of the currency in the market. After all, when we try to learn about a society, we tend to pay attention to the average income of the people. As one might imagine, in the case of North Korea getting a reasonable clear picture of the situation is not an easy task for many reasons. First of all, everyone would encounter difficulties in acquiring reliable information that can be trust. Indeed, official publications of statistic by the government stopped a while ago, in late 1960. Secondly, as we analyzed in the previous section of the work, the duality of the North Korean economy (official and unofficial) and the several policy changes adopted over the years make even more complicate any attempt to get a tidy vision of what is going on.

It turns out that the coexistence of two different economies put the value of the North Korean won currency on two different scales respectively. To have a clearer dimension, let's start by giving the current exchange rate of the won to another currency, the U.S. dollar. The official exchange rate declared by the state (which is never used) is set roughly around 130 won per dollar. However, the black market rate (which is the one dictated by the economy) fluctuate significantly between 5,000 and 8,000 won to the dollar. It is important to keep in mind this double valuation in order to better understand the entire system.

Talking about salaries, 40 years ago, in the 1980s the average monthly wage in North Korea was 70 to 80 North Korean won. By the year 2000 it had risen to 100 approximately. As we underlined in the previous part, after the 7.1 reforms of 2002, salaries were sky rocketing, reaching an average of 3,000 North Korean won.¹⁴⁰ Today, the official wage of North Koreans workers employed by the state (the only employer in the nation's economy) comes from 1,500 up to 7,000 won, and a medium skilled worker draw an average of 3000 won salary.

Now, considering the market exchange rate, the official salary is equivalent to less than 1 dollar a month. At the current market price¹⁴¹ with that amount of money one can afford around one, maybe two kilos of rice, which is way far from a normal ration of food needed to survive one month. Does it make any sense? Only if we consider the official economy the only existing one. Why?

For decades during the Kim Il Sung era between the late 1950s and early 1990s, the North Korean government within the Public Distribution System was able to provide the entire population food rations and package of goods needed for living. This system was created to give a package with certain quantity and quality depending on the recipient loyalty to the state or one's social position. That said, North Korean authorities had the power to choose what the population should or should not put on their table. Above all, as it should happen in a socialist

¹⁴⁰ Andrei Lankov, *The real North Korea, life and politics in the failed Stalinist utopia*, Oxford University Press, 2015: about salaries, pp. 125.

¹⁴¹ On the Daily NK site, almost every day sources in North Korea report the actual price of the rice in different regions. This recent article (February 2017) explain how and why the price of rice is declining despite international sanctions. The price of the rice change almost every day and fluctuate from 3000 won to 5000 won: Daily NK, Rice prices on steady decline, Kang Min Ji, February 2017: <http://www.dailynk.com/english/read.php?num=14352&catald=nk01500>

society the price of such package was really low constituting only a small part of one's salary.¹⁴²

Let's try to give an example. In the 1980s (when a 120 won salary was consider high), an average party official would receive around 20 kg of rice, about 4 kg of meat and 5 kg of fish, two bottles of cooking oil and 15 eggs every month.¹⁴³ In addition to this, the state would provide the family with clothes, including socks and shoes, in special occasion also electronic goods such as TV, appliances or other smaller gadgets like watches. For the package the official would only spend around 10-20 percent of his salary (15-20 North Korean won). Non-officials, like average workers in state-run factories, for the same price would probably gain only 20 kg of corn, some fish and a little bit of cabbage, as well as cheap clothes and low quality shoes.¹⁴⁴

Even though is not completely appropriate call them salaries, because as we have seen the same amount of money had different purchasing power according to one's social status, during the Kim Il Sung era it was possible talking about official incomes of a family. Until the end of 1980s everyone, from the elite party cadres to unskilled workers and farmers, could make a living with their salaries, being able to buy state handouts at a ridiculous token price. People could use the remain part of their wages to buy supplementary things like stationery or movie tickets, or satisfy other needs, while essential goods and services were provided and

¹⁴² NK News, how much money do North Koreans make? December 6, 2016. This article is written by Andrei Lankov: <https://www.nknews.org/2014/03/how-much-money-do-north-koreans-make/>

¹⁴³ Ibid.

¹⁴⁴ Ibid.

allocated by the state free of charge through the rationing system.¹⁴⁵ But what happen if the Public Distribution System suddenly arrest?

As we mentioned before, in early 1990s due to the stop of aid coming from the Soviet block and several natural disasters, the country faced food shortage and the consequence was the collapse of the system. North Korean authorities were still able to pay salaries but with nothing to buy people had no real reason to use money within state channels and the value of the currency decreased. Only few lucky of the top elite were continuing to receive rations and most likely with less amount than before. Abandoned by their own government the vast majority of the population had to turn to other source of income.¹⁴⁶

It is natural then, imagine why North Koreans started to be engaged in a great variety of private activities to earn what was needed in order to buy necessities of life. Defectors agree that the survival income for a family of three or four is about 200,000 won (roughly 25 dollars according to the current exchange rate) which is paradoxically more than ten times the official salary.¹⁴⁷ North Koreans running their own business are making much larger incomes. As Kookmin University professor Andrei Lankov reported, the owner of a medium sized restaurant would normally make 200 to 400 dollars every month, which is almost the same amount of money people make working in private and therefore unofficial boutique cloning Chinese clothes. While the official salary given by state worth less than a pack of cigarettes. With that said, is completely understandable why even those few lucky that have the privilege

¹⁴⁵ North Korea's antique food rationing, by Andrei Lankov on AsiaTimes online, January 2005: <http://www.atimes.com/atimes/Korea/GA15Dg01.html>

¹⁴⁶ NK News, how much money do North Koreans make? December 6, 2016. This article is written by Andrei Lankov: <https://www.nknews.org/2014/03/how-much-money-do-north-koreans-make/>

¹⁴⁷ Andrei Lankov, *The real North Korea, life and politics in the failed Stalinist utopia*, Oxford University Press, 2015.: about salaries, 127.

to receive food ration from the party do not miss the chance to improve their salary engaging private businesses.

In conclusion, we discovered that for the North Korean case formal income (official and unofficial) does not necessarily indicate the person's position in the society with any degree of accuracy. People engaging business in the market (the majority are women because men are supposed to work for the state) are able to earn as much as ten, hundred times the salary of a North Korean workers officially employed by the state. On the other hand, even if their monthly income is considered low, few elites have the fortune to receive both food ration and special items unavailable to normal people, such as chocolate and cigarettes with filters.¹⁴⁸ In any case, both of these examples are quite free to enjoy primary services that a socialist state is supposed to give the population at an almost-free fare, and in fact it does. Health care, transportation and other public service¹⁴⁹ are almost free of price, at least in the capital and in major cities. However, this is not the case of mobile telecommunication system. After all, in a regime like the one of North Korea, wireless communication is definitely not considered as a primary need.

2.5. – Smuggling into North Korea

As we have examined in the previous part the outbreak of informal markets was primarily due to the lack of the food supply given by the state. Smugglers from China started to make business taking advantages of the famine in North Korea while introducing a substantial

¹⁴⁸ Daniel Tudor & James Pearson, *North Korea Confidential*, Tuttle Publishing, 2015.

¹⁴⁹ The free health care system unfortunately collapsed in 1990s and many retired doctors started to make business through unofficial market earning ten times more than before. Metro system in Pyongyang is almost free, a single ticket cost 5 won, about 0.01 U.S. dollars.

amount of food and other goods. Smuggling is certainly an underground way to trade and therefore it has to be controlled in some ways, after all, North Korea remains one of the strictest dictatorships. We already underlined that the phenomenon of marketization is widely tolerated, but still, some goods are absolutely forbidden and any attempt to sell prohibited products can be severely punished. That said, how do smugglers manage to import in North Korea dangerous items too? Isn't the border heavily controlled by the regime? How do Chinese smugglers cross the river without even being detected?

The border with China is for many reasons really different from the border that divide the two Koreas. First of all it is more than five times longer, about 1400 km while the southern border is long only 250 km. Secondly, the Tumen and the Yalu rivers are quite narrow in some areas and in winter they freeze completely, allowing North Korean defectors and Chinese smugglers to walk across. Thirdly, no land mines nor fences with barbed wire are deployed along the whole Chinese border.¹⁵⁰ The Demilitarized Zone (DMZ) is way more difficult (if not impossible) to cross also because it is heavily guarded from both sides. On the other hand, along the northern border North Korean patrols are less active and more forgiving if bribed properly, making the border very porous. Even if at the end of Kim Jong Il era and the beginning of the Kim Jong Un the control over the Chinese border was intensified, Chinese traders are regularly making business crossing the line near big towns like Dandong in the Liaoning province on the delta of the Yalu river. Between the Chinese city of Dandong and the North Korean city Sinuiju the Sino-Korean Friendship Bridge is the busiest connection

¹⁵⁰ Only a few kilometers around main Chinese cities along the border are fenced. After Kim Jong Un took power China eventually boosted defense with higher fences with barbed wire on top and additional patrol posts were built on higher ground to improve monitoring. China boosts North Korea border fence, chinapost.com, AFP 2011:
<http://www.chinapost.com.tw/china/national-news/2011/03/31/296806/China-boosts.htm>

used to carry foreign aid and by traders to run business between the two countries.¹⁵¹(*Figure 2.2*)



Figure 2.2: The Sino-Korean Friendship Bridge on the North Korean

¹⁵¹ On the upper part is visible the name of the bridge (조중친선다리, 朝中友誼橋). Two guards are monitoring the traffic of trucks crossing the bridge. Trucks in the picture are probably Chinese aids going back to China or other traders. On this bridge pedestrian are not allowed to cross. The only way to either enter or leave North Korea is by train or automobile. It was constructed by the Japanese between the 1937 and 1943 during their occupation. Just next to this bridge there are the remains of an older bridge constructed in early 1900 and bombed by the Americans in the 1950. Both of bridges were damages to cut off Chinese supplies to North Koreans but only the 1943 bridge was fully repaired after the war. A third bridge was constructed in 2014 but the North Korean side is still uncompleted. Source of the photo: Businessinsider.com, China Built a Bridge to Nowhere in North Korea, AP, Eric Talmadge, November 2014: <http://uk.businessinsider.com/china-built-a-bridge-to-nowhere-in-north-korea-2014-11?r=US&IR=T>

In recent years, the number of trades running on this bridge dramatically increased. Chinese factories are even started to produce goods especially for the North Korean market like appliances running on low power.¹⁵² They bring with them all kinds of goods, from legal Chinese and Russian manufacture product to highly forbidden South Korean one. Even if the smuggling phenomenon dramatically increased during the years, most of the business is conducted by small traders. Most of the time smugglers manage to cross the border without any kind of problem whatsoever, but in the case of sudden inspection by the patrol guards, a little bribe is likely to be paid. This smuggling procedure ends right in the market place where goods are displayed and North Korean costumers are finally able to purchase their favorite products.

