

The University of Nottingham Ningbo China

School of International Studies

**Crossing the Ya-Lu River:
Chinese Economic Activities in North Korea Post-2002**

Student Name: Bo GAO

Student ID: 6508435

Abstract

This thesis examines the effectiveness of China's economic activities in North Korea in terms of resolving China's domestic non-traditional security problems. It studies the implementation of China's foreign economic policy towards North Korea. The thesis uses qualitative research methodology to study the economic activities launched after 2002 near the Sino-DPRK border and in North Korean ocean territory. It hypothesises that the commercialisation of China's foreign economic policy towards North Korea is driven by actors below the state in order to resolve their socio-economic problems at the sub-state level. This policy-transition from original pro-aid economic policy to North Korea also has important implications for the regional order in Northeast Asia. These implications include advancing the economic reform process in North Korea, worsening the relationship between China and South Korea, and reducing the effectiveness of the international effort to denuclearise North Korea. The specific non-traditional security problems which have driven three major sectors of China's economic activities in North Korea, i.e. mineral resource and energy sector, fishery industry sector and cross-border activities sector, include issues such as environment pollution, resource scarcity, labor shortage and cultural decline that diverge from the China's strategic targets to Korea Peninsular. This thesis explores the link between high and low politics in the implementation stage of Chinese foreign policy through the relatively active role of actors below the state in Sino-DPRK economic cooperation and their impacts at the regional level after 2002 in contrast to the previous dominant role of central government in this field.

Keywords: Domestic governance, Sino-DPRK relations, Northeast Asia affairs

Acknowledgment

The author wishes to express his gratitude to: Dr Ivaylo Gatev for supervising my work and for guiding me during my whole research, providing opportunities for being teaching and research assistant, and funding my trip to Northeast China in 2014; Dr Catherine Goetze, Dr Christopher Pierson, Dr Miwa Hirono , Dr Jonathan Sullivan and Dr. Gregory Moore for their help as my second and third supervisor during different periods of my research; Dr Wang Cungang for reading and commenting on the theory selection in my empirical chapter-oriented paper for the annual conference of Asian Politics and History Association 2014 in Shenzhen; Dr Liu Zhengning for hosting me during my research trip and his invaluable help in contacting potential interview respondents in Dalian ; Institute of Asia Pacific Studies and Graduate School of University of Nottingham, Ningbo China for sponsoring my conference travel in in Nottingham, Shenzhen, Seoul and Beijing. Finally, the author wishes to thank his family especially his parents for their financial and emotional support and patience without which this thesis would not have been written.

Contents

Introduction.....	7
1. Background.....	7
2. Research Puzzle and Gap.....	8
3. Research Questions.....	11
4. Hypothesis.....	14
5. Brief Introduction to the content of each chapter.....	15
Literature Review.....	19
1. Status-quo, problems and strategies of Sino-DPRK economic relations.....	19
2. China's central/regional relations in its economic interaction with DPRK.....	23
3. Non-traditional security problems in China and Northeast Asia.....	29
4. Implementing China's foreign economic policy.....	33
Concept of Complex Interdependence and Multi-level governance approach: selection and interpretation.....	37
1. What is realism and its incongruity to current Sino-DPRK relations.....	38
2. Liberalism, complex interdependence and multi-level governance.....	40
2.1. Complex interdependence.....	41
Increasing linkage between state and non-state actors.....	44
Multiple channel of interaction between states.....	45
The military is not useful in resolving problems.....	47
Less hierarchy between low-high politics; the blurred difference between domestic and external affairs.....	48
2.2. Multi-level Governance.....	51
The definition of Governance and Multi-level governance.....	51
Types.....	54
Decentralization in China.....	55
Relevance of Multi-Level Governance to Chinese de-centralisation and selected concepts.....	58
3. Security Issues.....	63
4. Methodology.....	66
Chapter 4 China's economic activities in the North Korean mineral resource sector.....	71

1. Introduction.....	71
2. Chinese enterprises: different types of SOEs and economic activities in DPRK.....	71
3. China's economic activities in North Korea in the sector of mineral resource.....	74
3.1 Economic activities at the state level.....	75
3.2 Economic activities at the level below the state.....	76
3.3 Drivers and consequences of China's economic activities in North Korean coal mines.....	81
3.4 Drivers and consequences of China's economic activities in North Korean Rare-Earths.....	88
3.5 Drivers of China's economic activities in North Korean iron mining and central-local divergence.....	90
4. Conclusion.....	93
Chapter 5. China's economic activities in the North Korean fishing industry.....	97
1. Introduction.....	97
2. China's economic activities in North Korea in the fishing industry.....	98
3. Drivers 1: Response to the reduction of China's fishing area caused by the signing of the China-ROK fishery agreement.....	105
3.1 Difference between old & new agreements.....	105
3.2 Driver 2: Seeking a clean alternative fishing area due to the heavy environmental pollution in the offshore area of China.....	112
3.3 Driver 3: Influence of the nuclear accident in Japan.....	118
4. Divergence between central government and local actors.....	121
4.1 Background of fishery incident.....	121
4.2 Beijing's punishment: worsened Sino-DPRK relation.....	123
5. Conclusion.....	124
Chapter 6. Chinese cross-border economic activities in North Korea.....	127
1. Introduction.....	127
2. China's drivers for implementing economic activities in North Korea border areas.....	129
2.1 Economic security.....	129
2.2 Border security: illegal immigrants.....	131
3. Economic Activities.....	139
3.1 The Mutual management of the Rason Special Economic and Trade Zone.....	139

3.2 Physical infrastructure co-operation.....	140
3.3 Labor/ Light industry co-operation.....	146
3.4 Tourism cooperation.....	147
3.5 Agricultural Co-operation.....	149
4. The effectiveness of Chinese economic activities in North Korea on resolving and mitigating the non-traditional security issues in the China border areas near North Korea.....	151
4.1 Labour shortage and population outflow.....	151
4.2 North escapees.....	156
5. Reasons for Beijing's distant-governance in Sino-DPRK cross-border cooperation.....	164
5.1 Illegal immigration.....	164
5.2 Cultural decline and labor shortage.....	166
6. Conclusion.....	168
Chapter 7 The Regional Impact of Chinese economic activity in North Korea.....	171
1. The Implications for North Korea Economic Reform and Opening Up.....	171
1.1 The history of failed North Korean economic reform and opening up.....	172
1.2. The domestic barriers to North Korea's opening up.....	175
1.3 The role of Chinese economic activities in North Korea in promoting North Korea's own economic reform and opening up.....	180
2. Implications of the China-South Korean Jeodo Island-centred dispute of economic zones....	189
2.1 Background.....	189
2.2 The obstacles to resolving the dispute.....	190
3. Implications for the role of South Korea and US aid in de-nuclearising North Korea.....	195
3.1 South Korean aid to North Korea.....	196
3.2 US aid to North Korea.....	201
3.3. The implications of Chinese economic activities on the de-nuclearisation of North Korea	203
4. Conclusion.....	206
Conclusion.....	208
Bibliography.....	229
Appendix.....	273

Introduction

1. Background

China and North Korea had become blood allies since the beginning of the Cold War, in particular following the friendship built during the Korean War against US-led UN troops. Since then, China has offered large amounts of funds and material aid to North Korea according to the Treaty of Friendship, Cooperation and Mutual Assistance between People's Republic of China and Democratic People's Republic of Korea. The harsh ideological disputes about orthodox schooling and the revisionism of socialism during the Cultural Revolution and China's establishment of a diplomatic relationship with South Korea in 1992 have not halted the aid from Beijing to North Korea which maintains the survival of China's strategic buffer zone against the United States and its allies.

In the post-Cold War era, especially since the early 2000s, the Sino-DPRK relationship has become commercialised. It started with the entry of a small number of Chinese companies into North Korea in the early 2000s and officially began with the signing in 2005 of the Agreement between the Government of the PRC and the Government of the DPRK for the Promotion and Protection of Investment. Chinese economic activities in North Korea expanded rapidly in several fields such as mineral resources, the fishing industry, physical infrastructure, tourism, and labour cooperation. The commercialisation of the Sino-DPRK relationship can be observed from three specific changes. The first is the reduction of official economic assistance and rapid increase of investment. According to an official report from South Korea the number of Chinese investment projects in the DPRK increased from 1 to 144 (KOTRA, 2012) between 2002 and 2011. The second change concerns multiple economic actors. The new Chinese economic

activities have been implemented by not only the central government but also the sub-state level economic actors. The latter, such as local companies and regional governments (city and province), are also more active than central government in the huge field of investment in North Korea. Such investment includes those made in the market store; the construction of social infrastructure (such as roads and railways); mineral extraction; computer production; marine production and fishing licensing. The third change relates to the measures taken to support North Korea which has been transformed from direct official assistance to a mixture of official assistance and investment in order to help Pyongyang develop its own economic strength. The Chinese government aims to encourage Pyongyang to follow the Chinese style of economic reform and achieve integration into the international economy. This idea however is rejected, or at least resisted, by Pyongyang. The response from China has been to promote and encourage investment in North Korea, and to use technical assistance in exchange for natural resources with a view to improving North Korea's technological capability in the short term and building the long-term comprehensive economic self-development abilities of North Korea rather directly aid.

2. Research Puzzle and Gap

In the current research on the Sino-DPRK economic relationship, there are two major research strands. The first, mainly researched by Chinese scholars, is dominated by discussions of the existing problems in Sino-North Korea trade and measures taken to address them. The main problems include huge difficulties in, and risks of, trade settlement, the increase in North Korea's outstanding payments and the negative influences of political issues, such as the nuclear crisis in North Korea. Relevant measures include the promotion of inter-government co-operation and the institutionalisation of trade, providing aid for the construction of infrastructure

and the resolution of North Korea's nuclear problems (Lin, 2009: 37-43; Wang, 2008: 48-50; Zhang, 2006: 3-8; Lv and Zhang, 2009: 84-92; Zhang, 2011: 13-21). Man (2011) uses the case of Dandong-Sinuiju economic co-operation to explain a top-down model of the Sino-DPRK economic relationship and predicts future developments. Shen (2008) also discusses the problem of North Korean escapees to Northeast China and their negative impact on China's diplomacy.

The second research strand provides explanations for China's economic policy regarding North Korea, especially from the general state level, and in the traditional area of security, such as the aim of maintaining regional stability and peace and avoiding the collapse of North Korea (Russell, 2000: 47-64; Moore 2014:77-80). Hundt (2010: 132-42) and Chang (2005: 118-130) claim that Beijing's ultimate objective in pushing Chinese economic activities in North Korea is in order to sustain regional stability, thereby persuading Pyongyang to restrain itself and attempting to lower the possibility of a US attack on North Korea. Ikenberry and Moon (2008: 45-59, 140-150) point out that China aims to use North Korea as a tool to increase its regional influence and ensure security by balancing the US military influence in Northeast Asia. Haggard and Noland (2009: 10-12) recognise that Beijing plays a key role in the encouragement of investments in North Korea because it aims to promote regional economic integration of Russia's Far East, Northeast China and the Korean Peninsula, in particular the Great Tumen River Initiative. Choo (2008: 360-70) sees the rapid increase of Chinese investment as Beijing's strategic objective of leading North Korea towards economic reform, increasing its dependence on China and finally achieving de-nuclearisation of North Korea. Kim (2011: 257-271) also takes the example of Sinuiju, a North Korean city on the Sino-DPRK border, as an indication that the intention of Chinese economic investment in North Korea is to develop Northeast China.

Indeed, the previous research outlined above is helpful in understanding the Sino-DPRK economic relationship. However, little work has been done on the specific activities in the field of China's economic activities in North Korea from the non-military security drivers and actors below the state level. This research is not about the structural change of Chinese economic activities, rather it considers Beijing as the one who controls and orchestrates the actions of the other Chinese actors and recognises traditional security as the main motivation of Beijing. Even though they contributed to the non-traditional security problems, the major impact is still discussed around the central government with two major weaknesses.

Firstly, Chinese economic activities have changed with the rapid increase of Chinese investment and the reduction of official assistance. Its role has been weakened as a result of domestic de-centralisation of the economy (because Beijing has re-centralised political power since Xi became President) and active engagement of actors below the state level with North Korea. Meanwhile, the requirement of developing Northeast China is both too wide and too partial for of two reasons. On the one hand, compared to the Northeast provinces of Jilin and Liaoning provinces, Heilongjiang province (also in Northeast China) is almost irrelevant to the border economy with North Korea. However, it has benefited from developing a cross-border economy with the Russian Far East. On the other hand, Chinese economic actors in the DPRK are not only from Northeast China but also from other coastal provinces. The spread of ethnic Korean businesses towards other coastal areas of China have created multiple identities for these businessmen and expanded the relationship between North Korea and different provinces outside Northeast China. For instance, Zhejiang province in the **Southeast China** encourages ethnic Korean businesses to join the local chamber of commerce. Thus, the requirement of developing Northeast China is only one reason for Chinese economic engagement with DPRK.

Secondly, the idea of traditional security-oriented motivation could explain Beijing's active organisation of the Six-Party Talks and other mediation between North Korea and the US in order to avoid potential military invasion by the US of North Korea and protract a complete resolution of the North Korean nuclear problem through diplomatic negotiation. However, it is not appropriate to explain Beijing's intention to implement economic activities in North Korea from both general strategic and specific details. From the general strategy and military view, Beijing has avoided a potential short-term regional war on the Korean Peninsula through its mediation. It successfully sustained the regional peace and fundamental order even it is a cold peace on the brink of military conflict. Its encouragement to invest in North Korea aims to strengthen its influence over the country, to push through economic reform and to raise expectations that the investments of actors below the state level could help the construction of independent developing abilities of North Korea in non-military areas to reduce the burden of offering economic assistance.

From the specific areas of investment, even if the official assistance could be seen as a tool for sustaining the survival of the Pyongyang regime, it could be very difficult to connect the investments motivated by resolving local socio-economic problems with the grand strategy of central government, especially as there is divergence between local requirements and national strategy.

3. Research Questions

There are four major research questions:

1. What is the relationship between Beijing and actors below the state level in their economic activities in North Korea since 2002?

2. What drives the actors below the state level to implement economic activities in North Korea and what are their differences from the national interests?

3. What is the impact of Chinese economic activity in North Korea on regional security and China's grand strategy in Northeast Asia?

4. What does this mean to the making of China's foreign policy?

The first question addresses three points. Firstly, it aims to make clear the specific activities of central government and actors below the state in North Korea. Secondly, the relationship between Beijing and actors below the state is described by outlining and comparing the amount, the types and the funding of economic activities implemented by actors at the state level (central government and central state-owned companies) and at the level below the state (governments on the province and city levels, local state-owned companies and private enterprises) in North Korea since 2002. Thirdly, in contrast to the (Beijing-dominant) relationship of central-local/sub-level actors in economic interaction with North Korea in the Cold War era, the (bottom-up) characteristic of this central-region relationship is discussed specifically.