2.6. – The *Jangmadang* and *grasshopper merchants*

The term that is commonly used to identify these theoretically illegal, yet completely tolerated, markets in North Korea is *Jangmadang* (장마당)¹⁵³, which is a word that comes from old Korean and it is literally translated into “marketplace”, a place where North Koreans merchants would gather to display their goods (historically agricultural products). If in the end

¹⁵² Daniel Tudor & James Pearson, *North Korea Confidential*, Tuttle Publishing, 2015.

¹⁵³ Despite North and South Koreans share the same language, for many reasons they use different words to describe the same thing since for 70 years the two languages have grown apart. This is one of the case. In the South, market is defined with the word *sijang* (시장) which is also used in China. The most iconic word that shows this difference between the two countries languages I believe is ice cream. While in Seoul is commonly used the word as it is, the English ice cream (아이스크림) or the Italian gelato (젤라또), in North Korea foreign words (and U.S. words above all) are forbidden. They use a word that is literally translated in ice snack (얼음과자). Refugees living in South Korea often encounter such problems. Now, for defectors a South-North Korean dictionary is also available for smartphones. Here's and interesting announcement video about it: South Korean-North Korean translator <https://www.youtube.com/watch?v=ym3HnjBxPsw>

of 1990s a typical *jangmadang* could be found in residential part of North Korean towns or in busy crossroads of rural villages,¹⁵⁴ from 2002 the state started to construct buildings designed especially for market purpose. Nowadays are easily be found in big cities and their size dramatically increased in recent years. One example is the Pohang market in the city of Chongjin, northern east part of North Korea, right in front of the sea. Is one of the biggest *jangmadang* in the whole country and is also clearly be seen using Google Maps¹⁵⁵. Markets in North Korea are quite busy places, considering the fact that are the main source of food and livelihood for most of the population (almost 80 percent of the total living expenses). At the end of 2000s it was estimated that 70 percent of households living in cities were engaged in *jangmadang* doing handicrafts, trade or transportation services. In average, each of the *jangmadang* market generates 10,000 visitors per day.¹⁵⁶ In a Yonhap news video¹⁵⁷ about *jangmadang* it is calculated that every day 1 to 1.8 million of North Koreans are trading good using these markets. The popularity of markets was the main lever that allowed the great

¹⁵⁴ Daniel Tudor & James Pearson, *North Korea Confidential*, Tuttle Publishing 2015.

¹⁵⁵ Pohang Market (포항장마당) in the port city of Chongjin (청진) on Google Maps: <https://www.google.it/maps/place/Pohang+Market,+Chongjin,+North+Hamgyong,+Corea+del+Nord/@41.7992112,129.7780556,186m/data=!3m1!1e3!4m5!3m4!1s0x5fcbca5df2c420cf:0x1159f4563d6f2452!8m2!3d41.7992194!4d129.7782923>

¹⁵⁶ Sang T. Choe, The New Markets of North Korea: Jangmadang, University of Southern Indiana, 2015: http://www.na-businesspress.com/AJM/ChoeST_Web15_4_.pdf

¹⁵⁷ “북한 장마당 하루 100 만~180 만명 이용”, 26 December 2015. The video is in original language: <https://www.youtube.com/watch?v=pqN3oJNvgzo> In this video is also possible to see the number of jangmadang by regions. The administrator of Yonhap News also said that in North Korea there is a quite interesting saying: “장마당은 이익 되고 노동당은 이익 안 된다”. That it literally means “while the market gives you profit the Worker’s Party does not” (in Korean language both market and Worker’s Party words ends in the same way to make the rime). This reflects the dissatisfaction against the government that is rising among people.

expansion of the network. There are more than 300 *jangmadang* in North Korea nowadays and almost half of this number increased just in the last five years.¹⁵⁸

The typical *jangmadang* consist by long rows of stalls that are selling various type of products.¹⁵⁹ If a North Korean wants to set his own stall is required to pay a stall tax to the inspector (which is connected to Party cadres making the state complicit in the market system) in order to keep their slot. In bigger markets, there are also some electronic devices capable to keep track of who has paid their taxes.¹⁶⁰ Officials inspectors overseeing in *jangmadang* are usually identified with a specific outfit and a badge with her/his name and have the order to find any suspect exchange of illegal goods and sometimes they demand traders a part of their profits.¹⁶¹

As we already have seen, the typical trader working behind the stall in the market is a woman, usually middle-aged married woman (called *ajumma* 아줌마 in either North and South Korea). Men are often employed in the state working in the military or in factories earning really low wages. *Ajumma* are the real protagonist in market businesses and therefore the main source of wealth in every household, turning them into breadwinners challenging the traditional Korean family dynamic focused on the husband.¹⁶² Almost every

¹⁵⁸ 4 Angels-The Jangmadang Generation, Transforming North Korea:

<https://www.youtube.com/watch?v=WLWKEb7WVAc&t=310s>

¹⁵⁹ A recent report on New Focus International (8 February, 2017) shows the top 10 products by popularity in North Korean *jangmadang*. Top 10 Products Trending on the North Korean Market, February 2017: <http://newfocusintl.com/top-10-products-trending-north-korean-market/>
Interestingly enough, at position number one smartphone cases are the most popular gadgets, confirming the boom of cellphone users. Also solar panel for electricity and contraceptive devices are really popular nowadays in North Korea.

¹⁶⁰ Daniel Tudor & James Pearson, North Korea Confidential, 2015, pp. 26.

¹⁶¹ Official *jangmadang* inspector can be seen in this video at minute 14:04: 북한 장마당 몰카 2 탄: https://www.youtube.com/watch?v=Mxublg7B_iE&t=401s

¹⁶² Ibid. pp. 27.

woman in North Korea had been engaged in market trades. In an interesting episode of a South Korean TV show¹⁶³, a defector was interviewed about *jangmadang*. As the guest was asked if she had ever been engaged in the market trade, she firmly answered that there is no woman living in North Korea that never did business into the *jangmadang*.

Also men are able to engage market business but is not as common as for women. Indeed, in order to reach *jangmadang*, one has to leave the workplace in the factory or military unit. In recent years, some North Korean men leaving the state-company are ending up with being the owner of a small factory once owned by the state or being independently trading in market activities. Those individuals are even employing other people to work within one's private business and they are paying wages to them. In both cases, for the entrepreneur and the employee, it is expected to pay a certain "donation" in money to the state-factory which she/he officially belongs to compensate the lack of not being in the workplace. As professor Lankov stated during an interview, this donation to one's official workplace is called "Third of August money"¹⁶⁴ and the actual size of the donation can vary greatly depending on one's salary or the type of the new business in which is engaged in. Nonetheless, it is surely higher than the official salary that would be paid to the absent worker and it goes directly to the budget of the factory in question. This donation indeed, is not a bribe but a sort of "tax" on private earnings and it is totally legal. In recent years, this

¹⁶³ The video is in original language. Entitled "Recent North Korean jangmadang video" 최근 북한 장마당 영상": the question was asked at minute 7:25. Original answer: "북한에서 살았다고 하면 장사를 못 해본 여자 없죠! 다 해봤죠!". <https://www.youtube.com/watch?v=ku9oFEFJCT0&t=21s>

¹⁶⁴ The name "Third of August money" came after Kim Jong Il ordered the creation of the 8.3 Movement on the third of August in the 1980s. The movement was created to increase provision of consumer goods by having factories source their own inputs. On the topic see: Culture of August 3rd Changing with the Times, on Daily NK, Seoul Song Ah, 2014 <http://www.dailynk.com/english/read.php?catald=nk01500&num=12171>

arrangement became really popular among people that want to be exempted from work, freeing them up to engage private businesses such as trading in *jangmadang*. In fact, few years ago, it was more difficult to buy such freedom to be engaged in private business in *jangmadang* because the regime wanted every worker to be in one's workplace (even there was actually nothing to do there) just for a matter of control on the society, checking that everyone were doing what they were supposed to do.¹⁶⁵

If at the beginning of marketization phenomenon, the supply of goods was limited, nowadays in *jangmadang* it is possible to find a large variety of goods and services. Without any doubt, the biggest part of trades involves food products and other primary goods. With the increase of market activities, the quality of the goods as also increased. The consumption is also increased, from 383 g per day in 2012 to an average of 397 in 2013, it seems not a big increase but for North Koreans is still a quit big change.¹⁶⁶ Imported fruits and vegetables also made North Koreans diet more variegated. Even if the price is a little bit high, some people buy uncommon fruits like bananas, watermelon, oranges or mandarins for special occasions (unlike the rest of the world, in North Korea is still very difficult or completely impossible to acquire certain food products commonly consumed in other countries).¹⁶⁷

¹⁶⁵ Professor Andrei Lankov was interviewed by Korea and the World on 1 February, 2016. Here's the link to the interesting podcast: <http://www.koreaandtheworld.org/andrei-lankov/>. It is also available on YouTube: Episode 58 - Andrei Lankov <https://www.youtube.com/watch?v=npXE4oFzmYo&t=1058s>. He talks about North Korean private engagement and the "Third of August Money" at minute 12:40

¹⁶⁶ Sang T. Choe, The New Markets of North Korea: Jangmadang, University of Southern Indiana, 2015: http://www.na-businesspress.com/AJM/ChoeST_Web15_4_.pdf

¹⁶⁷ This kind of imported products are common only in big cities. In this video the interviewed defector confessed that the first time she saw a mandarin she ate it without peeling it (just because she did not know how to eat it properly). Video in original language entitled 북한 내부영상 공개 함경북도 라진시 장마당 : at minute 10:41 <https://www.youtube.com/watch?v=efETcWHGFd8>. It is also possible to see the variety of product available at that time in common jangmadang.

Beyond primary goods, other imported products from China and South Korea are sold in *jangmadang*. Most of these products are clothes, cosmetics, toys, TVs, refrigerators, and even the popular South Korean Cuckoo rice cooker begin to be a to-have item among upper level families. Unfortunately, for most of the population, this kind of products are too expensive and therefore off limits. A defector confessed that a set of shampoo bottles would cost as much as 20 kg of pure rice, something that only families with big surplus could afford.¹⁶⁸ Car batteries are also a very desirable item, people use them when the state cut off the electricity to watch TV or run electronic devices like electric shavers. Aside from rural *jangmadang*, luxury goods like laptops, cars, electric bicycles, motorcycles and air conditioners are likely to be seen somewhere in big market of the capital and other major cities.

Another noteworthy characteristic about *jangmadang* is that it gives North Koreans services that otherwise are not accessible through official channels. As banks does not really function in North Korea, *jangmadang* stalls are used as the main platform for banking transactions¹⁶⁹ or even to exchange foreign currency with the local won. People always try to use and accumulate foreign currency for they savings or to be able to buy expensive products. Given the instability of the domestic money is always risky owning large amount of local won. North Koreans are already aware of the unpredictability of their government, that had accustomed his people to sudden and cruel changes of monetary policies.

¹⁶⁸ Rice is the measure North Koreans often use to give a certain product a value. The defector in this video also confessed that the shampoo was too expensive and her family usually used powder detergent for washing machine imported from China to wash their hair: at minute 4:11 최근 장마당 물카 <https://www.youtube.com/watch?v=ku9oFEFJCT0&t=21s>

¹⁶⁹ New Focus, North Korea Implements Identity-Based Vendor System. 29 July 2013: <http://newfocusintl.com/north-korea-implements-identity-based-vendor-system/>

As the free medical care system collapsed during the Arduous March more than two decades ago, people started to seek help elsewhere. In fact, North Koreans are left without any treatment unless they pay up bribes at state hospitals. In the market network is possible to find a community of retired doctors running private activities and selling medicines. They give diagnosis, which is crucial in medical treatment in North Korea where many people died from cirrhosis and other miss diagnosed diseases caused by the lack of food. Defectors reported that some Korean medicine doctors have earned great reputations and have queues in front of their doors, including some upper-class elites who could not get a proper treatment in hospitals.¹⁷⁰

Private education is another example of service that started to become popular among *jangmadang* traders. It is possible to pay to educate one's children in music, computers, foreign languages such as English and other private courses are offered as well. Tutors are making good money through unofficial education system becoming widely used among elites. According to professor Lankov, while in countries that emphasize private education money plays a key role in getting students into college, in North Korea this role is played by one's connections and background. Pyongyang elites often rely on private education system to improve their children grades. In addition to this, is not rare to find corruption as money buys entrance into schools, changes scores of tests, and also permit one to prevent being called out to go to the workplace.¹⁷¹

¹⁷⁰ Daily NK, Black market diagnoses saving more lives. Seol Song Ah, 11 September 2015: <http://www.dailynk.com/english/read.php?cataId=nk01500&num=13458>

¹⁷¹ Radio Free Asia, North Korean Crackdown on Private Education Overlooks Real Issue. Andrei Lankov (who also attended Pyongyang's Kim Il Sung University in 1985), February 2014: <http://www.rfa.org/english/commentaries/lankov-02122014111559.html>

Beside the *jangmadang* market itself, in North Korea there is another class of traders that are running private activities in a different way. These people are doing business next to the actual market or in hidden alleyways to avoid harassment, controls and extortion from the official supervisors working in the *jangmadang*. In North Korea these traders are known with the name *grasshopper merchants* (the original word is 메뚜기 장사꾼 or 메뚜기 시장) due to their high mobility and their rapid proliferation. Some of them perform their market activities even in the night when *jangmadang* are closed, and they display their goods under the soft light of a small flashlight or under the ray of the bright moon (hence the name “*moonlight market*”, 달빛 시장).¹⁷² Traders of this kind are running businesses in a place not designed by the state because they also sell goods that are forbidden by the regime. Therefore, this dangerous trading network it has to be hidden somehow to avoid to get caught and suffer severe punishments related to this crime. The government has ordered to set up a countermeasure but officials are often engaged so they close an eye pretending to send them away.¹⁷³ They are almost immune to the direct control and supervision of official channels. The volatility and the stealth characteristic of these markets grant North Koreans the possibility to acquire smuggled products that are otherwise are unavailable elsewhere. Sometimes, when traders are not able to pay expensive stall fees, they become *grasshopper*

¹⁷² In the link below a rare footage of a North Korean “moonlight market”. There is a trader selling pretzel and another one next to her selling Sundae to a soldier. My translation, the original source: 파배기 장사꾼과 그 옆에 순대 장사꾼이 보이며 군인이 그 옆에서 사먹는 모습이다. The article is in Korean. 북한의 달빛 시장, Ju Song Ah, 2011: <http://blog.donga.com/nambukstory/archives/2361>

¹⁷³ The article is in Korean. 북한 전역 “메뚜기” 골머리...단속 소용없어, Lee Seok Yeong, 2011: <http://www.dailynk.com/korean/read.php?num=92496&catald=nk04500>. My translation, original source: 이어 "하당 메뚜기 장사가 제일 무질서해 당국에서 대책을 세우라고 지속적으로 명령하고 있지만 대책이 따로 없는 실정이다"며 "당 간부와 보안원의 처들도 그렇게 장사를 하고 있어 단속에 나서는 보안원도 메뚜기 장사를 쫓는 척만 할 뿐이다"고 설명했다

merchants. A woman interviewed in a South Korean TV show confesses that, unlike the South, in North Korea if you have money to bribe people you can do whatever you want. She also said that she paid supervisor to have a space to sell her illegal imported clothes from China, becoming a real trader in a *grasshopper market*.¹⁷⁴ Nowadays, these furtive traders are not only seen in rural areas where is more easy to find a hidden place to sell, but even in the capital they greatly increased their popularity.



Figure 2.3: An example of "grasshopper merchants". Reuters, 2015

¹⁷⁴ Here's the video about the South Korean TV show, from minute 3:53 to 4:40 they speak about selling imported illegal clothes from China, how bribing is popular in North Korea and how she managed to work in a *grasshopper market*: 북한 내부영상 공개 함경북도 라진시 장마당 <https://www.youtube.com/watch?v=efETcWHGFd8>. A little later on in the video they underline the fact that the real protagonist in markets are women, while men are considered to be less wealthy and therefore not relevant in the economy of a household.

As we have seen, thanks to *grasshopper merchants* and other activities in *jangmadang*, a great variety of smuggled goods are available to people who can afford to buy them. Beside less dangerous items like South Korean clothes is also possible to find highly prohibited “capitalistic” or “anti-revolutionary” products. Among these goods there are South Korean DVD of dramas and movies, USB drives filled with South Korean TV programs (and sometimes even pornographic files) and basically anything that let the population receive information from the outside world. Indeed, one of the reason that make North Korea different from other socialist dictatorships in the world is the existence of a powerful and wealthy South right at the other side of the 38 parallel. If North Korean people come to know the welfare of the other half of the nation, the political stability of the regime will be undermined by the rising discontent of its population. Any information from outside has to be blocked before it reaches the people and jeopardize the system. This is why North Korean authorities are committing their selves in order to keep individuals isolated and ignorant, prohibiting items that can give people the dream of getting a better life beyond those razor wires.

Hence, smuggled Chinese phones with Chinese SIM cards are the right example of devices that help North Koreans to escape.

2.7. – Making connection

As we have examined in the previous part, the beginning of the smuggling phenomenon led to profound modifications of the North Korean economy and society. People started gradually to improve their living condition due to a more supply of food and the proliferation of market trades. A certain level of wealth started to emerge and some lucky North Koreans manage to save enough money to buy goods that are not primarily needed for survival. Among those items, we can find various types of media device such as laptops, MP3 players, DVD players and cellphones.

In the first part of this research we also examined the official mobile telecommunication system ran by the government. The latter, provide North Koreans (those who can afford such luxury) with a highly monitored network only capable to send and receive information within the country borders. Just intranet service and local phone calls are accessible through the Koryolink line and therefore no international information exchange is possible.

Besides that, there is a more interesting and exiting side of North Korean mobile telecommunication that involve people who connect their devices to the Chinese mobile network gaining the power to communicate with counterparts outside the county. Some of them use it to make cross-border activities and businesses interacting with Chinese traders who are right at the other side of the frontier. Others, try to contact family member residing in the enemy South Korea perhaps to plan an eventual defection. In both cases, it is needed to be near the Chinese border to get connected to Chinese signals towers, making people living in distant places of the country unable to get such privilege unless they travel long distances without being detected by surveillance corps. Secondly, in order to do that it is necessary to

have a proper device loaded with the right SIM card. Telephone calls of this type are not directly monitored by the regime as long as they do not be transmitted through state owned lines. However, as we will see, North Korean authorities managed to implement some system and devices to block or detect such illegal connections. First let's try to figure out the various methods used by North Koreans to get connected with the outside world.

The most obvious and direct way to make an international phone call is to physically own a Chinese mobile phone (known in North Korea with the name 중국 손전화, which literally means Chinese cellphone) and load it with a Chinese SIM card. As we already seen, those devices can be bought through Chinese smugglers dealing businesses between the northern border and in unofficial markets. Although it may seem quite easy thing to do so, the high price of such dangerous items is an insurmountable barrier for the largest part of the population. We already mentioned that the price of an official cellphone is quite high for the North Korean standard, and smuggled illegal Chinese mobile phones and SIM cards are not an exception. A defector interviewed by Amnesty International on February 2015, said that buying cellphone and SIM card through illegal channels of the black market is a privilege that only few can afford. He stated that a Chinese SIM card are sold for around 100 Chinese yuan that it is equivalent to 16 U.S. dollars¹⁷⁵ depending on the amount of credit in the card. If we put it in relation with the official salary of a legal employed worker we cited in the previous part, it would need something like one year of hard work (saving the 100 percent of the income without buying anything else) just to be able to afford one Chinese SIM card. It is necessarily then, being involved in private trade activities to reach the amount of money needed to

¹⁷⁵ Amnesty International, Connection Denied, Restriction on mobile phones and outside information in North Korea. March 2016. pp. 22.

purchase smuggled devices and SIM cards. Above all, the possession of illegal devices is certainly a crime severely punishable by regime's authorities.¹⁷⁶

For those who are too concerned about having possession of such dangerous devices or not able to spend high quantity of money all of a sudden to get one, there is a second method reported to be used. It is stated that borrowing a Chinese mobile phone was also possible and the respective fee depends on the allocation of call time. Some Chinese traders or North Koreans in possession of such device try to make profit by renting it to people that want to contact someone outside the country. Even though the eventual caller is not the actual owner of the phone, this practice is also dangerous. Indeed, if the real owner of the phone was under investigation or being observed by the State Security Department (SSD) agents or other officials of the police, who borrowed the device can also be detected and be punished. A defector stated that an owner of such illegal device was once caught, and when confessed that he has rented the cellphone to someone during the interrogation, his customer who borrowed it for money was arrested too.¹⁷⁷

The third and most popular way to get connected to the international communication network without having possession of a Chinese cellphone is by buying a remittance service from a broker. The mechanism behind the network of brokers is more complicated than the first two methods and is not less dangerous. However, it can be the only way for the largest part of poor North Koreans that cannot afford to buy a Chinese cellphone and have someone in the South ready to give help.

¹⁷⁶ See the 2.6.4 part of this work: What Happen If You Get Caught.

¹⁷⁷ The defector was interviewed by Amnesty International on 26 May 2015. Source: Connection Denied March 2016.



Figure 2.4: Chinese mobile phone antenna near the North Korean border. (Source: Liberty in North Korea)

2.7.1. – Brokers

Before talking about how brokers manage to place phone calls between a North Korean and another person outside the country let's try to figure out who brokers are and in which business are involved in.

Illegal cross-border activities between China and North Korea is a huge source of income for many people. Engaging the trade of goods is only the small part of the entire business. The biggest part of those underground activities is managed by these brokers, who are usually Chinese men (ethnic Koreans who know the language) traveling between China and North Korea or national North Koreans with connection in China.