The second question aims to highlight three points. The first concerns the drivers of actors below the state level in the implementation of economic activities in North Korea. The point after that is how effective these activities are in helping resolve such local problems faced by China as environmental pollution, population outflow, local industrial development, and the loss of traditional fishing areas. The final point is to demonstrate that these activities are mainly driven by the desire to protect local interests. This can be examined by making comparisons between the local and national data related to these economic activities. Usually these economic activities focus on the local interests because their product outputs are relatively significant to the local level but very small at the national level.

The third question mainly evaluates the general impact of Chinese activities in North Korea on the regional security of Northeast Asia, especially the Korean Peninsula, at three levels. The first level is the domestic level of the Korean Peninsula, in particular the economic reform and opening up of North Korea. It discusses how Chinese economic activities push North Korea to broaden its economic 'opening up' to the world and avoid regime collapse by attracting funding. The second level is the relationship between China and South Korea. This reveals that the rapid increase of Chinese economic activities in North Korea has led to concerns in South Korea about the economic over-dependence of North Korea on China and created further negative impact on Sino-ROK relations, especially the resolution of historical disputes. The third level is the general regional security problem, especially the de-nuclearisation of North Korea through Six Party Talks. It illustrates how Chinese economic activities offer the fundamental conditions of Six Party Talks by avoiding the collapse of the North Korean regime. However, in general, the huge amount of funding brought about by these activities weakens the weight of US economic leverage to engage the de-nuclearisation of North Korea and almost make it impossible to de-nuclearise North Korea through dialogue and economic pressure.

The final research question focuses attention on the process of China's foreign policy-making as it becomes more pluralistic with the de-centralisation of power from Beijing. The central government is not the only, nor the ultimate, policy-implementing body on foreign economic policy. Multiple actors below the state level, such as provincial and city level governments, local state-owned companies and private enterprises, and even social associations and the general public, can play a role in China's foreign policy-making, especially at the implementation stage, allowing their own voices to be heard and protecting their interests.

4. Hypothesis

The hypothesis is that the commercialisation of the Sino-DPRK relationship is driven by a multiplicity of actors below the state level, which include governments at the provincial and city levels, local state-owned companies and private enterprises, as well as social associations. These actors have become economically engaged in North Korea at a deep level. Their activities both contribute, and occasionally run counter, to Beijing's overall objectives of keeping regional peace and stability in Northeast Asia and sustaining positive relationships with neighbouring countries. **At a higher level, the implementation of China's foreign economic policy is pluralistic with the decentralisation of Beijing's authority and active engagement of actors below the state level. Even the decision-making of China's foreign economic policy is pluralistic in special cases such as Chang-Ji-Tu National Strategy which will be introduced later in the empirical chapters.**

This thesis contributes to the existing literature by adding new ideas. First of all, a comprehensive picture is drawn of Chinese economic activities in North Korea. It includes activities implemented by actors in different provinces (Zhejiang, Shandong, Henan and Chongqing) rather than focusing only on Jilin and Liaoning provinces in Northeast China as much previous research has done. This is followed by an illustration of the changed relationship between Beijing and actors below the state level (the majority of Chinese actors in North Korea) in the implementation stage of foreign economic policy which concerns economic participation in North Korea. The traditional hierarchical central-local relationship during the Cold War is being replaced by a bottom-up model with the de-centralisation of Beijing's power over the economy. Furthermore, with the increased distance of Beijing from the administration of local affairs, Chinese economic activities, participated in mainly by actors below the state level in

North Korea, are driven by reasons of developing the local economy and resolving non-traditional security problems. They are less limited by the concerns of national interests at the strategic level and even run counter to the national interests in some cases. This thesis aims to improve new insights from the sub-state view but not attempting to trivialise the military factors behind Beijing's motivations of promoting and encouraging Chinese economic activities to North Korea. These significant military factors, which include consolidating North Korea domestic stability and avoiding refugee wave led by the regime collapse, which have been frequently discussed and mentioned in the previous scholarships.

5. Brief Introduction to the content of each chapter

The literature review firstly outlines different schools of thought and the related literature on Sino-DPRK economic relations, such as the different schools of thought on the motivation for the implementation of economic activities in North Korea (developing Northeast China, protecting national military security, and increasing economic influence in North Korea). Then it discusses the gap which exists between this research and the present situation of the Sino-DPRK economic relationship since 2002, especially the limitations of the existing literature. These limitations concern the lack of due consideration given to economic de-centralisation in China and the enlarged scale of Chinese economic actors beyond Northeast China. Finally it clarifies the contribution that this thesis expects to make by drawing a comprehensive picture of Sino-DPRK relations, non-traditional security concerns driven by economic activities, and the bottom-up model of central-local relations in China's foreign economic policy implementation in North Korea.

The chapter on theory and methodology firstly presents the reasons for choosing neo-liberal theories, especially multi-level governance and complex interdependence, to inform the research. The focus on economic co-operation and multiple actors calls for drawing on neo-liberal approaches, rather than realist approaches which pay more attention to military security and single state-centred competition. The chapter provides an overview of complex interdependence and MLG theory, focusing in particular on the four characteristics of complex interdependence, two major modes of multi-level governance, and several other concepts that the research draws on. Qualitative research methods used are also outlined. There are three sources of data collection: documentary analysis (official reports and documents); field trip (to South Korea, Northeast and coastal areas of China which have a business relationship with North Korea); and elite interviews (i.e., with scholars, businessmen, governmental officials, and journalists). It also explains the significance of using triangulation to check the validity of data. This is particularly relevant in China where information about North Korea is considered sensitive and is therefore difficult to obtain.

Following the literature review and the theoretical/methodological chapter are three empirical chapters. The first of these, Chapter 3, discusses activities in the sector of mineral resources, e.g., direct investment and the foundation of joint-ventures; drivers here being the prevention of environmental pollution, the development requirements of local industry, and the reduction of economic costs. In this section, actors below the state level are the major actors in Chinese economic activities in North Korea whereas the central government in Beijing remains directly involved in a few economic activities in North Korea relevant to central state-owned companies. Meanwhile, Beijing also provides aid to North Korea in order to help the achievement of economic activities of several local Chinese state-owned companies.

Chapter 4 discusses activities in the fishing industry, such as the civil co-operation programme, direct investment and buying fishing licenses, the drivers being the foundation of alternative fishing areas to combat reduced traditional fishing fields, seeking a cleaner environment, and the impact of the Japanese nuclear accident. Actors below the state level are the major actors of Chinese economic activities in North Korea while Beijing plays the role of opportunities-supplier and diplomatic emergency mediator.

Chapter 5 discusses activities in the sector of cross-border movements, including physical infrastructure, tourism, and light industry with the drivers being improvement of the local economic conditions, reduction of population outflow, and border controls. Actors below the state level are the major actors of Chinese economic activities in North Korea whilst Beijing plays the role of the agent who builds the connection between North Korea and governments at the province and city level. Beijing also offers assistance to increase the attractiveness of the 'Chang-Ji-Tu project' in Jilin province to the national strategy in name only, i.e., without any other practical support.

Chapter 6 is a discussion of the impact of China's economic activities in North Korea on the regional security order of Northeast Asia, with a focus on the Korean Peninsula. The chapter follows the previous logic that the impact of China's economic activities has more divergence than consistence to the national strategy of Beijing in maintaining regional peace and stability as well as in sustaining positive relationships with neighbouring countries. On one hand, the positive impact is pushing North Korea's economic 'opening up' and avoiding regime collapse in Pyongyang. China's economic activities offer enough funding to North Korea to improve its attractiveness in terms of physical infrastructure to external funding from other countries, and at the same time, because of Pyongyang's concern of economic overdependence on China to push it

to enlarge its scale of use of non-Chinese foreign investments. On the other hand, China's rapid increase of economic engagement in North Korea has made South Korea increasingly anxious about the weakened sovereignty of North Korea and even the practical status of a fourth province of Northeast China. Meanwhile China's increasing control of North Korea fishery resources also reduces South Korea's opportunities to develop its fishery industry in North Korea. Thus, the dispute between China and South Korea over oceanic economic zones has intensified and caused several rounds of negotiations to fail. Furthermore, Chinese economic activities reduce the effectiveness of US economic aid and subsequently delay the de-nuclearisation of North Korea through dialogue in the Six Party Talks. China's economic programmes in North Korea, backed by large amounts of funding, actually increase the expectation of North Korea for aid from the US. This aid is used to exchange the de-nuclearisation of North Korea so that the national security and survival of Kim's family is assured. However, the aid from the US has always been extremely small in contrast to Chinese economic funding.

The thesis concludes with some thoughts on the drivers of economic activities in North Korea, central-local relationships in China, regional impacts of Chinese economic participation in North Korea, as well as the usefulness of neo-liberal approaches to understand the implementation of the foreign economic policy of non-liberal states like China. The implications and contribution of this research at both empirical and theoretical levels, and its limitations are made clear.

Literature Review

With the increased transparency of information about economic interaction with North Korea, there has also been an increase in the literature about Chinese economic activities in North Korea. The existing literature on the topic discusses Beijing's motivation for economic engagement with the DPRK, as well as its significance and effect. However, there is still room for new approaches to add to that literature. In the following paragraphs these new approaches to the immediate scholarship within different schools of thought are outlined separately. Following this is a discussion identifying the contribution of this research to the wider academic literature on China's foreign economic relations, China's non-traditional security problems, as well as the relevant IR and governance theories about interstate relations and central/regional relations.

There are several major schools of thought in the current research into Sino-DPRK relations. These focus on four different fields; China's central/regional relationship in its interaction with North Korea; China's domestic motivations for economic co-operation with North Korea and the relevant consequences; the status-quo of economic interaction with problems and corresponding strategies; and China's non-traditional security problems as they relate to North Korea.

1. Status-quo, problems and strategies of Sino-DPRK economic relations

Many scholars focus on the state of play of Sino-DPRK economic interaction at the regional level. They outline the economic co-operation between Northeast China and North Korea, mainly in the different sectors, reinforce the transition of Sino-DPRK economic relations from a pro-aid to a pro-investment win-win model, summarise the problems faced by regional

governments and other business actors from Jilin and Liaoning province; and offer suggestions as potential solutions to those problems. Piao (2012:46-50) emphasises that after the 2000s, Sino-DPRK economic relations developed in a different way from their political relations. The bilateral political relations, which strengthened bilateral trade during the Cold War era and restrained it in the 1990s, is not influential in the Sino-DPRK economic relations in the 2000s. This economic relationship did not follow the requirement of strategic security to maintain the survival of North Korea. Rather, it became increasingly important and flexible, and kept increasing rapidly under conditions which saw Sino-DPRK political relations worsen due to bilateral conflicts surrounding the nuclearisation of North Korea. Sino-DPRK economic relations changed from being strategic-security oriented to market oriented. Kawk and Joo (2007) and Nanto and Charlett (2010: 36-37, 55-57) note that after 2000, especially following the second nuclear crisis on the Korean Peninsula which began in early 2003, China's economic participation in North Korea increased rapidly and severely impacted North Korea's independent policy-making. Yoon and Lee (2013: 20-25) also comment on the change of Sino-DPRK economic co-operation from one-sided aid to a win-win model of mutual co-operation. Chinese economic actors face both domestic and external problems during their economic participation in North Korea. On the one hand, domestically, Beijing is distant from the direct management of Sino-DPRK economic relations. This lack of top-down unified management from Beijing led to separated co-operation between China's sub-level actors and North Korea without a single comprehensive unified system of co-operation (Xu, 2009: 11-12; Yu, 2008: 32-34; Xu, 2011: 51-54, Li, 2012: 35-39). External problems include potential risks such as the deadlock of Six Party Talks and regional military conflicts between South Korea and North Korea. As the target of Chinese economic participation, North Korea also has problems concerning a shortage of

necessary institutional and hardware conditions to attract external funding. On the other hand, Beijing's trust in the North Korean leadership declined after Pyongyang's frequent promises to de-nuclearise and its withdrawal from the Non-Proliferation Treaty re-ignited nuclear problems. North Korea also lacks a comprehensive law system which could provide support and protect external investments. On the other hand, North Korea also has a problem of insufficient physical and financial infrastructure. Regarding physical infrastructure, even in Pyongyang the electrical supply is not stable for ordinary citizens. In order to screen any external news which might threaten the survival of the regime, North Korea set up special free trade zones such as Sinuiju and Rason. These are economic zones which are separated and developed by other countries without any involvement or support from North Korea such as physical infrastructure (e.g., supply of electricity and water). North Korea's financial infrastructure is also under-developed in terms of cross-border business settlement between the banks of the two countries (Zhang, Lu and Sun, 2009: 36-37; Park, 2012: 46-50; Zhang, 2011: 12-22).

To address the problems in Sino-DPRK economic relations mentioned above scholars offer different resolutions. The majority advise a strengthened role of central government in bilateral economic relations. Wang and Zhang (2014: 456-8, 462-9) call for increased support from central government for an institutional framework for Sino-DPRK economic interaction at the top-level. Beijing should also increase its communication and interaction with Pyongyang on policy co-ordination in order to avoid clashes and conflicts concerning economic policy-making. Apart from the previous trade promotion and protection agreement, relevant co-operation agreements need to be implemented to improve the bilateral economic legal system in the fields of Custom House, Bank, Tax, i.e., increasing the amount of financial institutions in the two countries to promote the efficiency of business settlement, starting bilateral dialogue for making

policy on the cross-border circulation and management of RMB, Custom House co-operation agreement, and avoidance of double taxation. Beijing should work together with Pyongyang to increase transparency in the publishing trade and investment policies in time to provide convenience for companies and individuals to gain information, participate in trade and investment, and make necessary adjustments (Zhang, Lu and Sun, 2009:36-37). In addition to calling on Beijing to play a more significant role, non-government organisations, such as think-tanks, civil associations, and commercial groups should also take part in the co-ordination of relevant affairs concerning trade and investment, taking responsibility for collecting North Korean economic information to offer necessary information and data for Chinese companies and individuals who have business relations with North Korea (Zhang, 2011:12-22).