Brokers are the life link that most of defectors used to escape the country and find a source of living once arrived in China. The first service they provide to help eventual defectors is giving them contacts to pay bribes to patrol guards in order to make them change their path to permit a safe crossing. Once arrived on the Chinese bank, they transport refugees in safe cities¹⁷⁸ and give them shelter (everything for a fee of course). Without that connection, the eventual defector would be totally exposed to the Chinese authorities which treats them not as refugees but as illegal immigrants. If a North Korean is detected and caught by Chinese police will be repatriated and detained in political prison camps to face years of severe punishments.¹⁷⁹

¹⁷⁸ One example is the Chinese city of Yanji which is close to the border. It is the capital of the Yanbian Korean autonomous region. The largest part of its population is composed by illegal North Korean immigrants (around 300,000) which two thirds are women. Many of them are working in the sex industry.

¹⁷⁹ Punishments in labor camps are harsh and can lead to death. A large number of defectors even prepare pills of opium to eat in the case of being caught to put end to one's life avoiding the hell of political prison camps.

Most of the time when a broker helps a defector to escape always try to exploit her/him taking advantages of their vulnerability to make profit. Smugglers are making money by selling women or young men for forced labor.¹⁸⁰ The biggest part of the human trafficking involves North Korean girls and women who are sold for forced marriage to Chinese men. Brokers are the actual link between these female defectors and Chinese pimps who push them to engage the prostitution network in brothels or in the Internet sex industry.¹⁸¹ Unfortunately a lot of North Koreans defectors came across those broker's activities before reaching the South and a lot of them share their stories with people or volunteer working in NGO's.¹⁸²

A big number of defectors who manage to safely reach South Korea, have relatives, friends or simply acquaintances still living in the North. Even if starting from the bottom of the society in a new country can be troublesome and incomes of refugees are not that high (around half the average income of a South Korean), a small quantity of their money can

¹⁸⁰ The human trafficking of North Korea plays a huge role (beside the network of smugglers) permitting the state to acquire hard currency. People are sent to force labor camps in China Russia and other middle east countries to work for almost no retribution. In this VICE documentary, an example of North Korean labor camp in Russia controlled by the state: North Korean Labor Camps - VICE NEWS – Part 1 of 7 <https://www.youtube.com/watch?v=awQDLonkdl&t=35s>. See also Human trafficking in North Korea:

https://en.wikipedia.org/wiki/Human_trafficking_in_North_Korea#cite_note-dos-1

¹⁸¹ I highly recommend to watch this documentary on defector fleeing North Korea. Is one of my favorite. The video helps to understand how defector escape North Korea and the long route they have to travel illegally in order to get into South Korea. On this footage, it is also possible to see an example of a broker and a Chinese pimp helping a North Korean girl to escape the country. The defector will later be sold as a prostitute in the Chinese sex industry network (minute 7:20). An example of the internet sex industry at minute 10:10: ESCAPING NORTH KOREA 52' <https://www.youtube.com/watch?v=cSC6eIDUQNw>. At minute 4:00, an example of a smuggler that failed to help a woman. He still crosses the border to smuggle drugs (a business which accounts for around one billion of U.S. dollars in 2007).

¹⁸² There are several examples that can be found on the internet. I recommend to read this short story. It is an interview of Liberty in North Korea (LiNK) to a defector. It is an example of how brokers actually exploit female defectors: Joy's story: part 2 – trafficked in China, June 2016 <http://www.libertyinnorthkorea.org/joys-story-part-2/>. Here another touching example, a woman interviewed by Amnesty UK, please watch this video: North Korea: The Other Interview https://www.youtube.com/watch?v=DMn2_2TxiSw

make huge difference on the living condition of people in the North. A single salary of a defector living in South Korea (around 1 million won) can feed a North Korean family for one year, while a defection cost is around 2.5 million won.¹⁸³ Defectors residing in South Korea send every year an estimated amount of 10 to 15 million U.S. dollars to their counterparts in the North.¹⁸⁴ Of course, money cannot be transferred directly between South and North Korea (and indeed it is illegal to the eyes of both countries)¹⁸⁵, therefore a network of linked brokers is needed. The refugee in South Korea first contact a broker and send to him money by wire on a Chinese bank account. Then, the broker smuggles the cash across the border to North Korea and give the money to the recipient. The whole process is complex and risky, indeed, brokers usually charge the service with high percentages of the total amount. Usually 20 to 30 percent of the cash goes to the intermediary, of the typical transfer of one million won only 700 to 800 thousand won reach the recipient.¹⁸⁶ The high fee reflects the high risk of such service, but according to most of the defectors, brokers are very reliable and only in few cases cash did not reach the recipient. One interesting feature of the broker cross-border activities of transferring money is that they can arrange phone calls between sender and recipient.

¹⁸³ Remittances from North Korean defectors, 21 April 2011, Andrei Lankov:

<http://www.eastasiaforum.org/2011/04/21/remittances-from-north-korean-defectors/>

¹⁸⁴ Daniel Tudor & James Pearson, *North Korea Confidential*, Following the money trail. Tuttle Publishing 2015, pp.29.

¹⁸⁵ South Korean government perfectly knows about the trend of money transfer to North Korea by defectors. Almost 50 percent of refugees regularly send money to relatives but authorities are willing to turn a blind eye, after all, is just for humanitarian purposes.

¹⁸⁶ Remittances from North Korean defectors, 21 April 2011, Andrei Lankov:

<http://www.eastasiaforum.org/2011/04/21/remittances-from-north-korean-defectors/>

2.7.2. – Calling the South

As we have seen, the broker network is quite reliable and therefore widely used by defectors. Many refugees reported to have been using this method to contact family members still residing in North Korea and indeed explained how the system works.

During International Relations master's degree at Ca' Foscari University of Venice I had the opportunity to spend one year as an exchange student in South Korea. I attended the Graduate School of International Studies (GSIS) at the Seoul National University (SNU). One of the course I decided to take was a seminar class about North Korea. On the 19 May 2016, during a special lecture, we had the pleasure to invite and interview a North Korean defector who escaped in 2008 and currently lives in South Korea with his family. Mister Choi Hyun Joon¹⁸⁷ was my first contact with someone who used the broker network system to contact his family member and helped his daughter to escape North Korea. His story is really touching and permitted me to better figure out how mobile connection between the two country works and how important is to the life of people that want to escape the hermit country.

¹⁸⁷ Mr. Choi Huyn Joon Served in the military for 21 years as a Company Commander, which is a Captain rank. As Major, was a member of Ministry of People's Security. He graduated from College of Education after 4 years' study. He also was Head of Department (Lt. Colonel), Ministry of State Security. He entered Republic of Korea in April 2008. He is the President of Unification Future Solidarity, President of Unification Security Lecturer Council and advisor at DPRK intelligence, ROK Ministry of National Defense.



Figure 2.5: Mr. Choi and I in front of GSIS department in Seoul National University

According to Mister Choi and other defectors testimonies, the broker network consists in a variable number of intermediaries settled respectively in South Korea, China and North Korea. These brokers are the link between the caller, which is a defector living in the South, and the recipient living in the North. If the caller is already aware of the process she/he can skip the first intermediary in South Korea (which in most of cases is another defector who already used the broker system and let the new defector know the existence of it) and directly contact the broker settled in China.

The first broker (broker A) is always a Chinese citizen who holds a Chinese bank account. The second broker (broker B) is the one who smuggle cash (always Chinese yuan) into the country and frequently travel across the border between China and North Korea. The second broker most of the case is a Chinese national but with Korean origin, able to speak fluently both languages. The last broker (broker C) is often a North Korean citizen who travel inside the country if the recipient is not living near the border, for example in Pyongyang.¹⁸⁸

As we already underlined in the previous part, every step through this network of intermediaries has a price which reflects the risk of such practice. Therefore, making phone calls from South to North Korea is strictly correlated to the broker cash remittance system. Basically, if a defector living in Seoul wants to contact her/his family member in North Korea (who does not have the money to buy a Chinese mobile phone) it is necessary to pay at least 1 million won. Let's summarize the various steps in order to make a phone call between South and North Korea through the broker system:

¹⁸⁸ Amnesty International, Connection Denied, Restriction on mobile phones and outside information in North Korea. March 2016. pp. 23.

Phone calls through broker's network	
Cost of the call	At least 1 million South Korean won per call (around 900 U.S. dollars)
Level of risk	Very high (depending on the location of the recipient in North Korea)
Location to place the call	Only near the Chinese border (eventually implies the recipient to walk several kilometers in the shadow to get close to Chinese antennas)
Quality of the call	Bad (depending on the connection method)
Duration of the call	Short (due to instability of connection and to avoid electronic surveillance of patrol guards)
Punishment if caught	Severe (arbitrary arrest and eventual detention in political prison camp or reform facility)

Step 1: The caller (in the South) has to send at least 1 million won to the broker A's Chinese bank account via wire transfer.

Step 2: Broker A checks his bank account. If the transaction is properly carried out he contacts broker B.

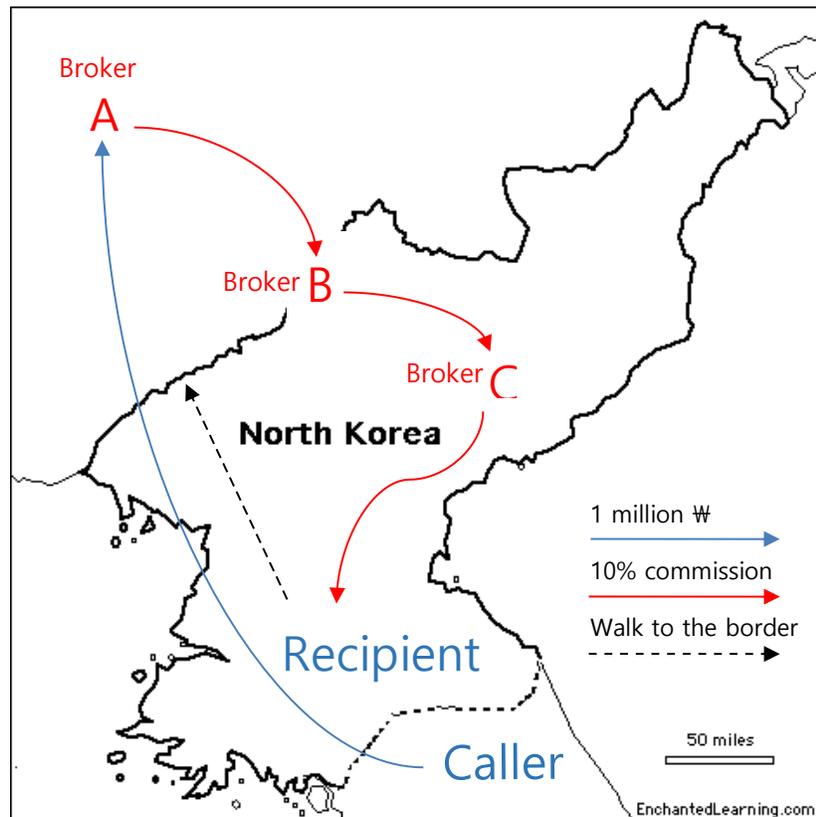
Step 3: Broker B, who has a Chinese mobile phone, gets into North Korea and contacts the third broker and gives him information about the recipient position and the amount of money he has to deliver.