The literature discussed above provides necessary information about the status-quo of Sino-DPRK economic co-operation, especially activities relevant to Northeast China. Northeast China borders North Korea, but there are two problems which need to be explained. On one hand, the concept of Northeast China is not accurate to describe the actors involved in North Korea because even in the decades between the 1950s and the 1990s, Heilongjiang, one of the three provinces making up Northeast China, rarely developed economic relations with North Korea. The only connection between Heilongjiang and North Korea is the economic assistance in the form of oil produced in Heilongjiang which distributed to North Korea through Dandong oil hub in Liaoning province on the Sino-DPRK border. On the other hand, it cannot be denied that in the history of centralised China, especially during the Mao era, only Jilin and Liaoning provinces developed economic relations with North Korea. However, nowadays, Chinese actors in North Korea, no matter the regional governments at the provincial and city levels or the companies

owned by the state and private companies, come from different parts of China, not just the Northeast, e.g., coastal areas such as the provinces of Zhejiang, Jiangsu, and Shandong, and Shanghai, and the inland provinces of Henan and Chongqing. This research takes a more comprehensive approach to China's economic activities in the DPRK in that it takes into account the activity of actors from the whole of China rather than being limited to Jilin and Liaoning provinces only. Without understanding the whole picture, it would be very difficult to understand the drivers and significances of implementing economic activities at the macro- and micro-levels.

2. China's central/regional relations in its economic interaction with DPRK

On central/regional relations the traditional idea of China as a centralised country still dominates the thinking on Chinese economic activities in North Korea. Current scholarship on Sino-DPRK relations recognises Beijing as the nerve-centre that knows and controls everything that Chinese enterprises do in North Korea. Man (2011: 123-5) explains the twelve characteristics (in Chinese) of Chinese economic policy on North Korea: 'Governments provide guideline; Companies are majority; Marketization Cooperation' as a top-down model because in his view the governments at provincial and city level are agents of the central government. Kim (2006), Cronin (2008), Byun and Snyder (2014, 155-160) perceive Chinese economic actors in North Korea as state-led enterprises sent by Beijing to achieve its diplomatic strategic target of sustaining regional peace and stability in the Korean Peninsula. Reilly (2012: 79-85) interprets the agreement to open an inter-city direct air route between Pyongyang and Beijing, signed by Beijing city government, as one inter-state agreement even though other similar agreements exist between Pyongyang and other cities of China, such as Yanji (the capital of Yanbian Ethnic Korean Autonomous Prefecture). Harrold (2004), Kim (2006) and Lankov (2013) see economic reform in North Korea as partly driven by Beijing. By encouraging trade and investment during

Kim Jong-Il's era, Beijing is the only actor who could influence him to push through economic opening apart from Kim Jong-Il himself. As the only one who acknowledges the importance of sub-state actors, Lee (2009) agrees with the traditional idea of control by Beijing, but also claims that only in the energy sector is the role of regional governments in China increasingly influential in the Sino-DPRK economic relations.

The ideas above help to explain China's central-local relations in Sino-DPRK economic co-operation during the Cold War era. However, China has been undergoing a process of decentralisation which has accelerated since the Cold War resulting in less control for the central government in Beijing. At the same time, local governments and non-state actors are more independent in administration of their own affairs. After the 2000s China's central government became less involved in North Korea in terms of decision-making and project-implementation compared to its overwhelming control of the 1950s. It only signed a general agreement with North Korea for the promotion and protection of investment and trade and published its annual white paper on overseas direct investment (ODI) to provide suggestions and guidelines for investment in North Korea. The central government did not take responsibility for the potential risk of investments and other economic activities in North Korea. If these economic activities were a top-down economic aid type of activity, they would have been carefully planned and formally implemented by the central state-owned companies with high standards and effective co-operation between the two countries. Furthermore, if Chinese economic activities in North Korea after the 2000s were controlled by Beijing, the rapid increase of Chinese economic activities, in particular after several nuclear tests carried out by North Korea, did not make sense because the inter-state relationship between Beijing and Pyongyang worsened with Pyongyang's clear intention to nuclear arm itself. After the withdrawal of North Korea from the Six-Party-

Talks, and when North Korea repeated its announcement as a nuclear state, Beijing's deep dissatisfaction with Pyongyang should have caused a remarkable reduction in Chinese economic participation in North Korea. However, Chinese economic participation continued its rapid increase in North Korea during the nuclearisation process. Even at the time of the historically strictest sanction imposed by Beijing on Pyongyang in April 2016, and although Beijing claimed to stop all the trade in mineral resources and energy with North Korea, there remained room for economic trade in the general “name of humanitarian aid” (**Xinhuanews, 2016**). Meanwhile, Beijing's limited involvement can also be examined through the development of Sino-DPRK economic co-operation after the execution of Jang Song-Taek. Jang, the highest ranking pro-China leader in Pyongyang, was very popular in China because he tried to learn from the Chinese experience of economic reform. His execution was seen as part of Pyongyang's increasing independence from Beijing. However, many significant projects in Sino-DPRK economic co-operation, such as the mutual management of the Rason Special Economic Zone from 2012, continued after Jang's death. This means that the freeze in Sino-DPRK relations at the top-level has not had a negative influence on economic co-operation at the level of actors below the state.

Following this discussion on the limitation of traditional top-down ideas about Sino-DPRK economic relations, the following section discusses the traditional understanding of domestic drivers and the implication of Chinese economic actors in North Korea, along with their weaknesses.

China's domestic drivers and implications of economic participation in North Korea

Most scholars agree on the significance of promoting the economic development of Northeast China when discussing the drivers and implications of Sino-DPRK economic co-

operation (Zhang, 2007: 38-40; Kim, 2011: 257-271; Rozman, 2007). General motivations include: the consolidation of economic relations between Northeast China and neighbouring countries; the enhancement of the border trade economy through the establishment of border economic co-operation zones (bilateral trade zones, export processing zones, and cross-border industrial zones) in the major border cities; and the promotion of co-operation in the area of raw materials, such as energy and mineral resources. Bian (2014: 6-10), Guo and Su (2011: 119-123) link the foundation of North Korea's special economic zones with the economic development of China's border areas with North Korea. Jiao (2015: 30-33) analyses the influence of the North Korean new economic zone near Dandong and the economic development of Liaoning province. Ge (2015: 111-115) notes that renting ports in North Korea's Rason Harbor is also important and meaningful to Jilin province. The province gained from practical access to the Sea of Japan when its traditional route through the Tumen River was blocked by Russia and North Korea. The Russia-North Korea cross-border railway, which is 11 metres higher than the river, makes it possible for China to send large boats to the Sea of Japan via the Tumen River. Meanwhile, Russia and North Korea are not amenable to China's suggestion of engaging in dialogue to resolve this problem. Jilin province also benefits economically by saving the cost of coal transport through this first ocean logistic path from Northeast China to South China. The ocean transport avoids the weakness of railway transport in Jilin province, it increases the amount of coal that can be moved and shortens the travel time by 3-4 days. Apart from benefiting the economy of Northeast China, many other scholars discuss the diplomatic and security implications of Sino-DPRK economic co-operation with China. Choo (2008: 343-50) and Haggard (2011) mention the importance of Sino-DPRK economic co-operation in sustaining the survival of the Pyongyang regime as it provides a buffer zone between China and the US military

strength in South Korea and Japan, and avoids a wave of refugees from North Korea into China. As mainstream thinking in the scholarship of the Sino-DPRK economic relationship, this idea is also supported by Kim (2002), Beal (2005), Goldstein (2006), Moore (2008), Shambaugh (2010: 43-45), Song (2011), and Zhang (2013). Furthermore, Kim (2011: 257-271) claims that China increased the economic dependence of North Korea on China in order to apply pressure on Pyongyang to de-nuclearise itself, and Moore (2008) argues that China uses North Korea dependency on China, in a fashion common in East Asia cultures, to gain influence over Pyongyang to persuade North Korea to better heed Beijing's interests, whether on denuclearization of other issues of importance to China. Pinilla (2004: 51-60) and Babson (2013: 170-72) argue that China strengthened its economic impact on North Korea in order to distance the two Koreas and avoid the unification of the Korean Peninsula. According to the historical cultural and territorial disputes between China and the Korean Peninsula, a unified Korea may threaten to turn the Yanbian Ethnic Korean Autonomous Region into China's own Kosovo problem, and the fourth domestic separatist threat to China after Xinjiang, Tibet, and Taiwan. Cornell (2002) and Fuqua (2007) claim that China's economic participation in North Korea is only a result of its historical competition with the Soviet Union to provide economic aid to North Korea and gain its diplomatic support. Huang and Shih (2014) recognise the use of North Korea's Rason Harbor as China's preparation to build a strong navy in the Sea of Japan in order to threaten Japan by opening a new front near the Japan Sea.

Among all the analyses above, the final ideas given by Huang and Shih (date needed) over-estimate the military implications for China of owning access from the Tumen River to the Sea of Japan. Indeed, China lost its original territory near the Sea of Japan through the treaty between the Qing government and Tsarist Russia in 1858. However, the right of free access via the

Tumen River to the Sea of Japan for fishery was recovered in 1992 as one consequence of Sino-Russian territorial negotiations. The authors' view of China's urgent desire to establish naval power in the Tumen River near the Sea of Japan is unrealistic in the short term. China already has three major fleets in Bohai (North Sea), in the East China Sea, and in the South China Sea to protect its northwest Pacific coast line. Seen as not only too costly, the building of a new naval strength in the Tumen River will also bring potential tension to China's relationship with Russia by increasing Moscow's concerns over China's potential military occupation of its Far East territory. In addition to this idea, most of the above analyses are helpful in understanding the drivers of Sino-DPRK economic co-operation from China's viewpoint at the macro strategic level. However, it is progressively more difficult for this central-state centered argument to explain the diversification of Chinese economic actors in North Korea, especially those below the state level who are in fact the major Chinese actors in North Korea. Indeed, pushing economic development is always essential in China, especially when China's Communist Party uses it to replace the previous ideology as the key origin of its legitimacy. Jilin and Liaoning province also faced problems in recent years with their economic development. However, this analysis of economic development is still too general. This thesis will take a further step toward building relationships between Chinese economic participation in North Korea and more specific affairs of Chinese actors below the state level. For instance, as seen above, the use of North Korea's Rason Harbour created access for Jilin province to the Sea of Japan. This change of geo-economic condition has resulted in several other consequences, such as strengthening the attractiveness of local economic conditions to a large amount of domestic and overseas investments, as well as the citizens in Northeast China returning to their hometown from other parts of China and other countries. These problems did not threaten China's overall national

interests and did not come under the auspices of central government. It may also be useful to emphasise the independence of sub-level authorities from central government.

After reviewing the current literature on different aspects of Sino-DPRK economic relations (i.e., status quo, problems, corresponding suggestions), as well as outlining the corresponding contribution of this research, the thesis makes a contribution to the wider academic fields which include non-traditional security issues in China and Northeast Asia, and China's foreign economic relations.

3. Non-traditional security problems in China and Northeast Asia

First, the literature on non-traditional security issues in China and Northeast Asia mainly covers the fields of several human security threats. Li (2010) and Kim (2005: 6-7) reinforce the need for the founding of the Northeast Asian Energy Community in dealing with energy scarcity in China and neighboring countries. Takahashi (2000) pays attention to the control of Acid Rain as a result of the formation of an East Asian regime. Kim (2010) emphasises the environmental problems of Northeast Asia and the significance of building a Northeast Asian Community among China, Japan, and South Korea to address issues of environmental protection. Xiao (2015: 170-2, 220-21) adds to previous research by investigating the status-quo of security problems on economic-finances and culture, as well as ideas for resolving these threats. The concepts of 'China's non-traditional security problems' and 'non-traditional security problems of Northeast Asia' in the current literature provide a view from the macro-level and the state-centered angle. For instance, China's non-traditional security problems only mean the nation-wide non-traditional security problems in China, such as environmental pollution.

Similarly, the non-traditional security problems in Northeast Asia are also limited to the universal inter-state affairs in the region which have an impact at the national level. For example,

the increased influence of Japanese and South Korean TV culture on China's society is a typical cultural security problem because it threatens China's cultural sovereignty and weakens the continuation of China's traditional culture. Furthermore, due to the view of presenting non-traditional security problems from the perspective at inter-state level, the corresponding resolutions also focus on the regional integration of Northeast Asia (e.g., the foundation of the Northeast Asian Community), and co-operation between central governments and international organisations. However, the current non-traditional security problems in China and Northeast Asia are not always on the national level but are caused by inter-state competition. Domestic factors could also lead to non-traditional security problems at the micro-level hidden under the general ones at the macro-level. Take the cultural decline of ethnic minorities in China as an example: the imbalanced economic development between different regions could result in population outflow from under-developed areas to developed ones. When these under-developed areas are the traditional habitation of ethnic minorities, even named as autonomous regions and with policy-priorities, the youths of ethnic minorities, attracted by the higher living standard and income of the developed areas, still leave. This causes direct population outflow and the problems of local cultural continuation in the long-term. Nevertheless, the problems of ethnic minorities are rarely mentioned by scholars because they cannot represent the whole country as the major ethnic group. They are represented by the general national condition as the victims of external cultural impact rather than the result of regional economic imbalance. Meanwhile, the under-estimated specific non-traditional problems, which are small in geographical terms and can be at least relieved in the short-term, only require bilateral co-operation rather than measures as significant as the construction of a regional community.