Step 4: Broker C physically reaches the recipient and gives her/him money.

Step 5: Broker C and the recipient together walk to the Chinese border to connect the broker C's phone to the nearest Chinese telephone line antenna.

Step 6: Place the phone call between South and North Korea. Beware of guards nearby!

Let's now refer to the map below:



Broker's network of calls and remittances

In some cases, if the recipient is living near the border, the third broker is not needed as the second broker directly contact the recipient to place the call. In the case of Mr. Choi though, his daughter was living in Pyongyang (which is far from the Chinese border) and therefore a third broker was needed to reach her, making the entire process time consuming and more expensive.

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Mr. Choi escaped North Korea with his wife in 2008, leaving both son and daughter in North Korea. Even if he entrusted his friend to take care of his children, once arrived in South Korea he was comprehensibly living a hell. Without being able to contact them and assuring their safety, living in the fear if they were caught by the police or either starving to death. Mr. Choi decided then to contact a broker for the first time. He made a money transfer to the broker's account in China and sent him a letter for his daughter. The contact in North Korea was a broker from the city of Musan, right on the border with China in the Northeast part of the country in the Hamgyeong province, far from Pyongyang. The broker after few days of travel reached Mr. Choi's daughter in the capital and give her the letter and roughly half the sum of the initial money. When she saw the letter from her father she was shocked and she couldn't believe it at the beginning. Indeed, three years before, when her father escaped, North Korean authorities sent agents to her house telling lies about the fate of her father. They claimed that her parents were shot to death while crossing the river to China. It is a practice that the regime often does to arouse terror among people in North Korea preventing any further escapes. The letter was the sign that they were still alive and therefore the proof that the broker was a person that could be trusted. The broker then asked her to go with him to Musan to place a phone call with her parents, connecting his Chinese mobile phone to the Chinese antenna at the border. She agreed. Unfortunately, there is no freedom of movement in North Korea¹⁸⁹ and travels town to town are monitored. The broker eventually managed to

¹⁸⁹ On the liberty of movement in North Korea see also the Report of the detailed findings of the commission of enquiry on human rights in the Democratic People's Republic of Korea at page 100.

obtain a travel permit for her, and after several days of walk they were finally reaching Musan city. They had to climb mountains and travel even during the night without any sort of light to avoid surveillance and patrol guard at the border. Even though the broker's house was enough close to the Chinese telephone antennas, they could not place a phone call because surveillance agents always patrol the city of Musan with special detectors to find any suspect activities related to illegal smuggled devices. The following day, in the morning, they hiked a mountain, reached the peak in the evening and finally placed the phone call to her parents in South Korea. Even though two years had passed without any connection between them, the phone call had to be as short as possible to eliminate any possibility of being detected and tracked down. Thanks to brokers and Chinese cellphones, Mr. Choi managed to contact her daughter and send her money needed to escape the country. In 2010, the family was finally reunited in South Korea, living a normal life in the city of Seoul¹⁹⁰.

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Issued on the 7 February 2014.

http://www.ohchr.org/Documents/HRBodies/HRCouncil/CoIDPRK/Report/A.HRC.25.CRP.1_ENG.doc

¹⁹⁰ Mr. Choi story struck me very much and his interview was one of the main reasons that led me to begin my thesis on this topic. When it comes to meet in person who really gone through the terrific life in North Korea, you begin to take it seriously. Mr. Choi and his daughter were also interviewed by Amnesty International. I highly recommend to watch this video which is the resume of Mr. Choi family story. The video is well made and I believe Amnesty international did a great job in order to promote the knowledge about this topic: Illegal call to North Korea – Is my father dead or alive? https://www.youtube.com/watch?v=MnZF8P_W4Z0

Mr. Choi story is one example of how broker system usually works, and how effective it can be in order to plan defections. There are many other defectors that went through this network of intermediaries in order to contact people in North Korea. Some of them even send Chinese cellphone to China and let designed broker smuggle it in the country to give it to the person they want to contact.¹⁹¹ Nowadays this network of intermediaries is really reliable and very quick. Brokers often smuggle a big quantity of cash in advance and they deposit it in North Korea. When a defector send money to the first broker's bank account in China, the contact in North Korea does not smuggle the cash instead use the deposit already in the country. This method is really quick (especially if the recipient lives near the border) and defectors reported that money remittance some time can reach North Korean recipient within an hour. An NGO worker in Seoul who helps defectors said that the system of broker sometime can be even faster that Western Union.¹⁹²

Perhaps the most dangerous part of the process is getting at the minimum range from Chinese antennas to get the signal. As we already underlined, any movement from town to town is monitored and it requires a special permit to travel the country. The recipient, therefore, has to travel in the shadow avoiding any type of surveillance. This is particularly difficult for men. Indeed, unlike women, men are supposed to work in state-company or in the military. That makes them highly controlled by the regime authorities and if one does not attend his work place inspections are likely to happen. This is the main reason why the

¹⁹¹ This interview is really recent, and the defector states that she sent a Chinese phone through the broker network to her family. She also says that they have to walk for kilometers to get to a secure position to make a phone call: at minute 16:46 of the video: What North Korean Defectors Think About North Korea (Part1) | ASIAN BOSS. <https://www.youtube.com/watch?v=DyqUw0WYwoc&t=908s>. I recommend to listen to the whole interview.

¹⁹² Daniel Tudor & James Pearson, North Korea Confidential, Following the money trail. 2015, pp.31.

majority of defectors are women, being traders in markets or simply housewives make them less subject to the state surveillance.¹⁹³ However, the farther they are from the border, the harder for them is to avoid controls and inspections. Refugees reported that in some cases to receive a phone call people have to travel for kilometers and eventually bribe surveillance guards to make them turn a blind eye.

Others, said that if the recipient already owned a Koryolink phone can use it to make contact with the broker near the border. The broker would receive the phone call from both the party in South Korea on his Chinese cellphone, and a call from the party in North Korea from a Koryolink phone. Then, he places two phones close each other in order to make voice connection between the two parties. The quality of the call would result very low, but thanks to this process, the North Korean caller avoids to walk for kilometers to get close to the border. The only problem with this type of “double call” using both international and North Korean line is that the Koryolink network is highly controlled risking an eventual detection. For these reasons, North Koreans talking on the phone with their counterparts outside the country, always use pseudonyms to cover their real names or others tricks to get a safe conversation in the eventuality of being detected. Allocation of call time is also a huge problem. Phone calls, obviously, have to be as short as possible. In recent years, under the Kim Jong Un regime, restrictions on phone calls and signal tracking devices had a huge improvement. To avoid any detection from the police, North Koreans have to keep conversations brief.

The broker system of money remittances and phone calls is the only way for many North Koreans to contact relatives abroad. Intermediaries working between the two countries

¹⁹³ NK News, Why the majority of North Korean defectors are female? Shinui Kim, July 31, 2013: <https://www.nknews.org/2013/07/why-are-the-majority-of-north-korean-defectors-women/>

are the only link to the outside world for people who do not have the possibility to buy a Chinese cellphone. The network of broker is also a powerful source to send information and money necessary to help loved ones to escape the hermit country. Even though brokers often try to get advantages exploiting North Koreans' precarious situation, the number of success defection increased thanks to this practice.

For this reason, the regime is trying to crack down the smuggle of Chinese cellphone and is keeping a special attention to control people near the border with China to eventually detect people calling on their illegal phones. After all, at the eyes of the regime, any introduction of outside information is a potential virus that can harm the political integrity of the country. How then North Korean authorities manage to monitor people and detect who does not respect the law? And what are the consequence those who commits such illicit practice have to face?

2.7.3. – The surveillance

North Korea is known as one of the most inaccessible and controlled country in the world. Indeed, regime's authorities practice mass surveillance as a routine. The population is highly monitored in order to eventually detect any suspicious behavior or anti-revolutionary acts. Historically, the system that the regime created is based on a person-to-person surveillance, where everyone can report a suspect individual to the police, making people afraid to talk each other about sensitive topics. This system of monitoring each other is so well embedded

in the society that among North Koreans sayings like “rats and birds can hear your whisper” or “even walls have ears” is a common way to aware friends to not speak out.¹⁹⁴

Surveillance had a further improvement since December 2011, when Kim Jong Un regime started to tight controls over border activities and information coming from the outside world. Thanks to the spreading of *jangmadang*, indeed, source of foreign news and media¹⁹⁵ started to play a relevant role in North Korean society and the number of defections dramatically increased. Worried about the stability of its power, the regime started to intensify every level of surveillance, especially regarding telephone signals in proximity of the Chinese border. This move is undoubtedly a sign that the government implicit admit the power of such devices, something that can harm the maintenance of internal security and therefore a threat that have to be neutralized. In order to do that, the regime is always ready to invest huge

¹⁹⁴ To learn more about surveillance in North Korea and figure out what are the various internal security agencies monitoring the people, see: Ken E. Gause, Coercion, Control, Surveillance and Punishment, An examination of the North Korean Police State, Committee for Human Right in North Korea, 1012: https://www.hrnk.org/uploads/pdfs/HRNK_Ken-Gause_Web.pdf . At page 43 a focus on the person-to-person surveillance history and the *inminban* system (neighborhood watch units) introduction with the relative explanation of how is carried out.

¹⁹⁵ On foreign media in North Korea see also: Nat Kretchun & Jane Kim, A Quiet Opening, North Koreans in a Changing Media Environment, Intermedia.org, 2012. I believe this report is one of the best work about the impact of media in North Korea, full of interesting information, defectors' testimonies and analytical analysis:

http://www.intermedia.org/wp-content/uploads/2013/05/A_Quiet_Opening_FINAL_InterMedia.pdf

The impact of foreign media on the people of North Korea is tremendously huge that the regime even created an ad-hoc surveillance unit dedicated to curb the rapid spread of illicit South Korean movies and dramas. It is called “109 squad” (or *gurupa*) and many defectors made reference to it. The squad works at night rushing into houses to arrest people watching illegal media. Defectors reported that if you get caught you suffer harsh punishment or public execution. See in: Ken E. Gause, Coercion, Control, Surveillance and Punishment, An examination of the North Korean Police State, Committee for Human Right in North Korea, 2012, pp 50.