Under the general picture of China's non-traditional security problems, there is specific research on those problems which are relevant to North Korea in the research of the Sino-DPRK relationship. North Korea escapees are a result of both economic and political issues. Economically, after the collapse of the Soviet Union, Moscow's shift in foreign policy from pro-North Korea to pro-South Korea abandoned Pyongyang and cut off half of its external material supply. China's own diplomatic strategy of developing diplomatic relations with South Korea worsened Sino-DPRK relations and lowered the aid from China by providing only the basic requirements of oil and food (Oh and Hassig, 2000; Rozman, 2007; Ford and Kwon, 2008). These external changes and the domestic Great Famine in North Korea created harsh living conditions for normal citizens in North Korea, especially for those in the regions outside Pyongyang, and forced them to leave for their survival. Apart from economic reasons, through media or religious channels many North Korea officials, in both mid-low administrative and military positions, and even some in the top echelon (such as Hwang Jang-Yap), chose to abandon their previous faith in the Juche political ideology (North Korean socialist ideology of self-independence and self-development). They sought a way to enter South Korea after understanding that the real external environment differed from the description in the propaganda of Pyongyang (Lim, 2009; Rozman, 2007; French, 2007). Li (2011: 58-61) and Sun (2015: 64-68) outline the negative impact of North Korean escapees on the public security and social stability of Northeast China. For instance, North Korean escapees occupied the jobs (in particular the cheap labour) of Chinese citizens because they would work hard for a lower salary. This deepened social conflicts by increasing unemployment in the affected region. North Korean escapees also threatened the social security of border areas as crimes such as smuggling, cross-border stealing, and violent crime increased. North Korean escapees are also seen as the root of

several of China's diplomatic problems. By rushing into foreign institutions in China to seek asylum, usually resulting in diplomatic conflicts, they worsened China's international image and its relationship with neighboring countries, especially North Korea and South Korea (Piao, 2012). Meanwhile, the different stances taken towards North Korean escapees by China, South Korea, Japan, and the United States prevented any further achievement of mutual understanding on North Korean affairs (Piao, 2012). Huang and Hu (2014: 3-10) offer numerous ideas for the resolution of the problem of North Korean escapees, such as: passing relevant laws with international standards and increasing punishment; deepening state-society relations for enhancing anti-escapee propaganda; strengthening border control; increasing mutual cooperation with neighboring countries and international organisations, such as the UN; and promoting the transparency of relevant affairs in order to avoid both diplomatic conflicts and the passiveness in addressing them. Apart from North Korean escapees, drug trafficking is the other North Korea-related non-traditional security problem facing China. North Korea became the third largest origin of drug trafficking to China after Southeast Asia (drug trafficking through Yunnan), and Central Asia (drug trafficking through Xinjiang). The number of victims in Northeast Asia increased rapidly after North Korea expanded their drug trafficking from Northeast China to South Korea, Japan, and Far East Russia to reduce the impact from economic sanctions and maintain income from trade with the rest of the world at its previous level in order to sustain nuclear development (Stares and Wit, 2009; Nanton and Charlett, 2010: 48-50). Due to the sensitivity surrounding drug trafficking and difficulties of data collection, this thesis will not investigate this problem. In the current scholarship about the former issue of North Korean escapees, many scholars have indeed built a connection between Chinese economic participation and the survival of North Korea because China aims to avoid any potential refugee wave from

North Korea should Kim's regime collapse. However, the refugee wave differs from the current North Korea escapee problem, which has been a problem in Northeast China since the great famine in North Korea at the end of 20th Century. Meanwhile, their ideas about the significance of sustaining Kim's regime in general are more about preparation for potential risk than measures directed at current problems. The discussion of corresponding solutions to this problem is also only discussed but not implemented. To the current reduction of North Korea escapees entering China from North Korea, there is a lack of connection built between Chinese economic participation in North Korea and the reduction in the numbers of North Korean escapees.

4. Implementing China's foreign economic policy

In addition to the literature about non-traditional security problems in China and Northeast Asia above, this section discusses the current literature on China's foreign economic relations, especially with developing countries. The scholars in this field mainly recognise the crucial leadership of central government on the 'going-out' strategy, in particular a mixed economic statecraft of trade, investment, and aid. Zhang (2014) points out that Beijing uses non-reimbursable assistance and inter-state dialogue (Sino-African forums and summits) to improve the scale of Chinese economic engagement and deepen China's economic impact in Africa. Yan (2012) also considers that as the most powerful enterprises in China, the overseas investment and purchase of foreign companies of China's central state-owned enterprises play the most important role in developing foreign economic relations by representing the central government's will and national interest, and creating a positive background for the long-term engagement of other Chinese companies. China's foreign economic relations with other countries, not only the under-developed countries in Africa but also advanced countries in the West such as Britain,

usually develop to provide fundamental support to strengthen political, especially diplomatic, relations (Alden and Hughes, 2009: 570-2).

However, China's economic relations with North Korea after the 2000s is an exception to Beijing's traditional monopolisation and central state-owned companies' status as pioneers. In contrast to other cases, such as Sino-African economic relations, which developed ahead of the warming-up of Sino-African diplomatic relations and the rapid increase of China's influence in Africa, Beijing's political influence in North Korea actually reduced with the cooling-down of Beijing-Pyongyang relations due to North Korea's strong stance on the development of nuclear weapons. Beijing was unable to continue its traditional dominant role in the economic relationship with North Korea through frequent top-level dialogue and the deployment of central state-owned companies as the pioneers of opening markets. In contrast, the regional governments, the local state-owned companies, and private enterprises became the majority of China's actors in economic relations with North Korea.

In conclusion, the current scholarship on Sino-DPRK economic relations demonstrates the status-quo of Sino-DPRK economic co-operation, especially the characteristics of China's rapidly increased investments and its transit from a historically one-sided aid model to the current win-win mutual co-operation model. It outlines the problems in the Sino-DPRK economic co-operation, such as the under-developed soft and hard conditions in North Korea and the shortage of support from Beijing, and calls on central government in Beijing to take on a more significant role. Scholars also discuss Beijing's dominant role in the Chinese economic activities in North Korea and its target of developing the economy of Northeast China, sustaining the survival of Pyongyang, and avoiding the refugee wave from North Korea. Although the current literature helps to see the picture of Sino-DPRK economic co-operation drawn by the

actors from Northeast China, in fact now actors from different areas of China also participate actively in North Korea. Meanwhile, apart from offering an institutional framework, Beijing's involvement in the economic sector remains at a limited level in contrast to actors below the state which include both regional governments (and companies owned by them) and non-state actors. These diversified actors are driven by their own reasons rather than the national interest at the strategic level. Furthermore, there has been little connection between Chinese economic activities in North Korea and their socio-economic function of resolving non-traditional security problems at the sub-state level. Additionally, the traditional mode of implementing China's foreign economic policy does not fit the condition in North Korea because the actors below the state level, rather central government and central-state-owned companies, are the major economic participators.

This thesis contributes to the current literature in three major ways. First of all, it draws a relatively comprehensive picture of Chinese economic activities in North Korea by discussing the activities from the actors in both Northeast China and other regions, such as Shandong and Zhejiang provinces. Then it identifies the drivers of these activities in resolving local non-traditional security problems and the relevant effects of this, such as how Chinese cross-border economic activities in North Korea have succeeded in strengthening border-control by coordinating the use of modern facilities to avoid escapees getting close to the border. It also explains the divergences, and even clashes, between these drivers and national strategic interests. Finally, it examines the major role played by actors below the state level (regional governments, local state-owned companies, and non-state actors such as private enterprises and commercial associations) in Sino-DPRK economic relations and a relatively reduced role played by Beijing in contrast to its overwhelming role during the Cold War era. At a higher level, this thesis adds

value to the current literature on national-interest-led foreign economic relations by demonstrating a shift in the drivers of China's foreign economic relations from the national interest at the state level to the interests of actors below the state at the sub-regional level, such as provinces and cities, through the active engagement of regional governments, their local government-owned companies and private enterprises. It explains that China's implementation of foreign economic policy is characterised by greater pluralism with the involvement of interest groups at the different levels. The economic co-operation between China and other countries at the regional level may be driven by particular reasons according to local conditions rather than national strategic interests.

Concept of Complex Interdependence and Multi-level governance approach: selection and interpretation

Since the early 2000s, in contrast to the blood alliance in the Post-Cold War era, and especially since the Korean War, the China-North Korea relationship has been commercialised to become a normal inter-state relationship. It was described as such by China's foreign ministry in 2004, and this was reinforced in 2014 by Zhang Liangui from China Central Party College, who is the top Chinese scholar on Sino-North Korea relations. This thesis aims to explain those changes in relation to the economics field which have significant implications, but which have not been discussed by academics to the extent which changes have occurred in high-politics, especially China's response to North Korea's nuclear development. Changes include the rapid increase of economic activities from China to North Korea, especially the transition from Beijing's leading role to the actors below the state level, and in particular the non-state actors. This condition is compatible with the neo-liberal approaches which focus on the pluralism of actors and highlight the role of non-state actors in international relations. One aim of this thesis, i.e., explaining the important role of actors below the state in the policy-making of domestic governance and the interaction of international politics, draws on the concept of Complex Interdependence and the theory of Multi-level Governance. This chapter aims to discuss these areas and how to apply them to the research topic, i.e., the drivers and implications of Chinese economic activities in North Korea from the early 2000s. It firstly outlines realist approaches to international relations and then the weaknesses of applying these in the current state of China-North Korea relations. It also introduces liberal approaches to international relations and then outlines key characteristics of the concept of complex interdependence and the theory of multi-

level governance, and how they apply to my research. In the section on multi-level governance theory, the conflict between this theory and the topic background, and the corresponding selection of concepts, will be explained. After that, the concept of non-traditional security will be introduced and, finally, the information collection and research methods are discussed.

1. What is realism and its incongruity to current Sino-DPRK relations

The realist school of thought is one of the most important approaches used to explain international relations. Classical realism has four basic tenets at its core, namely: the state is a unified actor with a coherent utility function and the unitary states are the key actors; the states act rationally and aim to maximize their utility; the international condition is anarchical, which means an absence of higher authority in making order in the international environment; and the states share dominant goals of sustaining their own survival through military means. Rather than a principal, the government is seen as an agent with the primary obligation of maintaining the national interest, especially in terms of military security. As a later alternative to classical realism, neo-realism, or structural realism, continues two basic characteristics of the classical variety. That is, anarchy is the defining feature of the international environment and military capabilities are the decisive variables for measuring the strength of states. In contrast to classical realism, neo-realism holds a structural view of international relations and creates concepts to explain the power comparison between the states. Furthermore, it adds another assumption to the targets of states, shifting from, at a minimum, maintenance of their own survival to, at a maximum, the achievement of universal domination in international relations.

The realist approach may be useful to explain the relationship between China and North Korea from the beginning of Cold War to the early 2000s. During this period Beijing and

Pyongyang monopolized the interactions and communication between the two countries. Even when this bilateral relationship declined rapidly following the foundation of diplomatic relations between China and South Korea in 1992, the domestic decision-making of affairs relevant to North Korea was still owned by Beijing. The Korean War is also a typical case of the balance of power between the two camps. It may also explain the ultimate significance to the states of maintaining survival by military means. Even in the late 2000s, the Six Party Talks were still recognised as a continuation of the Cold War with the balance of power lying in Northeast China between China-Russia-North Korea and US-Japan-South Korea. However, the Six Party Talks are not the whole picture of China-North Korea relations. The relationship has been normalised since 2004, shifting from a traditional alliance to a more normal inter-state relationship. China commercialised its relations with North Korea with a rapid increase in trade when North Korea developed its nuclear strength under criticism and with China's intention of de-nuclearising North Korea. In China, influenced by the tendency of domestic de-centralisation, the regional governments at provincial and city level are more independent from the central government on policy-making to do with interaction with North Korea to resolve local social and economic problems. Local state-owned companies and private enterprises are also very active in North Korea. Thus, apart from the Six Party Talks, the rest of the picture of China-North Korea relations cannot be explained by realism because there is not a unitary state and high politics issue. It may be better explained by liberal approaches. The next section will introduce liberalism, the concept of complex interdependence, and the theory of multi-level governance.

2. Liberalism, complex interdependence and multi-level governance

As another important school of thought in international relations, liberal approaches also have a few basic assumptions. Firstly, liberalism agrees with realism on the existence of anarchy, but denies a direct connection between anarchy and the chaos of international relations because institutions can be expanded by international organisations and other actors to maintain the stability at the same level as the domestic condition. Secondly, Liberalism accepts the status of the state as the most important actor in international relations, but it also reinforces the increasingly crucial role of non-state actors such as international organizations. Thirdly, in the eyes of liberals, the states are a collection of domestic social interest rather unitary actors. The actions of states are the result of compromise and negotiation between the domestic interest groups. Finally, liberalism focuses on mutual interests and co-operation between the states rather than military capabilities as the way of maintaining survival. (Keohane, 2001:32)

My research is more relevant to the notions and concepts derived from the concept of complex interdependence and multi-level governance. From the view of neo-liberalism, different organizations have competence and power in different fields. This at least reduces complexity for the nation state. There may, moreover, also be a kind of hierarchy across functions, so that we can speak of more or less important areas of constraint on state power. The trend in IR has been to deny such a functional hierarchy, which has traditionally placed military and security concerns at its apex. Arguments from proponents of a normative international order and complex interdependence have sought to deconstruct the notion of high and low politics and attempt to broaden the concept of security to encompass economic, environmental, and humanitarian concerns. The hierarchy between traditional and non-traditional security has been abolished. Both focus on multiple actors (state and non-state) and expand their security concerns from

single military security fields to non-traditional security issues. In this thesis, the concept of complex interdependence mainly explains the actors and their motivation for Chinese economic activities in North Korea through its three characteristics: multiple channels of communication between two countries; the inability of military means for the resolution of problems; and a more narrow hierarchy between high politics and low politics. The theory of multi-level governance generally presents the relations between central government, subnational governments, and even non-state actors in the governance of non-traditional security problems. This research aims to show that the actors below the state level play a dominant role in these Chinese economic activities in North Korea, while the central government only plays an assistant role. The theory of multi-level governance opposes state-centric theories and focuses on the role of non-state actors. The characteristics of these two theories will be outlined in the sections below.

2.1 Complex interdependence

The concept of complex interdependence directly opposes the three basic realist assumptions of the anarchical world, i.e.: the state is the most important actor in international politics, although other tools can be used, military strength is the most effective tool for one state to push other states to follow its will; issues in international politics have a hierarchy; and military security is as important as high politics and it dominates low politics, such as economic issues and social affairs (Morgenthau, 1967: 36). Comparatively, there are three major background issues to complex interdependence. Firstly, anarchy is a characteristic of international relations, but it does not always create an anarchical international society. Secondly, the state is the major actor in international society. Its rationalism and unity demand the

existence of international institutions. Thirdly, national interest is a crucial factor in measuring foreign policies and external relationships. The existence of comparative advantages among states is the precondition of mutual benefit (Keohane and Nye, 2011: 22).

The concept of complex interdependence has its own three characteristics. The first is multiple channels of interaction between different societies (Keohane and Nye, 2011: 222-23). The state is not the only international actor in the world. The other actors in international society also have communications and interactions which can be expressed within the three major types: inter-state contacts, these include formal and informal official connections, such as annual UN conferences and irregularly scheduled telephone exchanges of ideas between national leaders; cross-government connections with non-government civilians, which refers to the cultural communication between civil groups and the business interaction between non-government elites; and transnational contact, which is the domestic contact inside transnational organizations, such as the multinational commerce bank and multinational enterprises. Under multiple channels of communication, the interactions in the economic and cultural fields between domestic and external actors increase. In contrast to the formal official interaction at the top level, informal economic and cultural interactions can create a flexible and relaxed environment for the civilians of different countries to understand each other very quickly. The economic interactions, especially business relationships, are easily started and expanded between individuals, private SMEs, and large corporations. The deepened understanding of other countries' cultures could lessen psychological distance, reduce costs, and provide convenience in order to reach agreement in any negotiations by identifying mutual interests oriented from shared values. Thus, it can benefit some groups, associations, and even the whole country.

The second characteristic is that there is no hierarchy between the problems which could threaten the states (Keohane and Nye, 2011: 24-25). The problems faced by international society are beyond single military security and relevant to multiple fields, such as politics, the military, culture, the economy, and other areas. The problems of energy and resource scarcity, environmental pollution, population increase, uses of ocean and space, the drug trade, terrorism, and cross-border crime are as significant as traditional military security issues, such as sovereignty and territorial disputes. Meanwhile, the boundaries between domestic and external problems are blurred. The issues in many fields considered to be domestic affairs are actually international affairs which need to be resolved by international society as a whole.

The third characteristic is that military strength may no longer play a crucial role and can only be used as a secondary tool (Keohane and Nye, 2011: 25-26). After the end of Cold War, peace and development became two major challenges facing the world. Military strength is no longer the core issue focused on by states. Most countries pay major attention to the development of non-military fields, such as social welfare and protection of the environment. The national interest and strategic targets are diversified with the enlargement of the area of security concerns by states. Thus, states will not easily use violence to destroy the consequences of development. Meanwhile, national interest is diversified under the diversification of strategic targets. States will not use military force to resolve problems, particularly with regard to affairs and fields in which they have an advantage within their complex interdependence.

Under the mode of complex interdependence, because of the three characteristics discussed above, states with strong military capabilities have difficulties building relationships to resolve problems without using military strength. In contrast, relationships between states are strengthened where there is relatively weak military strength and more different issues are

successfully addressed because of this. The weak states benefit from the reduced military impacts so that they have more leverages than past in the non-military areas of the world.

Increasing linkage between state and non-state actors

Firstly, non-state actors are important but their only influence is achieved through the state who is the central actor in international relations. The sub-level economic actors, which include regional governments and private companies, actually play a very important role in new Chinese economic activities in North Korea because their investments fundamentally change the previous condition that the central government in Beijing is the only economic actor in North Korea, thereby weakening the overwhelming status of official economic assistance. The requirement for investment from sub-level economic actors successfully influences the policy-making and formulation of central government on economic investment in North Korea. The signing of the Agreement between the Government of the PRC and the Government of the DPRK for the Promotion and Protection of Investment in 2005 is the best example of this.

Secondly, the new economic activities of China in North Korea prove that co-operation may be achieved under the recognition of absolute gains through the signing of inter-governmental agreements which themselves could be seen as an institution. On the one hand, North Korea could gain external material assistance and foreign investment, ensure the supply of foreign currency, and weaken the negative influence of Western sanctions. On the other hand, China could also achieve three basic targets through involvement in low politics, especially concerning the economy. Firstly, although North Korea refuses to admit the attraction of foreign investment as an economic reform, in fact, although limited, its market has been opened up. Secondly, Chinese investments in North Korea could reduce the negative impacts of non-traditional security (NTS) threats. For example, the import of fishery products could sustain the supply of

seafood. Thirdly, the economic influence of China in North Korea is sustained and sub-level economic actors gain economic interests from the investment.

Multiple channel of interaction between states

There are two major channels between China and North Korea. The first is the inter-government relationship which includes the traditional channel of communication and interactions between the top leaders of the two countries, as well as those between and their sub-level politicians. Since 2002 the interaction between the central governments of the two countries has not been very frequent, although North Korea's leader, Kim Jong-il, visited China several times before his death in 2012. Most interactions concern North Korea's nuclear issues, in fact Beijing and Pyongyang only signed one treaty for the protection and promotion of Chinese investment and technology in North Korea in 2003. The sub-level politicians interactions occur between the local governments of the two countries and concern economic cooperation, dialogue on conflict negotiation and resolution, and training North Korean officials with Chinese experience of economic reform. One of these channels of interaction is between Yanbian Ethnic Korean Autonomous Prefecture and neighbouring North Korea regions, such as Rason special city. The other is between the Dandong and Sinuiju.

The second channel of Sino-DPRK interaction involves non-government elites, particularly business elites, which in fact means those interactions between Chinese non-government elites and North Korea officials, departments, and local communes who manage economic affairs under the planned economy system. These business channels are built in two ways. The first is the continuation of the historical relationship between individuals in the two countries, especially the blood relations constructed naturally between ethnic Korean in Jilin province and their

relatives in North Korea. These business relations are also extended with the migration of these businessmen from Northeast China to much more developed areas of China in order to secure funds and source new markets. In addition to this blood relationship, the historical military relationship is also useful whereby military officers who served in the Chinese People's Volunteer Army during the Korean War develop business connections in North Korea. Under the domination of the Kim family, North Korean local bureaucrats welcome this type of Chinese businessman because developing economic co-operation in this way shows loyalty to Pyongyang. It also expresses their great respect for their first leader who liberated the country from US invasion. For example, a group photo which includes Kim Il Sung and a low level military officer in the Chinese People's Volunteer Army is copied for the grandchildren of this military officer to examine her special characteristics and obtain the business opportunities.

Apart from the continuation and extension of such historical relations with North Korea, the second way of developing business relationships is through the response to North Korean advertisements designed to attract business. The number of business relationships created in this way is relatively fewer than the other relations discussed above, however, the numbers have increased rapidly in recent years. Potential business opportunities are found in publications of the Chinese authorities at different levels, e.g., the Department of Commerce and local governments, and also through visits to the annual international exhibition organized by North Korea in its border cities, mainly Rason and Sinuiju, or even in Chinese border cities, such as Dandong and Yanji. North Korea aims to attract investment in its major valuable products for export which always include agricultural products (seafood, juice, and fruits), as well as different types of mineral resources, light industry products, and its national sunrise industries, such as IT. with a priority on the policy in the future. However, due to concerns about the regional tension caused

by the unresolved North Korean nuclear problem, and an inefficient legal system in the commercial area, of the large numbers of businessmen who visit only a few have reached co-operation with, or made an investment in, North Korea.

These multiple channels of communication between China and North Korea changed the previous single way of interaction between the two countries with the inclusion of the interests of different actors. The interest behind the economic activities in North Korea is now shared by people in a larger region than previously, particularly in the most developed areas of China rather than in Northeast China only. Thus, China's policy-making, in terms of North Korea, is impacted by more powerful regions.

The military is not useful in resolving problems

China and North Korea are no longer allied as they were during the Cold War era, although Beijing officially recognises the relationship between the two countries as a traditional friendship. However, this special relationship does not mean there is no conflict between the two countries. In fact, in NTS fields, China and North Korea have had several conflicts but China has never used military means to resolve them. In recent years, there have been reports in the media about Chinese fishing boats in the Bohai Sea being kidnapped by unknown North Korean militants and then being controlled by North Korea in nominal that these boats are recognized as illegal cross-border fishers. The owners of the fishing ships and the employees are always required to pay large sums in ransom and fines. The official responses from Beijing and local governments are quite restrained in contrast to responses to similar clashes with other countries, particularly Japan and Southeast Asian countries. The spokesman for Chinese Ministry of Foreign Affairs expressed strong criticism of the activities of Japanese, South Korean, and Phillipino coastguard

ships in expelling Chinese fishing boats. Indeed, the strength of this type of criticism can be explained because these problems are related to territorial disputes and the claim of sovereignty. The Chinese central government also dispatched maritime police vessels and navy fleets to the disputed territory. Rather than using military means to resolve the problem, in 2012 the Chinese response to the North Korea militants' seizures of Chinese fishing boats was to impose a three day suspension on the fishing trade between Dandong and North Korea as a warning.

Less hierarchy between low-high politics; the blurred difference between domestic and external affairs

During the Cold War era, the Sino-North Korea relationship was dominated by high politics in the ideology and military fields. On one side, the Korean War promoted China-North Korea relations to a blood-alliance. On the other side, China still had to consolidate this relationship by sustaining its economic aid to North Korea in order to balance the impact of Soviet leadership in the communist camp. However, since 2002, the hierarchy between low and high politics on issues relevant to North Korea is not so clear to China. It seems that North Korea's nuclear issues should have been of urgent concern to China, however, the Chinese central government made no moves to prevent companies and local authorities developing close economic relationships with North Korea. One possible explanation is that China is reluctant to use economic sanctions to resolve the nuclear issue as this may cause the collapse of the Pyongyang regime and lead to a huge wave of refugees into Northeast China. Other explanations are also in the NTS field, e.g., China wants to: control the mineral resources in North Korea; use the clean environment as a new base for aquaculture; and reduce cross-border problems such as illegal immigration and labour shortages. At the same time, de-nuclearisation of North Korea has taken priority in

China's foreign policy. This is a clear reduction to the levels of the political hierarchy, i.e., between the increasing threats from a nuclearised North Korea, or high politics, and other NTS affairs, such as resolving threats of resource scarcity, reducing pollution in the seafood industry, the effects of the drug trade and illegal immigration through economic activities, or low politics.

The increasingly blurred difference between domestic and external affairs actually highlights two points. Firstly, although North Korea is a relatively isolated country, it still creates a number of NTS problems for China, such as illegal immigration. This domestic problem is caused by North Korea's economic difficulties, especially the large gap between the North Korean border region and Northeast China. Secondly, the NTS threats to China, such as the mineral resource scarcity, seafood reduction caused by pollution, and labour shortages, can be relieved by the economic activities in North Korea. However, these problems can only be relieved rather than completely resolved because North Korea is a small country with little willingness of studying China's mode of economic reform and limited room of accepting huge amount of Chinese economic activities in the areas of North Korea open to China and under Sino-DPRK mutual administration.

Complex interdependence combines power and interdependence and builds a structural model of international structural transformation by collecting the reasonable elements of both neo-realism and classical liberalism. On the one hand, it keeps the fundamental research philosophy of realism towards power, interests, and rational choice. On the other hand, it supports the liberal approach that trade and economic motivation can change the activities of states as well as the significance of institutions and norms. In contrast to realist approaches which focus on state and power, while ignoring different types of development at the domestic and transnational level beyond military security, complex interdependence provides a better

explanation for the influence of interdependence between multiple actors in international politics and their activities through the distribution and bargaining of the power structure in the international system.

However, there are still a few weaknesses of complex interdependence. Firstly, it does not provide a comprehensive analysis of the connection of problems and the change of agenda. The multiple channels of interaction between societies are considered as one characteristic of complex interdependence. The political progress of complex interdependence includes the linkage strategy which is very important in the research of international politics because it explains the origins of power in the specific field. However, complex interdependence does not offer any explanation about the linkage, especially when it will occur. Hence it is difficult to understand the complicated progress of political bargaining. It also only discusses the factors which may influence the formation of an agenda but does not offer any specific modes, time scale, or direction for the development of agenda change. Secondly, its analysis of military strength is problematic. In the condition of complex interdependence, military strength is less efficient as a tool to influence policy-making. The fear of attack does not exist between the developed countries. Indeed, with the increase of interdependence between the economy, society, and environmental development, in some fields the activities of states are no longer dominated by the traditional security policies. The price for big states to use military force has also increased with the huge risk of nuclear war and opposition due to domestic public opinion. However, military strength remains influential in many affairs such as South-North relations, inter-state relations between third world countries, and East-West relations. There is no explanation of what conditions must exist for military strength to be ineffective. The third weakness of complex interdependence, which is also the most relevant one to my research, is

that complex interdependence does not sufficiently address the effects of domestic politics on interdependence or the influence of international relations on domestic politics. In order to keep the theory concise, the analysis of complex interdependence is limited to the level of the international system. However, the assumption of complex interdependence tells the story of the blurred boundaries between domestic and external affairs. The multiple channels of communication also mean that the state is not the only actor. Under complex interdependence, there is interaction between domestic and international politics. The change to complex interdependence is the change of priority of the state's target, which can only be understood by analysing the relations between domestic and international politics. However, neither is there any explanation about the impact of domestic politics on complex interdependence, such as how the national interest is defined, nor any institutional analysis of the influence of international politics on domestic politics. In my research, the impact of central-local relations, especially the motivations of actors below the state level, to a commercialized China-DPRK relationship cannot be explained by complex interdependence. It allows me to use another neo-liberal theory of multi-level governance together with complex interdependence because multi-level governance theory can effectively explain domestic policy-making relations.

2.2. Multi-level Governance

The definition of Governance and Multi-level governance

Multi-level governance is a concept which aims to explain the overlap of authorities at different government levels and the interactions of state and non-state actors on the different levels. It attempts to politicalise the private actors in order to weaken the role of the state as the

gatekeeper between international and domestic politics. Multi-level governance theory goes beyond the traditional division of international and domestic politics and plays the role of a bridge to connect these two research fields. It is first defined by Marks (1993: 392) as 'a system of continuous negotiation among nested governments at several territorial tiers', and then developed by the analysis of domestic politics, especially the overarching policy networks, about how supranational, national, regional, and local governments are enmeshed in territorially overarching policy networks in multi-level governance (Mark, 1993: 402-3). The multi-level governance theory was used to develop a breakthrough in European Union (EU) decision making concerning the supra-nationalism that focuses on the role of regional integration in the EU, the transition of sovereignty from member states to the EU, and inter-governmentalism which pays more attention to the independence of member states and the motivation they have for gaining interest in their own countries. It started a new wave of recognition of the EU as a political system, rather than as a process of integration, by theorising the concerns of EU development from an example of international co-operation to the issues of EU governance, and it explained the policy-making progress from both supranational and national levels. It also began to build connections between domestic and international approaches in areas outside EU politics as scholars tried to explain increasing concerns about the dispersion of central government authority both vertically, to actors located at other territorial levels, and horizontally, to non-state actors. They also required analysis across increasingly contested jurisdictional and territorial boundaries both within and beyond states.

Some scholars (e.g., Kohler-Koch, 1999; Liu, 2005; Wu, 2003) summarise three major characteristics of multi-level governance. The first is, under the political structure of multi-level governance, political activities are implemented on several levels: supra-national; state; and sub-

state. The influences at different levels are diverse due to the variety of problems to be dealt with. However, each level is not completely separate from the others because of an overlap of functions. The new collective policy-making model is created under the interdependence of different levels and co-ordination of targets. The control and influence of central states is weakened under this type of model with reduced efficiency and consequences due to the clashes and disagreements between the different levels of actors.

Secondly, there are several actors taking part in the progress of multi-level governance. These actors can be international organisations and other supranational organisations, central governments of member states, and sub-state actors such as local governments, interest groups, private institutions and NGOs. Under the condition that multiple actors participate in governance together, and at the same time, the policy-making rights are shared by the actors on the different levels but not monopolized by the central governments. The relationships between actors at the different levels are not hierarchical. The progress of governance is not led by the central state governments exclusively. Rather, it consists of activities of political and administrative actors who can lead, steer, and manage society. In other words, multi-level governance stresses decentralisation and the open use of power with the mutual participation of multiple actors.