I also recommend to read the Report of the detailed findings of the commission of inquiry on human rights in the DPRK of 7 February 2014 at paragraph 214 to get a picture of the eventual punishment if caught by authority agents (with the voice of defectors who directly faced detentions):

http://www.ohchr.org/Documents/HRBodies/HRCouncil/CoIDPRK/Report/A.HRC.25.CRP.1_ENG.doc.

amount of money assuring modern devices to do the job. North Korea has bought dozens of thousands closed-circuit cameras from China in recent years, deploying them near the border in key points where smugglers or defectors can cross the river.¹⁹⁶ If cameras are useful (when power supply consent to operate them) to spot eventual defectors or brokers getting out or into the country, cellphones are the best way to quick alert other surveillance corps about the position to reach in order to stop illegal activities. Indeed, according to a NewFocus' source, North Korean authorities even distributed cellphones to security forces near the border with China to boost agents' communication speed while patrolling the frontier.¹⁹⁷

Besides methods of surveillance already existing in the country, during the Kim Jong Un regime, authorities intensified the implementation of measures dedicated specifically to curb the phenomenon of smuggled cellphones and telecommunication technology. One example is the installation along the border of devices with the only purpose of jamming radio signals emitted by cellphones. Defectors reported that in recent years due to the blocking signals devices, is becoming more difficult to catch Chinese network signal, and people must go deep inside the mountains, far from residential areas.¹⁹⁸ Is basically the same technique

¹⁹⁶ Recent floods of September 2016 destroyed surveillance infrastructures and the regimes did not wait to set measures to enhance the presence of cameras near the border: Daily NK, North Korea uses CCTV to enhance border surveillance, Kim Chae Hwan, December 2016 <http://www.dailynk.com/english/read.php?num=14277&catald=nk01500> . Refer also to the video of Unification Media Group: North Korea beefs up border security with more CCTVs <https://www.youtube.com/watch?v=ROf1xrLMOxM>

North Korea step up surveillance of citizens with 16,000 CCTV cameras, The Telegraph, Julian Ryall, 2014: <http://www.telegraph.co.uk/news/worldnews/asia/northkorea/9801850/North-Korea-steps-up-surveillance-of-citizens-with-16000-CCTV-cameras.html>

¹⁹⁷ North Korea distributes cell-phones to its surveillance agents, NF NewFocus, 2014: <http://newfocusintl.com/north-korea-distributes-cell-phones-surveillance-agents/>

¹⁹⁸ North Korea: Harsher Punishment for Contact with South, Humans Rights Watch, February 9, 2015. <https://www.hrw.org/news/2015/02/09/north-korea-harsher-punishments-contact-south> The defector interviewed by Human Rights Watch said that she used to call from her living room but now is no more possible to catch the signal. She also stated that she is now afraid to talk the

the regime used for decades to jam radio signals near the South Korean border with the only difference that the new technology is aiming to disturb frequencies used by mobile telecommunication devices. Defectors pointed out that when a phone call is being detected and jammed a sinister static noise¹⁹⁹ start to interfere in the conversation creating a certain sense of fear among caller and recipient:

“When I was in North Korea talking on the phone with my father, my phone call was disconnected because the authorities also used radio interference to interrupt phone calls. He thought that I was arrested, of in some kind of trouble. Luckily, I was not.”²⁰⁰

Beside devices that can only jam radio signals in a wide range, later in years the regime started adopting more advanced method to pursue surveillance on telecommunications. Defectors reported that agents use also sophisticated devices which are also able to follow the signal and lead to the source of it. Also Mr. Choi’s daughter reported that in Musan city

phone for more than one or two minutes and the number of calls she receives has shrunk by approximately 60 percent.

See also: Amnesty International, Connection Denied, Restriction on mobile phones and outside information in North Korea. March 2016. pp. 33.

¹⁹⁹ The creation of the sense of fear is a key point (especially in North Korea where is widely used) to dissuade people to stop a certain activity and making them afraid to being caught and punished. Here is an example of a jamming sound pursued by North Korean authorities: Jammer, North Korean, jamming, the voice of the People, July 24, 2011 <https://www.youtube.com/watch?v=qDv2rAeaXnw> Imagine to be crawling alone in the dark to illegally make connection to the outside world. At the same time, you listen to this sinister sound and you realize that someone knows that you are calling, and is coming for you.

²⁰⁰ The defector was interviewed by Amnesty International on 28 May 2015. Source: Connection Denied March 2016. pp. 33.

near the border, State Security Department (SSD)²⁰¹ agents patrolled the neighborhood with frequency detectors and arrest people. She stated that agents used normal military vehicles but with rotating mechanism with red light on the top, capable to detect frequencies emitted by mobile phones.²⁰²

It turns out that later in years, surveillance agents made use of more sophisticated devices to pursue a more affective and precise monitoring. The majority of defectors interviewed by Amnesty International about surveillance of mobile phones, agreed that they have seen or heard about more advanced and portable devices used by authority agents to control and monitor communications. Some of those devices were reported to be as big as a backpack, while others would even fit in a pocket of a security agent:²⁰³

²⁰¹ According to U.S. and South Korean intelligence, the estimated number of State Security Department agents is around 500.000 units. Is roughly calculated that 1 agent every 50 adults. A recent news (5 February, 2017) on the New Focus International, says that the head of the SSD Kim Won Hong (one of the most brutal man of the regime as the chief of the biggest organ of surveillance and punishment in North Korea who detain control over political prison camps), has been dismissed and many of the officials have been executed. Kim Wong Hong dismissed, official executed: <http://newfocusintl.com/kim-won-hong-dismissed-officials-executed/> He was one of the generals close to Kim Jong Un and his father. On him see also: Ken E. Gause, Coercion, Control, Surveillance and Punishment, An examination of the North Korean Police State, Committee for Human Right in North Korea, 1012 (he is cited at page 19 and is the first of the list of internal security officers listed at page 164): https://www.hrnk.org/uploads/pdfs/HRNK_Ken-Gause_Web.pdf

²⁰² She reported to have seen such devices near the city of Musan, where she contacted her father the first time. In this video the interview at minute 2.47: Illegal call to North Korea – is my father dead or alive? https://www.youtube.com/watch?v=MnZF8P_W4Z0

²⁰³ Amnesty International, Connection Denied, Restriction on mobile phones and outside information in North Korea. March 2016. pp. 33.

“Bureau 27 of the SSD²⁰⁴ has this monitoring device. They are put into backpacks, and agents hold this antenna-shaped device in their hands with red light blinking. They said it was a detecting device. When the Bureau 27 agents came arrest me, they took off their coats and there were these electric cords strapped around their bodies”²⁰⁵

Sophisticated devices of that type can track mobile phone signals with high precision and are also capable of recording the conversation. A defector stated that her friends were once detected and caught. She said that agents first track the signal with high precision, then they follow the source and get at the minimum distance needed to record the contents of the communications.²⁰⁶

It is difficult to imagine that North Korean authorities manage to build such high-tech devices. A surveillance expert source reported to VICE News that such sophisticated technology described by defectors can be attributed to modern IMSI catchers, which are devices that can intercept calls, internet data and also text messages.²⁰⁷ Such technology is

²⁰⁴ The Bureau (Department) 27 is an ad-hoc squad created specifically with the purpose of pick up and monitor electronic emission of signals of radios, computers and smuggled mobile phone. It is a sort of the “109 squad” we mentioned before but specialized in digital operations. On Department 27 see also the Report of the detailed findings of the commission of inquiry on human rights in the DPRK of 7 February 2014 at paragraph 203, 213 and 220.
http://www.ohchr.org/Documents/HRBodies/HRCouncil/CoIDPRK/Report/A.HRC.25.CRP.1_ENG.doc.

²⁰⁵ The defector was interviewed by Amnesty International on 22 May 2015. Source: Connection Denied March 2016. pp. 34.

²⁰⁶ The defector was interviewed by Amnesty International on 18 May 2015. Source: Connection Denied March 2016. pp. 35.

²⁰⁷ IMSI-catchers are also known as Stingrays. They are used in western countries and in the U.S to track and spy telephone calls. Source: Vice News, North Korea Is Apparently Using Sophisticated Tech to Jail Citizens Contacting the Outside World, Ben Bryant, March 9, 2016.

likely to be imported instead of manufactured in North Korea. There is no evidence whatsoever about the real origin of those devices, but according to defectors who experienced surveillance of that type, they are coming from abroad.²⁰⁸

In any case, if the State Security Department (SSD) or other authorities managed to improve their surveillance system, for people in North Korea things are getting worse. If years ago, to place a phone call meant just to watch out for guards and be careful not to be seen, nowadays people have to contrive further methods to avoid surveillance. The rule of keeping phone calls short cannot be neglected, as well as the caution to keep secret personal information. People are now forced to move far from cities or villages where security agents deploy their devices and patrol neighborhood with signal catchers. Finally, when they don't use the mobile phone, they store the SIM card and the battery away from the phone to avoid guards to turn it on during random inspection in households.

It is a sort of cat-and-mouse game. Who is smarter than whom. Guards use advances technologies to enhance their ability of catching people off guard, to punish them or simply to extort bribes. On the other hand, North Koreans seeking contact with the outside world, excogitate tactics to avoid surveillance as much as possible. And as we might imagine, no good news awaits who fail.

<https://news.vice.com/article/north-korea-is-apparently-using-modern-surveillance-to-jail-citizens-contacting-the-outside-world-1>

Also, see IMSI-catcher on Wikipedia: <https://en.wikipedia.org/wiki/IMSI-catcher>

²⁰⁸ A defector heard that some advanced monitoring devices come from Germany. It is impossible to verify, but if such sayings are circulating it is likely that such technology is not made in North Korea. The defector was interviewed in Seoul on 26 February 2015 by Amnesty International.

2.7.4. – What happen if you get caught?

North Korean authorities carry out strict surveillance and control over the people as routine for a specific reason. Anti-revolutionary forces that can undermine the integrity of the country have to be neutralized in order to preserve and protect the socialist system referred to the Juche ideology.²⁰⁹ To do so, the regime follows the framework of laws dictated and amended during the years, applying methods of punishment ranging from re-education to public execution.²¹⁰ There is much to say about arrests and punishment in North Korea, but we will try to keep our attention only regarding the crime related to the possession and use of a Chinese smuggled cellphone.

If a North Korean is caught making an international phone call with a smuggled Chinese phone, or is simply detected while keeping such a device in her/his household, arrest is likely. As it happens for other type of crimes or suspects activities, when you are arrested in North Korea you can only be released if you bribe guards right away with a proper amount of

²⁰⁹ The Juche is the official ideology of North Korea. It was created by Kim Il Sung as a variant of the Leninism and Marxism ideology but with Korean character. Juche became the essence of North Korea and it is represented in many monument in Pyongyang. Juche is commonly translated as “self-reliance” and is mean to be the guide for the North Korean people to pursue the Korean revolution. On Juche see also: Official Web Page Of DPRK

http://www.korea-dpr.com/juche_ideology.html and Wikipedia: <https://en.wikipedia.org/wiki/Juche>

²¹⁰ Here the downloadable PDF of The Criminal Law of the Democratic People’s Republic of Korea amended in 2009 (the last amendment was in 2012 but is still in Korean language), Citizens’ Alliance for North Korean Human Rights. In the first page the record of amendments during the years. Look at chapter 3 at page 10 to learn about punishment related to crime against the state and the nation.
http://eng.nkhumanrights.or.kr/board/download.php?fileno=1103&no=4&board_table=bbs_literature
See also Human Rights Watch, World report 2016: <https://www.hrw.org/world-report/2016/country-chapters/north-korea#81c309>

money.²¹¹ Unfortunately this is not always possible and people who cannot afford to do so they face different treatments.