Thirdly, under multi-level governance, the expectations and pursuit of mutual targets and interests connect the governance activities on the different levels together, transform all the activities of the actors into a co-ordinated operation, and finally promote multi-level governance as a mechanism for making and implementing decisions. This is also a fundamental characteristic of governance. According to Kohler-Koch (1999: 14), the nature of governance is intensively deciding on one political target, making the effort to achieve that target, and ensuring

that the activities of all the actors are moving in the right direction. This is also called coordination or meta-governance.

Types

Marks and Hooghe (2004: 15-30) divide multi-level governance into two types. The first develops from the idea of federalism but is not confined to national states. It shares three characteristics with federalism: the framework is system-wide; the functions are bundled; and the levels of government are multiple but limited in number. It predominates in conventional territorial government up to the national level. Since the end of Second World War, decentralisation has rapidly increased, expanding from Europe to the developing world, and has come under the analysis of the first type of multi-level governance as scholars find that it is increasingly difficult for central government to over-ride decisions of subnational governments. Its key systemic characteristics are the limited number of jurisdictional levels and system-wide durable architecture. The first of these means that the first type of multi-level governance organises jurisdictions at only a few limited levels. Usually there is a local- intermediate-central level for inter-government relations, but the levels can also be varied. For instance, in the EU, there are supranational, national, regional, and local levels.

The second key characteristic means the different levels in multi-level governance indeed share similar functions and structure from bottom to top. This makes reform difficult and costly while adjustments are made to new jurisdictions, apart from changes made to the re-allocation of policy functions across the existing governance levels. In international relations, the first type of multi-level governance describes the modification, but not elimination, of the state-centric idea.

Scholars see the private and third sectors as necessary supplements to the nation state, but not as replacements as the primary instrument of domestic and global governance.

In contrast to the first type of multi-level governance, the second type tends to underestimate the role of the state because it usually exists within the international regime to which the nation states have transferred parts of their sovereignty, and in the cross-border areas with poor resource reserves. It has three major differences from the first type of multi-level governance. Firstly, it does not have a general purpose jurisdiction, rather this is replaced with task-specific jurisdiction. Public services for citizens are not provided by the government but by various public service industries, especially in the jurisdictions that are good at internalizing benefits and costs. Secondly, there are more jurisdictional levels in the second type of multi-level governance than the limited amount in the first type. Multiple, independent jurisdictions fulfill different functions which partly overlap. There is no up or down, no lower or higher, no dominant class of actor but a wide range of public and private actors who collaborate and compete in shifting coalitions. Thirdly, the second type of multi-level governance is designed to be flexible. Citizens, from families, clans, and charity organisations to international regimes, can freely join the jurisdictions in a competitive market. It focuses on the dispersed self-rule on the part of diverse voluntary groups which mobilise and deal with the auctioning of collective problems.

Decentralization in China

China is a single party system country with several decades of de-centralisation since its economic reform in the 1980s. During the last thirty years, the Central Committee of Chinese Communist Party (CPC) and the State Council in Beijing have introduced a number of

documents to implement the gradual de-centralisation of power. Jiang (2008: 58-9) and Cao (2013: 122) outline relevant documents which include:

‘Notice about the problems in the party and political organisation reforms of province, city and autonomous region’ (关于省、市、自治区党政机关机构改革若干问题的通知 *Guanyu sheng, shi, zizhiqu, dangzhengjiguan gaige ruogan wenti de tongzhi*) in Dec 1982;

‘Notice about the problems in the local, city and distinction party and political organisation reform’ (关于地市州党政机关改革若干问题的通知 *guanyu di shi zhou dangzhengjiguan gaige ruogan wenti de tongzhi*) in Feb 1983;

‘Notice about the problems in the town level party and government organisation reform’ (关于县级党政机关改革若干问题的通知 *guanyu xianji dangzhengjiguan gaige ruogan wenti de tongzhi*), in Dec 1983;

‘Plans for Party and government organisation reform’ (党政机构改革的方案 *dangzheng jigou gaige de fangan*);

‘The notice about the implementation of party and government organisation reform plans’ (关于党政机构改革方案的实施意见 *guanyu dangzheng jigou gaige fangan de shishi yijian*) in July 1993;

‘The advice of Central Committee of CPC and the State Council to the local government organisation reform’ (中共中央、国务院关于地方政府机构改革的意见 *zhonggong zhongyang, guowuyuan guanyu defang zhengfu jigou gaige de yijian*) in Jan 1991; and finally,

‘The decision of Central Committee of CPC about problems in improving socialist market economic institution’ (中共中央关于完善社会主义市场经济体制若干问题的决定.

Zhonggongzhongyang guanyu wanshan shehuizhuyi shichangjingjitizhi ruogan wenti de jue ding) in 2003.

In particular, the decision of 2003 clearly pointed out ‘a reasonable division of rights and responsibilities of central government and local governments on managing socio-economic affairs’ (*合理划分中央和地方经济社会事务的管理权责 heli huafen zhongyang he difang jingji shehui shiwu de guanli quanze*), and ‘The national and cross-province (as well as autonomous regions and municipalities) affairs will be managed by central government in order to ensure the national unification of legal system, political order and market. The regional affairs belonging to the local administrative region will be managed by local governments in order to promote the working efficiency, reducing managing cost and promoting administrative dynamics.’ (*属于全国性和跨省（自治区、直辖市）的事务，由中央管理，以保证国家法制统一、政令统一和市场统一。属于面向本行政区域的地方性事务，由地方管理，以提高工作效率、降低管理成本、增强行政活力, shuyu quanguoxing he kuasheng zizhi qu zhixiashi de shiwu, you zhongyang guanli, yi baozheng guojia fazhi tongyi, zhengling tongyi he shichang tongyi, shuyu mianxiang benxingzheng quyue de difangxing shiwu, you difang guanli, yi tigao gongzuo xiaolv, jiangdi guanli chengben, zengqiang xingzheng, huoli. Cao (2013: 122-25).*

Thus, it can be seen that the de-centralisation that has taken place in China over the last three decades, and the core themes that run through these documents, are the de-centralisation of Beijing and the increasing independence of local authorities from Beijing when dealing with the affairs within their administrative scope.

From the structure of government, the central government does not have its own department for implementing policies. The ministries, committees, bureaux, and offices under the State

Council are a fundamental administrative part of government. However, these departments mainly take responsibility for policy making, macroeconomic control, and the provision of guidelines, but not the implementation of policy. Thus, Beijing only depends on the regional governments on the policy implementation (Shen and Song, 2009:15). The central government usually represents social public interest in general and aims to maximize its own interests. There are dual levels of regional governments' interests. On the one hand, their interests align with those of central government which aims to maximize public interest and promote social development by organising industrial production. On the other hand, the interests of regional governments are in the socio-economic development of their own regions which is clearly independent from the interests of central government (Shen and Song, 2009: 16-8). Under the traditional planned economy, the regional governments were restrained by the administrative and financial control of central government and their independence from central government is not very clear. The regional governments are only the agents of central government and passively accept and implement policy under direct control from the top without independence, flexibility, or subjectivity. After the economic reform, with the decentralisation of economic power (especially the devolution of power of regional state-owned companies, in terms of supervision and management, from central government to regional governments), and new economic-development-oriented evaluation systems to officials in the sub-level governments, the motivation for self-development by regional governments existed and increased rapidly. Regional government began to strengthen control of local state-owned companies, who are regionally the most powerful business actors, and to develop their own flexibilities on understanding central government policies in order to make regional development effective (Jiang, 2008: 57).

Relevance of Multi-Level Governance to Chinese de-centralisation and selected concepts

As a unified single state, China is different from the EU which is an integration of numerous single states. Thus, the multi-level governance approach which is firstly used to explain the governance structure of the EU, cannot be directly applied to this case. This section will firstly outline the clashes between China's domestic context and multi-level governance theory. Then, it will choose part of the concepts of multi-level governance theory and apply them to China's central-local relations in its policy-making progress concerning economic affairs in North Korea.

Clashes and selected concepts

There are two major clashes between China's domestic condition and the ideal theoretical condition of multi-level governance. Firstly, as noted above, the EU is a very special political actor. It has characteristics of both federation and confederation because the integration of its policy-making is not complete. Meanwhile, it has own a compatible qualification to normal states in the international law whereas the independent status of its member countries in the international law also offers its characteristic of normal international organization. In contrast to the supranational characteristic of European and special institutions working for its all-in-one integration, such as the European Parliament and the EU, there is no supranational level in the case of this thesis because it only exists inside China, which is a unified single state. Indeed, the United Nations played its role in the physical infrastructure through its Great Tumen-River Initiative, however, its significance is fairly limited because, although achieving a general direction of co-operation among member states (China, Russia, South Korea, Mongolia, and North Korea), North Korea withdrew from the initiative in 2007 before signing any practical

agreements. Thus, there is an absence of engagement at supranational level in the case of this thesis.

Secondly, this thesis aims to show a relatively significant role of local actors below the state in economic interaction with North Korea, these include local governments, local state-owned companies, and non-state actors. The former two actors play very important roles. Meanwhile, now that China is decentralised, local governments are more independent from the central government and have rights to deal with local economic affairs in their own administrative region. They are still influenced by the central government in Beijing and far away from the full control of authority seen in federalist countries. Beijing is not overwhelmed by the local governments because it is still the only policy-making actor at the cross-regional and national level. It is also the only authority to offer legitimacy to the activities of local governments, especially their innovation and reform. Hence the fundamental opposition to the state-centric multi-level governance approach cannot work in this case.

Furthermore, the essential involvement of Beijing is another characteristic of Sino-North Korea economic cooperation, even at the local level, due to totalitarian control in North Korea. In contrast to the weakened role of Beijing in decentralised China, Pyongyang is the only mediator and final decision-maker of all the economic co-operation with North Korean local actors. Thus, in order to ensure reciprocity between the two countries, this special characteristic forces Beijing to be involved in most economic co-operation activities with North Korea, even if it only plays a minimum role of signing treaties and agreements without taking part in any other specific operation or management of projects.

The first MLG model is more suitable because it is more state-centric and better describes the realities of Sino-North Korean economic cooperation from the concept of limited jurisdiction

and system-wide architecture. Firstly, it is clear that in economic co-operation with North Korea, there are three levels of jurisdiction: central government; local government; local state-owned enterprises; and private companies. There is no supranational level. Resources are limited so there are not many opportunities for local government and non-state actors to choose to govern. In this thesis, for different regions, there are only five areas of resource scarcity: labour; fisheries; immigration; energy and mineral resources; and transport access to the Japan Sea. Apart from the central government, who rarely become directly involved in dealing with these problems, local governments (and their companies) and non-state actors (mainly private companies) are the major actors in their resolution. The non-state actors take responsibilities of governance in a few areas, such as in labour co-operation continued from historical relations, and in the implementation of co-operation on tourism. However, they are not recognised as the only actors of governance which replaced the local governments to provide social services because, in China, local state-owned companies take priorities of market control due to their special relations with local governments. Local governments and local state-owned companies are major actors in providing public goods and services.

Secondly, local governments and central government indeed share a similar functional structure although the latter mainly provides institutional support by way of signing treaties and agreements and rarely becomes involved in their implementation. They also share the consensus that regional economic development should not harm the national interests.

Although the domestic governance relations in Chinese economic engagement in North Korea is closer to the two concepts of the first type of MLG discussed above, it is also infused with concepts from the second type of MLG. On the one hand, a decentralised China is still not federalism. Even though local governments can manage the affairs in their administrative region,

central government can still choose to take back decentralised power if its will is violated by local governments. For example, the connivance of the Liaoning provincial government on the cross-border co-operative monopolisation of fishery resources in the Bohai Sea near Dandong at the end of 2013 led to central government punishment which forbade the Liaoning boats to fish in North Korean waters in 2014. However, this type of special condition rarely happens. Thus, in contrast to the concept of intersecting members in the first type of MLG, the central-local relations in China are between non-intersecting members, or between members with very limited intersection. On the other hand, the general purpose jurisdiction does not exist in Chinese economic activities in North Korea. It is true that local governments and private companies have to follow the general strategy of central government and avoid challenging the national interest. However, apart from the governments and companies of coastal provinces which attempt to use North Korea fishery resources as a supplementary source of seafood, different regions and companies rarely aim to resolve the same NTS problems in this thesis. It is a typical task-specific jurisdiction because all the actors below the state aim to resolve their own problems. Having said that, during the process of resolving these problems, such economic activities are helpful for central government to achieve its own target of maintaining regional peace and stability. The impact of this only indirectly affects the region and, in fact, is even not considered by actors below the state.

To sum up, after making a comparison between the two types of MLG and the real condition of Chinese domestic policy-making in its economic cooperation with North Korea, four concepts have been selected. They are task-specific jurisdiction, very limited intersecting memberships, jurisdictions at a limited number of levels, and system-wide architecture.

3. Security Issues

This part aims firstly to define traditional security and non-traditional security (NTS), then to outline the types of NTS problems which exist in the current context and connect them to the research topic. Traditional security threats are those factors that could threaten the security of sovereign states. Normally these are military threats, but the concept also includes political and diplomatic conflicts (Burgess, 2010: 1-5). Depending on the differences in the level of threat, traditional threats may be divided into three types: military competition; military deterrence; and war. War may also have different levels, such as world war, regional war, civil or conventional war, and nuclear war (Burgess, 2010: 1-5). In contrast to traditional security, the NTS threats refer to the non-military, non-political and non-diplomatic factors which could threaten the general survival and development of human beings and sovereign states (Tsuneo Akaha, 2002: 1-2). NTS threats cover a wider and more complex range of threats than do traditional ones. They could be economic security, financial security, environmental security (pollution, collapse of natural systems and diversity), information security (hacker, virus and other illegal activities of transporting and stealing information), resource and energy security, terrorism, proliferation of weapons (especially weapons of mass destruction), spread of disease, cross-border crime, smuggling and drug problems, illegal immigration, piracy attacks, or money laundering (Tsuneo Akaha, 2002: 1-2).

According to Lou and Teng (2005: 15), NTS problems normally include five important characteristics: firstly, both causes of, and solutions to, NTS problems are normally transnational; they may appear in not only one country but in one region and then create negative influences at the regional, or even the global level; secondly, the creators of NTS problems are uncertain, they could be state or non-state actors such as individuals, organizations or groups; thirdly, once NTS

problems intensify, they may transform into traditional security problems which may then be resolved by military means, such as violent conflict or even regional war; the fourth characteristic is that the state remains the main actor in the resolution of new security problems and has the autonomous right to resolve the problem; finally, the settlement of new security problems requires international co-operation in order to reduce the negative impact of threats and achieve a complete resolution.