If the case is considered serious, for example being detected while making an international phone call with the enemy South, the caller would be sent to a political prison camps (*kwanliso*). In lighter cases, a North Korean citizen caught for example keeping a Chinese cellphone in her/his household, would be imprisoned in a reform facilities or reeducation centers (*kyohwaso*) for one or two years.²¹² Things changed in recent years during Kim Jong Un government though, and punishments turned harsher. In fact, North Korean authorities used to treat people contacting the South or trying to escape North Korea by detaining them in reform facilities, facing forced labor in harsh working conditions with lack of food and medicine. But now, they directly send suspected people to the worse political prison camps (*kwanliso*) which are the hardest and deadliest.²¹³ On top of that, bribing Security Department agents is becoming increasingly more difficult. A defector interviewed by Human Rights Watch said that during the years 2014 and 2015, her smuggling businesses decreased by approximately 80 percent due to the tightening of controls and she also stated:

²¹¹ A defector said that when a person get caught, agents check the cellphone history to verify if one had called China or South Korea. She also stated that if you convince agents that the phone is not yours and you pay them properly you can get out easily. The defector was interviewed by Amnesty International in 2015 and reported in: Connection Denied March 2016. pp. 37

²¹² The defector who shared this information was interviewed by Amnesty International and reported in: Connection Denied March 2016. pp. 37. She also stated that most of people were caught by security agents in the first place because they detected their signals using special machines.

²¹³ In this article, also a brief explanation of the punishment people face in political prison campo (*kwanliso*). North Korea: Harsher Punishment for Contact with South, Humans Rights Watch, February 9, 2015.

<https://www.hrw.org/news/2015/02/09/north-korea-harsher-punishments-contact-south>.

A defector (who worked as a broker) interviewed by Human Rights Watch said that after Kim Jong Un took power people caught talking with the South are directly sent to political prison camps.

“It does not matter how much money you can pay or what contacts you have, many of the people I worked with are in political prison camps in North Korea or going through trials if they are Chinese.”²¹⁴

Despite the fact most of the time, crimes such as making contact with South Korea, would be punished with hard labor or detention in political prison camps, recently was also reported that the regime can also decide to give death penalty to those who commit such crime. A North Korean source told DailyNK that death sentence has been imposed upon an individual caught while he was making a phone call with a South Korean counterpart near the Chinese border.²¹⁵ The execution of the man was not public but was used as an example to others and his family had been incarcerated in a State Security Department facility, the source said.²¹⁶

If years ago, arrests and extortion of bribes were arbitrary and totally dependent on agents' will, recently crimes related to the use of illegal Chinese cellphones (also media related crimes and illegal transnational activities) were effectively added on the country's criminal code. North Korea authorities added new clauses that codify severe punishments for illegal behaviors including illicit international communication with the outside world.²¹⁷ There were no references whatsoever on this type of crime until 2014, but now, persecutions of this kind are written on paper. These clauses were added on the Article 60, with worse

²¹⁴ North Korea: Harsher Punishment for Contact with South, Humans Rights Watch, February 9, 2015. <https://www.hrw.org/news/2015/02/09/north-korea-harsher-punishments-contact-south>

²¹⁵ DailyNK.com, Hyesan Man Executed as Example for Rest, Kang Mi Jin, 2014. According to the source, the man did not have time to take the phone apart to hide it from the agents when they checked his household. <http://www.dailynk.com/english/read.php?num=11891&catald=nk01500>

²¹⁶ Ibid.

²¹⁷ DailyNK.com, Criminal Code Inciting Border Fears, Kang Mi Jin, 2014. <http://www.dailynk.com/english/read.php?catald=nk01500&num=11885>

punishments than before which can incur now in the death penalty. The new amendment includes offenses of²¹⁸:

- Making illegal phone contact with foreigners, including South Koreans;
- Aiding and abetting defectors and leaking state secrets;
- Viewing South Korean dramas or DVD's and listening to foreign radio broadcast;
- Using or dealing in drugs;
- Transnational human and sex trafficking.

Even the law now clearly states that a minimum of five years of reeducation or the death penalty can be enforced who those that connect their phones with the outside world, and a minimum of ten years for those who get caught simply watching South Korean media.²¹⁹ The DailyNK's sources who reported this modification to the penal code also said that recently authorities are working hard to detect suspicious activities and to arrest people calling the outside world. He also claimed that people somehow doubt the fact that authorities really execute people for calling South Korea. Nonetheless, everyone is now uncomfortable and afraid to expose themselves calling abroad and many people have already been sent to reeducation centers due to the new amendment.²²⁰

²¹⁸ Ibid.

²¹⁹ Unfortunately, the amendment of 2014 is still in Korean. Here's the latest penal code of North Korea translated in English (amendment of 2009):
http://eng.nkhumanrights.or.kr/board/download.php?fileno=1103&no=4&board_table=bbs_literature

²²⁰ DailyNK.com, Criminal Code Inciting Border Fears, Kang Mi Jin, 2014.

<http://www.dailynk.com/english/read.php?catald=nk01500&num=11885>

Usually, contacts in North Korea who share this precious information with DailyNK or other South Korean based Newspapers are using Chinese cellphones to communicate (which is the only possible way). Therefore, being on site means that they are the first example of people afraid of the tightening on controls. Lately, due to increasing of restrictions, also precious information of this

The fact that the regime is enforcing tight grip along the border and even amend modification or adjustments to the North Korean penal law concerning this matter, tells a lot. It reflects the anxiety of the regime and therefore that of Kim Jong Un. The Supreme Leader is completely aware of the potential of such weapon. The weapon of free and borderless communication is allowing many people to contact relatives and plan defections. People of this type are anti-revolutionary criminals that to the eyes of the regime have to be severely punished.

2.8. – Conclusions

With the present chapter, we analyzed the second face of the mobile telecommunication system in North Korea. We deeply inspected the phenomenon that led the introduction of smuggled Chinese cellphones, enabling North Koreans to get unmonitored communication with the outside world. Paradoxically, the worst and obscure period suffered by the country, was the time when the outside world started to penetrate into regime's border and begin to slowly modify the perception of the life of an increasingly large number of North Koreans.

We started by talking about the historical path that caused the crisis of mid-late 90s, the Arduous March, the time when North Korean regime gave up the Public Distribution System needed to sustain the entire populations. North Koreans suffered extreme conditions of living characterized by shortage of food and the lack of other primary needs necessary to

type that are helpful to understand what's going on in the country are less frequent and contacts in South Korea are more concerned about their safety.

survive. The insane struggle pushed people with hopeless situation to flee the country or search a secondary source of livelihood beyond the defunct PDS system. Private markets and other activities, started to emerge in North Korea, especially among people sharing the lowest social stratus, helping them to find the necessary money and food to endure the famine period. The breakdown and the subsequent development of the black market began to bring modification to the North Korean society, changing the gender roles and making women the real breadwinner of the new Korean households. As one might expect from an all rounded socialistic regime, North Korean authorities commit their selves in the struggle of curbing such capitalistic phenomenon already spreading in every region of the country. Several attempts were made in order to control the market and to put an end to the growing private and smuggling activities, but the series of failures left the regime with no other option but to implicit admit the existence of it and to start an unavoidable coexistence.

The chapter also analyzed how a North Korean *jangmadang* is composed, who are the figures working within the market stalls and the various product North Koreans can buy. Beside food products and other primary items, people (who managed to save enough money) started to search for exclusive goods to improve their living conditions or even to spend their spare time. The introduction of media devices and other advanced products through smuggling activities with China, had a huge impact on the livelihood of North Koreans. Among these devices, we put our attention to the Chinese cellphones and SIM cards that enabled people near the northern border to gain access to the international mobile network. North Koreans who are luckily enough to obtain such precious and expensive (yet dangerous) devices can now contact relatives who have defected abroad, especially in South Korea, to discover what the life beyond the wire fences really looks like.

Depicted in such terms, this bridge of hopeful connection seems an easy and safe expedient, but it isn't. Acquire such device is impossible for the majority of poor North Koreans, the high price is an insurmountable obstacle leaving most of the people without any chance to get one. On top of that, having possession of an illegal mobile phone is very risky and those who make use of it are persecuted by State Security agents. However, for those who have relatives or acquaintances living abroad, there is another way to place an international conversation.

We discovered and examined the system of brokers making business along the Chinese border. This network of intermediaries begins its existence as an expedient to smuggle money and other sensitive products from South Korea, through China to finally reach the recipient in North Korea. Thanks to this network, defectors living in other parts of the globe periodically send money to their acquaintances, money that certainly make a huge impact on the living standards of a North Korean household. Indeed, planning a defection through the help of brokers has a quite high price, reflecting the tremendous risk of such attempt for both broker and fugitive. Neither trafficked nor smuggled, the life for a North Korean who make it through and reach China is still in danger. The path, once crossed the border, is not strewn with roses. China see defectors not as refugees but as illegal immigrants and routinely repatriate them. The only way to achieve safety is to travel for thousands of kilometers in the shadow to seek asylum in another country.

Perhaps, what's more interesting about the broker's cross border activities is that they can arrange phone calls between South and North. Through Mr. Choi story we discover how important the broker system is in order to make connections with North Koreans and planning eventual defections. The latter, is obviously a phenomenon that the regime is trying to

neutralize. North Korean authorities implemented ad hoc measures with the only purpose of jamming and detecting signals emitted by Chinese cellphones. The regime is afraid that viruses of capitalism can destroy the integrity of the pure socialist society of North Korea and therefore is ready to spend huge amount of money to enhance surveillance near the border. After Kim Jong Un took power in December 2011, new technologies and special forces started to emerge in the northern part of the peninsula. The already harsh punishments for those who commit the crime of international communication with South Korea eventually get worse and more deadly in recent years. The anxiety of the North Korean leadership about this topic is so evident that new clauses codifying crimes specifically related to the use of Chinese cellphones were added to the criminal code. Without any doubts, international phone calls and the free exchange of information is something big, something alien that make the regime quiver. Is something that can make the Supreme Leader very uncomfortable, as he stated:

“We must contrive a strategy to neutralize the penetration of imperialism ideology and culture, and reliably set up a double or triple “mosquito net” to prevent the infiltration in our border of the capitalism venom that our enemy tenaciously spread.”²²¹

Kim Jong Un.