Recently, China has faced many NTS threats, especially in six main areas. The first is the environmental security problem which includes four parts: water loss and soil erosion; large scale environmental pollution (air-pollution and acid rain, water pollution); shortage of energy and mineral resources; and decrease in biological diversity (Li, 2002: 1-3). The second is the information security problem, especially the loss of information under attacks from external hackers and from viruses (Wang and Liu, 2011:30-33). The third threat is the possible spread of an epidemic with rapid changes in DNA and improved counter-medical abilities (Li, 2002:1-3). The fourth threat is due China's huge population which increases pressure on the limited resources and deepens the welfare burden on an aging society (Miao, 2005: 119-124). The fifth one concerns border control problems, which include the drug trade in Northwest, Northeast and Southwest China, and illegal immigration from North Korea (Liu and Wang, 2010: 45-50; Shen, 2008: 20-25). The final threat is that of financial security. During the period of deepening reform, the imperfect Chinese financial system may be easily manipulated by external hot-money and other financial risks (Wang and Liu, 2011:30-33).

Among the six types of NTS threats discussed above, three are relevant to the research topic. The first of these is resource scarcity. Currently, due to the rapid increase in population and in modernisation, China relies heavily on the import of oil and many other resources. However,

most transportation lines by sea from the Middle East are not safe because the Chinese navy is not strong enough to protect them in the case of war. China is in the process of decreasing its dependence on oil (Li, Cheng and Wang, 2007:91-3). On the one hand, China is pushing its technical project of coal-liquefaction to produce oil, therefore the importation of coal from North Korea is important (Yin and Ding, 2006:1-6). On the other hand, as the largest owner and exporter of rare-earth minerals in the world, China plans to improve the status of these as a strategic resource in order to increase the dependence of the world on China for rare-earth minerals, thereby balancing Chinese dependence on the import of oil (Li and Guan, 2009: 89-92).

The second NTS threat relevant here is the environmental and food problem. China is bordered by four seas: Bohai Sea; Yellow Sea; East China Sea; and South China Sea. However, apart from the South China Sea, which is relatively further away from the Chinese mainland than the others, these seas have been seriously polluted resulting in an under-production of seafood (Dai, 2005: 255-260). Chinese traditional fishing areas also reduced dramatically due to the fishery agreement signed between China and South Korea in the early 2000s because the amount of Chinese fishing boats working in the South Korea Exclusive Economic Zone significantly reduced under the restriction of quota given by South Korea according to the agreement. The social concerns about the negative impact of Japan's nuclear accident also created a need for alternative sources for those fishery products traditionally imported from Japan. Thus, Chinese economic activities in the North Korean marine field could sustain the supply of seafood and make up for the loss caused by the reduced fishing areas, sea pollution, and overfishing.

The third threat comes from the cross-border problem. Northeast China suffers from two main cross-border problems. One is social instability caused by illegal immigration from North Korean. Chinese economic activities in North Korea may also be helpful in strengthening border

control in order to reduce the amount of illegal immigration by improving the local living conditions and decreasing unemployment (Shen, 2008: 20-25). In addition, Jilin and Liaoning provinces, especially the Yanbian Ethnic Korean Autonomous Prefecture, face the problem of population outflow to South Korea which directly leads to a reduction in terms of local culture and labour shortages. Chinese economic activities in North Korea which focus on co-operation in tourism, physical infrastructure construction, and mutual management of the Special Economic Zone in North Korea create conditions for the resolution of these problems.

4. Methodology

The thesis uses qualitative research methodology to study how the Chinese economic activities in North Korea are motivated by the NTS concerns of actors below the state, the relative central-local relations, and their regional impacts. Triangulation occurs through documentary analysis, media information, and elite interview techniques which draw a full picture of Chinese economic activities in North Korea. In telling the story of how the NTS concerns of actors below the state drive the commercialisation of China-North Korea relations, this thesis is guided by a certain investigative empiricism that seeks to take it beyond what is already known about China-North Korea relations around the Six Party Talks and North Korea's nuclear weapons.

The main evidence of Chinese economic activities is presented in three empirical chapters that deal with the relations between Beijing and actors below the state which are motivated by specific NTS problems. Each empirical chapter begins with an introduction of core NTS threats and the specific information of Chinese economic activities in North Korea which were implemented to resolve them. In doing so, it draws on reports mainly from Chinese media, but

also from South Korea news agencies, about local economic activities in North Korea. It also uses evidence from the academic literature which presents the NTS problems of regions which conduct economic activities in North Korea and suggests possible solutions that include specific economic activities from the media reports. These secondary sources are covered separately under different types of NTS problems in each empirical chapter and may concern mineral resource scarcity, food safety (environmental pollution), and cross-border security on illegal immigration and cultural decline.

Apart from news reported in the media, each evidential chapter also contains an analysis of central-local relations in China on the policy-making and implementation of economic activities in North Korea. The Chinese economic activities in North Korea from the early 2000s are conducted mainly by actors below the state, especially local governments, local state-owned enterprises, and non-state actors which include private enterprises and non-governmental organizations. The evidence presented in these sections derives from official speeches, announcements, and documents, especially the annual reports of local governments, which are available on their official websites, as well as the policy-cum-strategy collections stored in local libraries and archives. Apart from the official documents and other publications concerning China-North Korea engagement, this thesis also includes a number of annual reports from the companies who have developed business relations in North Korea in order to show their subjectivities and enthusiasm beyond central government.

The third source of information derives from over twenty confidential elite interviews conducted by the author during several research trips in China and South Korea between the autumn of 2012 and the winter of 2014 covering the time between my first and third annual research review.

The interviewees include scholars and academics from universities and think-tanks in Beijing and other regions who have business relations with North Korea, officials in the central government of Beijing and different departments of local authorities at both provincial and city levels, businessmen whose companies have business partners in North Korea, and journalists who wrote relevant reports on Sino-DPRK economic engagement. Interviewees were selected on the basis of their knowledge and expertise in the programmes and policy areas that fall within the scope of this research. The method of selection consisted of going through the organisational charts of target institutions in order to identify suitable individuals for interview. The first interview in China was conducted by the author from the contact information shown on the website of one local state-owned company in a neighbouring city and then developed through the business and academic network under the snow-ball effect. The interviews in South Korea were designed with, and supported by, my supervisor. Interviewees were usually contacted by telephone or text message to see if, and when, they may be available for interview. All interview material used in the writing of this thesis is referenced by citing the date and the location of the interview. No individuals responsible for the information quoted in the chapters are named as all interviewees have been assured of strict confidentiality. Only in the Appendix is there an outline of all interviewees and the details they made available. Additionally, the interviews were not taped but notes were made with the permission of the interviewees. The specifics of each interview were memorised and written down after the interviews. The questions to interviewees are also outlined in the appendix. Meanwhile, because most of questions are open ended and relevant to the varied personal experience and understanding to the different fields of Sino-DPRK economic cooperation, the answers are not quantified.

Most of the interviews were face-to-face, semi-structured and guided by open-ended questions to allow reasonable scope for discussion. Depending on the availability of interviewees and the personal rapport established, the length of each interview was between forty-five minutes and two hours. The language used in the interview was Mandarin for Chinese scholars and English for South Korean scholars. Only one interview was made by an agent of the author who was close to a respondent in a relatively high government position in order to avoid difficulties of a direct interview by the author.

The information collected from the elite interviews added flesh to the bones of the data obtained through documentary analysis and continued the stories from the media which tend to focus only on the beginning of economic co-operation, especially the launch events of co-operative projects and the ceremony of signing treaties. The interviews have four major functions: clarifying the questions arising from the documents and policy papers; getting additional documentary material that was not easily accessible; learning the evaluation of events from the personal and professional perspective of interviewees; and receiving expert commentary on specialist topics relevant to the thesis. It should be mentioned that in China the identity of academics and researchers in the universities and think-tanks is similar to government officials because in China most universities and think-tanks are in the official system. These academics and scholars are very familiar with government policy-making progress, especially the bargaining between central government and local actors.

The need for triangulation is demonstrated by Williams (2011: 73) who states that 'qualitative data rely on human interpretation and evaluation and cannot be dispassionately measured in a standard way. Checks on the reliability and completeness of qualitative data can be made by consulting a variety of sources of data relating to the same event – this is called

triangulation'. Each one of the three data collection methods used here, documentary analysis, media news, and elite interviews, only addresses one part of Chinese economic activities in North Korea. Their combination is suitable for the empirical investigation into Chinese economic activities in North Korea undertaken here. It benefits the researcher to establish the facts of what is happening on the ground in sufficient detail, which is a fuller picture of Chinese economic activities in North Korea beyond the general description in the official documents and incoherent reports of media.

Chapter 4 China's economic activities in the North Korean mineral resource sector

1. Introduction

The previous chapter outlined the theoretical background and methodology of this thesis. What follows are three empirical chapters about China's economic activities in the North Korean sectors of mineral resources, the fishery industry, and cross-border activities. They show that Chinese economic activities in North Korea, in the sector of mineral resources, were implemented mainly by actors below the state, such as provincial and city level governments, local state-owned companies, and private enterprises. These activities were driven by NTS concerns, such as resource scarcity and environmental considerations, as well as other reasons, such as reduction of economic costs, improvement of social welfare, and local industrial transition. This chapter focuses on Chinese economic activities in the North Korean mineral resources sector.

Chinese general perception of NTS with respect to mineral resources concerns both imports and exports. For mineral resources, which China needs to import from other countries, this security means the assurance of supply, attempts to reduce dependence on other countries, or to at least diversify import origins. Such security has been threatened in two ways. Firstly, the international sea lanes are not secure for Chinese shipping due to the distance between numerous US overseas military bases and China's relatively weak naval strength, therefore China needs to develop sources closer to home in order to keep the Chinese pipeline away from the control of the US navy (Wu, 2011: 330-331; Marcketos, 2007). Secondly, external political sensitivities, especially local protectionism, have weakened the possibility for Chinese companies to purchase

foreign enterprises (Lan, 2011:152-165). While China imported energy from other countries, it also exported certain types of mineral and seeks to maintain the competitiveness of these products in the global market. In China, a country as large as Europe, different conditions predominate in different provinces, each of which have their own interests and motivations. This chapter aims to explore the different interests towards economic co-operation with North Korea found at the level of the central government, and that of actors below the state. From the perspective of the central government, the main motivation is to secure access to mineral resources. This should be understood in the context of the general perception of resource security discussed above. However, for actors below the state, mainly regional governments, local state-owned companies, and private enterprises, the reason for engaging with North Korea is to do with factors such as environmental pollution and the survival of small and medium enterprises (SME) which impose an economic cost on them. It also analyses how their activities in North Korea can reduce these problems. In doing so, it distinguishes between the objectives of the central government in Beijing and those of actors below the state, mainly regional governments and private enterprises. The paper also argues that the actors driving the policies behind these activities are mainly actors below the state, such as the local government, private, and state-owned companies. Except for providing aid and engaging in dialogue with the North Korean authorities for the participation of central state-owned companies, the central government rarely plays an essential or active role in these activities. During the Cold War era it relinquished its unchallenged role of conducting negotiations on economic co-operation, signing all the agreements (as a part of general treaty) with North Korea on energy supply, especially the construction of the oil pipeline connecting Northeast China (Dandong) and North Korea.

The following paragraphs begin with a short introduction about the similarities and differences between central state-owned companies and local state-owned companies. Central state-owned companies rarely participate in the North Korean economy, except in the mineral resource sector where they play a relatively important role. Then it outlines the specifics of China's economic activities in the North Korean mineral resource sectors, i.e., in three fields: coal; rare-earth; and iron, in the post-2003 era. This information includes direct investments, technology transfer, joint-ventures, and the construction of physical infrastructure. It explores the motivations and significance of these activities found at the level of both state and non-state actors. The motivations and significance include the requirement for industrial system upgrades, reduction of environmental pollution, control of external resources, and the use of advanced technology. Lastly, the paper examines the role of central government and that of sub-state actors in China's economic engagement with DPRK. Actors below the state - either regional government, with their local state-owned companies at the provincial level, or small-scale private enterprises at the city level, have played a major role in the implementation of China's economic strategy towards North Korea. By contrast, the Chinese central government rarely plays a direct role. It mainly provides assistance during the process of negotiation with the North Korean side.

2. Chinese enterprises: different types of SOEs and economic activities in DPRK

This section outlines two types of Chinese State-owned Enterprises (SOEs) and their differences, and points out the economic activities of both SOEs and Small and Medium Enterprises (SMEs) in DPRK. Firstly, concerning ownership, Chinese companies are divided into three types: central SOEs; regional SOEs (in Chinese 地方国企 *di fang guo qi*), and private companies. Even though regional SOEs have experienced the structural transformation from

public to private ownership that has taken place in China in recent decades, to some extent they still maintain close ties with regional governments at the provincial and city levels. Governments at the provincial level always supervise the SOEs at both provincial and city levels (Montinola, Qian and Weingast, 1996: 61-65). Thus they pay more attention to the interests of local authorities than to those of central government.

The central SOEs, on the other hand, are directly supervised and managed by the Assets Supervision and Administration Commission of the State Council (SASAC), which was founded in 2003 by the central government in Beijing (SASAC, 2008). Currently, there are 117 central SOEs in China which are active in: public procurement, for example, the military industry and the State Grid; the exploration and sale of strategic resources, such as oil; and the supply of consumer goods and services, such as the construction industry (SASAC, 2008). These central SOEs are connected to the central government and represent the national strategic interests of China.

3. China's economic activities in North Korea in the sector of mineral resource

After discussing the similarities and distinctions between central SOEs and regional/local SOEs above, this section firstly reviews the history of Sino-DPRK mineral resource co-operation. Then it outlines the details of Chinese economic activities in North Korea at two levels, state and sub-state (regional). Firstly, state level economic activities include initiating potential investment and co-operative programmes between the PRC and the DPRK and acting as a broker between Chinese companies, especially provincial and city level state-owned companies, and the North Korean side.

Before 2003, the mineral resource co-operation between China and North Korea was directly controlled by the central governments of the two countries in the form of the provision

of aid from China to North Korea. The first agreement to include mineral resources was the Sino-DPRK 1971-1976 Agreement on the Mutual Supply of Important Products, signed in 1970. During these five years, China provided 500 thousand tons of oil to North Korea. The renewed agreement in 1975 ensured the supply of 100-150 tons of oil per year between 1976 and 1979 from China to North Korea at a special reduced price. This amount achieved 30% of North Korean annual oil consumption at that time. On Dec 20th, 1975, as China's first and only oil pipeline for export, the construction of the Sino-DPRK Friendship Oil Pipeline in Dandong was finished and began to operate (see Appendix 1). After the 1980s, China continued its supply to North Korea at a rate of 500 thousand tons of oil and 40 million dollars of coke annually for over thirty years, except for a six month suspension from January to June, 2014, in response to North Korea's third nuclear test. Furthermore, in 1982, China also assisted North Korea to build the Oil Processing Refinery in Sinuiju with an expected output of 2 million tons of oil.