²²¹ Kim Jong Un speech, 8th Conference of Ideological Officials of the Korean Workers Party, 24 February 2014.

My translation. The original source: “적들이 끈질기게 들이미는 자본주의 독소가 우리 지경을 넘어서지 못하도록 모기장을 2 중 3 중으로 든든하게 치면서도 제국주의의 사상문화적 침투책동을 물거품으로 만들기 위한 주동적인 작전을 전개해야 한다”.

Appendix 1: my translation of the Koryolink brochure.

Data communication service by using mobile communication

1. Information about the services

This data communication service by using mobile communication is available to customers through mobile handset. Through this service is possible to browse different contents including technology, architecture, industry, TV broadcasts, pictures, music, books and video games.

2. payment information

Customers can choose their category plan from the table below.

	Local currency		Foreign currency		
	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5
Subscription fee	15 won	100 won	420 won	280 won	140 won
Monthly fee		150 won	280 won	420 won	700 won
Free usable data		100MB	500MB	1GB	5GB
Additional data	500KB	500KB	300KB	300KB	200KB
Fee for additional data	20 won	20 won	14 won	14 won	7 won

1) Local currency

Subscribers applying for local currency plan have to make a quarterly payment of 2850 won. The data service is available by using accumulated local currency.

-Local currency plan 1 subscription fee amounts to 15 won and provide service available within 3 days without any additional monthly fee.

Local currency plan 1 do not provide the Free usable data and every 500KB additional unit usage the balance is decreased by 20 won.

-Local currency plan 2 subscription fee amounts to 100 won; the service is available within 1 month with 150 won of monthly fee and you make the subscription payment only once.

Local currency plan 2 provide 100MB free usable data and every 500KB additional unit usage the balance is decreased by 20 won.

2) Foreign currency

This plan is available for subscriber that fill their credit balance with foreign currency.

-Foreign currency plan 3 subscription fee amounts to 420 won, the monthly fee is 280 won and the service is usable within 1 month.

Foreign currency plan 3 provide 500MB free usable data and every 300KB additional unit usage the balance is decreased by 14 won.

-Foreign currency plan 4 subscription fee amounts to 280 won, the monthly fee is 420 won and the service is usable within 1 month.

Foreign currency plan 4 provide 1GB free usable data and every 300KB additional unit usage the balance is decreased by 14 won.

-Foreign currency plan 5 subscription fee amounts to 140 won, the monthly fee is 700 won and the service is usable within 1 month.

Foreign currency plan 5 provide 5GB free usable data and every 200KB additional unit usage the balance is decreased by 7 won.

Subscribers can type *900*# to check their remaining balance. If the monthly fee is not paid the service will be temporary interrupted.

3. Subscription procedure

1) Subscribers can refer to the following notice table and send to the 555 to request the activation or the withdrawal from the data communication service.

	Activation	Deactivation
Plan 1	*#i1A#	*#i1D#
Plan 2	*#i2A#	*#i2D#
Plan 3	*#i3A#	*#i3D#
Plan 4	*#i4A#	*#i4D#
Plan 5	*#i5A#	*#i5D#

2) Subscribers who either activate or deactivate the one's communication service plan will receive a notice message as follow:

<Customer's request has been accepted. Please wait>

4. How to use

The mode of use may change depending on the type of the handset.

Since the mode for smartphones is similar, please refer to the following instructions

1) Creation of the connection point

-To create a connection point, select Settings:

- Settings > Extra > Mobile Communication Network > Connection Point Name > New APN

-Options in the Settings screen

-Leave other selectable items as they are and just set the name of the APN

- After the name selection write a self-explanatory name based on the user intent to connect to the national network
- Select the APN and write KL.H
- Close the Settings screen

2) Homepage connection

to connect to the Homepage of the service proceed as follow

- Open the browser Homepage on your phone
- According to the user purpose, type the corresponding address in the address text box of the Homepage. Please refer to the table below

Homepage name	Homepage address
Information	http://10.99.0.88
Rodongshinmun (Newspaper)	http://10.99.0.9
Yeolpung (Science & Technology)	http://10.99.0.40
Korean Central Communication Agency	http://10.99.0.50
Manbang (TV broadcasts)	http://10.99.0.66
Cyber University (Bookstore)	http://10.99.0.99

- Press enter
- Is also possible to bookmark user favorite Homepage

5. Notices

1) If the intended Homepage cannot be opened, it is necessary to find out the cause from the various causes written below.

- Is the National network data viewing function correctly assigned to the user telephone number?
- Is the telephone data connection function enabled?
- Is the APN set up correctly?
- Does the letter "G" or "H" appear on the antenna symbol of the telephone?

2) After using the data communication service, you must disconnect mobile data function following the instructions below. If you do not follow this rules, you will continue to consume your credit.

- Settings > Data usage > Mobile data (deactivate)

If you cannot find the causes by yourself, you should call the 999 or get a technical service through a sales office, and you can use the service only in that area.

Original source:

이동통신을 리용한 자료통신봉사

1. 봉사에 대한 개념

이동통신을 리용한 자료통신봉사는 가입자들이 손전화기로 자료통신봉사를 받을수 있는 봉사입니다. 자료통신봉사에서는 과학기술, 건축, 공업, 텔레비존방송, 그림, 도서, 음악, 전자오락을 비롯한 여러가지 내용물들을 열람할수 있습니다.

2. 요금에 대한 소개

가입자들은 아래의 요금부류를 선택할수 있습니다.

	내화부류		외화부류		
	1 부류	2부류	3부류	4부류	5부류
가입비	15 원	100원	420원	280원	140원
월사용료		150원	280원	420원	700원
무료사용용량		100MB	500MB	1GB	5GB
용량삭감단위	500KB	500KB	300KB	300KB	200KB
추가요금삭감단위	20원	20원	14원	14원	7원

1) 내화부류

내화부류는 가입자들이 분기요금 (2 850원) 을 지불하고 잔고로 축적되는 내화를 리용하여 자료통신봉사를 받을수 있는 부류입니다.

-내화 1부류를 리용하려면 가입비 15원을 지불하고 3일동안 사용가능하며 월사용료는 지불하지 않습니다.

내화 1부류에서는 무료사용용량을 제공하지 않으며 500KB 를 단위로 하여 20원씩 요금을 삭감합니다.

-내화 2부류를 리용하려면 가입비 100원, 월사용료 150원을 지불하고 한달동안 사용가능하며 가입비는 한번만 지불합니다.

내화 2부류에서는 무료사용용량 100MB 를 제공하며 500KB 를 단위로 하여 20원씩 요금을 삭감합니다.

2) 외화부류

외화부류는 가입자들이 외화를 충전하여 자료통신봉사를 받을수 있는 부류입니다.

-외화 3부류를 리용하려면 가입비 420원, 월사용료 280원을 지불하고 한달동안 사용가능합니다.

외화 3부류에서는 무료사용용량 500MB 를 제공하며 300KB 를 단위로하여 14원씩 요금을 삭감합니다.

-외화 4부류를 리용하라면 가입비 280원, 월사용료 430원을 지불하고 한달동안 사용가능합니다.

외화 4부류에서는 무료사용용량 1GB 를 제공하며 300KB 를 단위로 하여 14원씩 요금을 삭감합니다.

-외화 5부류를 리용하려면 가입비 140원, 월사용료 700원을 지불하고 한달동안 사용가능합니다.

외화 5부류에서는 무료사용용량 5GB 를 제공하며 200KB 를 단위로 하여 7원씩 요금을 삭감합니다.

가입자들은 *900*# 눌러 요금상태를 확인할수 있으며 월사용료를 지불하지 않으면 가입한 봉사에 대하여 임시 중지상태에 들어가게 됩니다.

3. 가입절차

1) 가입절차들은 다음의 통보문을 555로 전송하여 요구하는 요금부료별에 따르는 자료통신봉사에 가입하거나 탈퇴할수 있습니다.

	가입	탈퇴
1부류	*#i1A#	*#i1D#
2부류	*#i2A#	*#i2D#
3부류	*#i3A#	*#i3D#
4부류	*#i4A#	*#i4D#
5부류	*#i5A#	*#i5D#

2) 가입자가 선택한 봉사부류에 정확히 가입하거나 탈퇴하면 아래와 같은 통보문을 받게 될것입니다.

<손님의 봉사신청을 접수하였습니다. 잠시 기다려주십시오.>

4. 사용방법

손전화기형에 따라 사용방법은 차이를 가지고있습니다.

그러나 지능형전화기에서의 사용방법은 비슷하므로 이 방법을 서술하였습니다.

1) 접속점창조

-접속점창조를 위한 설정의 선택

설정 → 기타 → 이동통신망 → 접속점이름 → 새 APN

-설정화면에서의 설정

여러 선택항목들에서 다른 설정항목들은 그대로 두고 이름과 APN 만을 설정해줍니다.

이름항목을 선택하고 국가망열람 사용자의 의도에 따라 자체로 알아볼수 있는 이름을 써넣습니다.

APN 항목을 선택하고 KL.H 로 써넣습니다.

설정화면을 닫습니다.

2) 열람홈페이지접속

홈페이지열람봉사기에로의 접속은다속은 다음과 같이 진행합니다.

전화기의 홈페이지 열람기를 엽니다.

홈페이지주소칸에 사용자가 목적하는 열람봉사기의 주소를 아래의 표에서 선택하여 써넣습니다.

홈페이지 이름	홈페이지 주소
안내	http://10.99.0.88
로동신문	http://10.99.0.9
열풍 (과학,기술)	http://10.99.0.40
조선중안통신사	http://10.99.0.50
만방(텔레비죤방송)	http://10.99.0.66
원격대학(김책공업종합대학)	http://10.99.0.99

5. 주의사항

1) 만일 목적인 홈페이지가 펼쳐지지 않을 때에는 아래의 원인중에서 그 원인을 찾아 퇴치해야 합니다.

지가의 손전화 번호에 국가망 자료열람 기능이 할당되어있는가?

전화기의 자료접속기능이 활성화되어있는가?

설정된 APN 이 정확한가?

전화기의 안테나그림에 G 또는 H 글자가 나타나있는가?

2) 자료통신봉사를 사용한 후 반드시 아래의 경로로 자료사용을 해제하여야합니다. 이요구사항을 지키지 않으면 요금이 계속 삭감됩니다.

설정 → 자료사용 → 이동통신자료(해제)

원인을 자체로 찾을수 없는 경우 999를 호출하거나 판매소를 통하여 기술봉사를 받아야 하며 해당한 망지역에서만 봉사리용이 가능합니다.

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Gaining reliable information about North Korea is not an easy task. Among all websites, I really want to recommend some of them. They are truly reliable as they maintain access with correspondent inside North Korea. Founded by defectors in the South, these websites communicate with brave North Koreans that use Chinese cellphones to send precious information. I check these interesting webpages on a weekly and some of them on a daily basis.

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- Daily NK (dailynk.com)
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