Since 2003, China's economic activities in the sector of mineral resources increased rapidly among all the sectors in North Korea. In 2003, as the third largest import product, the import of mineral resources from North Korea achieved over 17 percent of import output from North Korea, one third the amount of seafood import output. However, two years later, it overtook the status of seafood as the largest of China's imports from North Korea by 61% of the total import amount for almost one decade (Lin, 2009: 39-40; Han, 2012: 15-17). Different levels of Chinese participators in North Korea invested in coal, rare-earth, and iron ore through direct investments, technology transfer, the foundation of joint-ventures and technology transfer. Specific information about these economic activities is discussed below.

3.1 Economic activities at the state level

Concerning investments in coal, the ministry of Commerce in Beijing has provided assistance on contacting the North Korean side for the Wu Kuang Group Company, one of the central state-owned companies in China. Meanwhile, Zhou Zhongshu, Wu Kuang's General Manager and chairman of the CCP branch in Wu Kuang, also gained permission from the central government and joined the official Beijing delegation to North Korea in early October 2005 (China Minmental Corp.,2005). This delegation successfully completed a difficult one-year negotiation between Wu Kuang and its North Korean partner over the investment in the Long-deng coal mine (China Minmental Corp, 2005). On October 20th, 2005, Zhou Zhongshu signed an agreement to set up a joint venture in the North Korean coal field with Lee Ryung-nam , the deputy minister of the North Korean Ministry of Commerce. This agreement was the first co-operative programme between North Korea and a foreign country outside its SEZ (Special Economic Zone), and shows the opening of the North Korean resource sector to the outside world (China Minmental Corp, 2005). This delegation represents a high-level interaction with the involvement of central government.

In addition to providing assistance to central state-owned companies, in special cases the central government also directly intervenes to finalise economic negotiations. For example, in 2011, in order to help Liaoning Machine (LIMAC) Corp, a local state-owned company, to succeed in negotiating with the North Korean side on an investment in a rare-earth mine, Beijing provided economic aid to North Korea. The aid comprised 300 thousand tons of fertilizer and 500 thousand tons of corn (Cheminfo, 2011). This demonstrates the direct and indirect support from central government to Chinese economic activities in North Korea.

3.2 Economic activities at the level below the state

At the level below the state, different actors at the provincial and city level, such as regional governments, local SOEs, and private SMEs, formed groups to negotiate joint-ventures with North Korea in order to provide technical support, manpower, and the construction of infrastructure, such as railways and electrical support. They became involved in this type of aid as a form of investment.

In the area of coal extraction and processing, YiMa Coal Corp, the third-largest local state-owned company in Henan province, succeeded in reaching co-operation on two projects in North Korea. These projects involve the opening of a 10 million ton coal mine and a 1.2 million ton coal chemical project, and the construction of physical infrastructure, including electrical power plants, coal-separating plants and a project of the comprehensive utilisation of coal gangue (YiMa Corp, 2008). YiMa Coal Corp's North Korean partner, An-zhou Coal's joint companies, are the largest developer of coal products in North Korea. On December 12th, 2008, the vice top manager of Yimei Corp. Ltd, and the CEO of An-zhou Coal's joint companies institution, together with the leader of the North Korean delegation, signed a letter of intent between the two companies (YiMa Corp, 2008) .

In contrast to the individual activities of central state-owned companies and Beijing, the regional/local SOEs and private SMEs chose to form co-operative groups in order to jointly invest in the coal mines of North Korea. In 2008, from Shandong province, three private enterprises from two cities, Ruiyu Mineral Corp from Rizhao, Diyuan Industry Corp and Yide Industry Corp from Weihai, formed a group and invested in a North Korean coal mine. From Liaoning province, another domestic co-operative group was formed between a local SOE from Dandong, Datongjiang trade, and two private companies from Dalian, Zanhua trade and

Hongyang trade. This co-operative group also created a joint-venture with a North Korean partner and gained the exploration rights to a coal mine in North Korea (Anonymous interviewee, 2011).

The strategy of joint exploration and development pursued by small and medium sized Chinese companies can be observed in the rare-earths sector as well. Rare-earth is the collective name of 32 special chemical materials. In fact, deposits of these minerals are actually very large. They are called rare-earths because they are very difficult to obtain due to the extremely complicated purification process accompanying their extraction. With the development of scientific technology, the strategic value of rare-earth minerals has increased. They are irreplaceable in the production of electronic components for the military industry, among others. Similar to coal mining above, Chinese central governments and regional SOEs are still motivated by different reasons. According to China's Ministry of Commerce (2008) and another interview (Anonymous Interviewee 3, 12 Sep 2012), on 17th, August, 2012, Liaoning Equipment Co Ltd, a local state-owned company, formed a joint venture called 'North Korea Liaofeng Non-ferrous Metals Joint Venture' with North Korea Lianfeng Group. With a registered investment portfolio of 23.16 million dollars and a 20-year operating lease to develop a 20-million-ton rare-earth mine in Maoshan, Liaoning Equipment Co Ltd used 9.2 million dollars (8 million Euros) to acquire 51 percent of the shares of the joint venture. The North Korean partner used its facilities, such as the land, the coal mine, and the company buildings as their funding of the remaining 49 percent share (7.6 million Euros) .

In the iron ore mining sector, some regional SOEs founded joint ventures with North Korean enterprises. According to the records of the ChangBai Ethnic Korean autonomous town Environment Protection Bureau (2007), on 11th, May, 2007, Shuguang Industrial Trade Co, a

local state-owned company based in Jilin City, spent 51.8 million RMB on acquiring 50 years' exploration rights for an iron mine in North Korean Jiashan. Zhang (2006) and SINA (2005) describe how, in 2005, three local state-owned companies, Jilin Tonggang Co Ltd and China Steel Co Ltd from Changchun, and Tianchi Industrial Trade Co Ltd from Yanbian, achieved a co-operative programme by way of compensatory trade with North Korean Maoshan Iron mine, providing funds to the tune of 7 billion RMB, technical support in the form of training personnel on relevant knowledge and skills, and infrastructure by building an electrical power station and roads from Maoshan to Yanbian, in exchange for iron ore and mining rights for 50 years. In order to ensure the success of the projects described above, the Jilin Department of Commerce provided 110 million RMB of economic aid to North Korea. Thus, in contrast to several different types of activities of regional SOEs and private enterprises, the engagement of one central state-owned company, that of Wu-Kuang, is fairly limited (see table below).

Table 4.1 Details of Chinese economic activities in North Korea in mineral and energy sector

Name of Sector	Chinese actor	North Korea partner	Type
Coal	Wukuang Group	Longdeng Coal Mine	Agreement for Joint-Venture in 2005
Coal	Ruiyu Mineral Corp; Diyuan Industry Corp; and Yide Industry	N/A	Joint-venture in 2008
Coal	Datongjiang trade; Zanhua trade; and Hongyang trade	N/A	Joint-venture in 2010

Coal	YiMa Coal Corp	An-zhou Coal	Opening of a 10 million ton coal mine and a 1.2 million ton coal chemical project and the construction of physical infrastructure, including electrical power plant, coal-separating plant, and a project of comprehensive utilisation of coal gangue
Rare-earth	Liaoning Equipment Co Ltd	North Korea Lianfeng Group	Foundation of North Korea Liaofeng Non-ferrous Metals Joint Venture (\$23.16 million) for a 20-year operating lease to develop a 20-million-ton rare-earth mine: 6.3 million USD for mining rights; Liaoning Equipment Co Ltd used 9.2 million dollars (8 million Euros) funds to acquire 51 percent of the shares of the joint venture The North Korean partner used the real facilities, such as land, the coal mine, and company buildings, as funding of the remaining 49 percent share (7.6 million Euros).
Iron Ore	Shuguang Industrial Trade	North Korea Jiashan Iron Mine	51.8 million RMB on acquiring 50 years' exploration rights
Iron ore	Jilin Tonghua Steel; China Steel; and Tianchi Industrial Trade	North Korea Mosan Iron Mine	Providing funds to the tune of 7 billion RMB, technical support in the form of training personnel in relevant knowledge and skills, and infrastructure by building an electrical power station and roads from Maoshan to Yanbian. This program is assisted by 110 million RMB aid from Jilin provincial government

According to the information above, it is clear that in the first decade after 2002, there have been multiple channels of interaction at both state level and at the level below the state, between China and North Korea. Even though the traditional oil supply from China to North Korea still continued during these years, Beijing' role remained weakened from its dominant control of

affairs concerning Sino-DPRK mineral resources during the Cold War era, to be the broker of any co-operation deadlocks for Chinese companies facing difficulties with their development programmes in North Korea. This can be seen from the limited amount of Beijing's engagement in contrast to the relatively large number of economic activities from diversified regions. At the level below the state, there were cases about co-operation between Chinese companies and the North Korean side on technology transfer, construction of physical infrastructure, and the foundation of transnational joint-ventures. In other words, from the view of multi-level governance, Chinese actors only have two levels of jurisdiction in their economic interaction with North Korea. The central government mainly provides a framework and assistance to the co-operation with North Korea, while the companies, both local SOEs and SMEs, only participate in the specific economic activities. These two levels of jurisdiction do not overlap. However, although the levels of jurisdiction are limited, the ways of jurisdiction remain varied. Central government assists the negotiations and provides framework support, while the SOEs and SMEs participate through joint ventures, technology transfer, and direct investments.

Chinese economic actors in the North Korean sector of mineral resources are driven by particular concerns. In the coal industry, they are driven by the national strategy of coal-liquefaction technology development at the state-level, and the lower-cost of exploration and avoidance of purchase by local state-owned companies at the sub-state level for SMEs. In the rare-earth sector, compensation of rare-earth outflow for long-term control by the international rare-earth market is the driver at the state level. In contrast, pollution dumping is the major reason at the level below the state. In the sector of iron ore, Jilin Province's plan of developing its vehicle industry and the requirement for railways, are the major motivations.

3.3 Drivers and consequences of China's economic activities in North Korean coal mines

China's industrial and economic development has close ties to the mineral resources industry, especially coal. In 2013, as the country with third largest coal deposit in the world, China consumed 402 million tons of coal (half of the world's total coal consumption), produced 370 million tons of coal, and also imported 32.7 million tons of coal from other countries (China's Ministry of Commerce, 2014). The paragraphs of the section below show the absence of the relationship between the national strategy of China on coal liquefaction and economic activities in North Korea, and then discusses the motivations of actors below the state, such as regional SOEs and SMEs.

State level: China's National Strategy for oil production through coal liquefaction

Coal liquefaction has been an effective way to reduce dependence on oil imports from other countries and is projected to reach 60 percent of China's comprehensive oil consumption in 2020 (Wu, 2011). Since 2000, China has invested significant resources in developing the technology necessary for oil liquefaction. In Shandong, Henan, and Shanxi Provinces, which are rich in coal, liquefaction was heavily promoted through a co-operative programme between research centres and central coal companies. The programme was funded by Beijing (Wang, 2007). With the improvement of advanced technology, the expected production of coal liquefaction also increased significantly. In 2007, the China Shenhua Group developed the most advanced oil-liquefaction technology in the world by using one thousand tons of coal to produce over three hundred tons of fuel oil through direct liquefaction. The Group then tried to expand this technology to the whole of China (Shenhua Group, 2012). This technology reduces the environmental impact of liquefaction by draining the pollution through the cyclic utilisation of

wasted water, the use of oil sludge in production of electricity', and the store of carbon dioxide 1500-2500 metres underground (Shenhua Group, 2012).

Although a few Chinese coal SOEs have developed the advanced technology for coal liquefaction, these SOEs are mainly from Shanxi and Shandong Provinces. There is rarely relevant information about the coal-liquefaction technology of central SOEs. Thus, the involvement of Beijing in the investment of Wu Kuang was a result of its ownership of central SOEs, rather than the coal-liquefaction strategy. Meanwhile, Chinese central SOEs, as well as the regional SOEs, such as YiMa from Henan, rarely developed businesses in North Korea. Thus, they lacked experience in negotiating with North Korea, especially as the Longdeng coal mine is a significant source of coal in North Korea. The assistance provided by Beijing was helpful to resolve the deadlock in the negotiations. It can also be explained as a result of inter-provincial economic blockades in China. The regional SOEs from Henan province could only invest in North Korea after failing to gain inter-provincial co-operation.

The drivers of actors below the state and consequences

After showing the absence of links between the national strategy of coal liquefaction and Wu Kuang, this section discusses the drivers of actors below the state level. Firstly, ensuring the survival of SMEs is an important reason. In Shandong Province, SMEs, rather than local state-owned companies, play a major role in coal-related economic activities. This is a result of the unsuccessful integration of seven large coal SOEs inside Shandong due to the lack of agreement over the distribution of power and future interests (Ding, 2011) (see Appendix 2). This extended the survival of private SMEs in Shandong Province and provided opportunities for them to invest in North Korea. They were not immediately swept out of the local market by the seven large companies due to their failed integration. To these companies, which are presently unable to

develop local coal deposits because of financial difficulties, North Korea is a passive choice, but still a good place for investment because North Korea needs external investment to attract foreign currency. The SME's major target is survival, in contrast to the huge overseas strategic purchases implemented by powerful large companies which already monopolise much of the domestic market and have started to expand into overseas markets. Thus, it can be argued that these Shandong SMEs invested in North Korea with a different motivation to the national strategy on coal liquefaction and resource control. Meanwhile, the provincial government also benefited from the successful removal of Shandong SMEs from the local market because only the consortium of the seven city-level SOEs in Shandong Province could pay full attention to provincial coal resources.

The strategy of investing in North Korea left room for the survival of SMEs in Shandong Province. This can be seen from the slow steps taken towards coal company integration in Shandong. In 2008 and 2012, Shandong Province made the decision to re-organise its coal industry by closing the under-developed small scale companies and encouraging large local state-owned companies to purchase private SMEs. However, with the increase of participation in North Korean coal mines, private SMEs promoted their own strengths and survived by keeping their scale of operation beyond the minimum official standard of company scale (300 thousand RMB). The names of three private Shandong SMEs with coal investments in North Korea are always on the list of Shandong Coal Annual Books (Shandong Coal Annual Book, 2011, 2012, 2013: Appendix). Even in recent years, the majority (90%) of Shandong coal companies met financial difficulties due to the rapid drop in coal prices. This resulted in a widespread bankruptcy of SMEs in Shandong. In Zaozhuang, six other private SMEs closed in 2013 (Chen,

2013:45). However, the three private SMEs with investments in North Korea still survived without being purchased and bankruptcy.

Another driver of expansion into the North Korean coal mining sector is to do with the high casualty rate among workers in Chinese coal mines. The low security risk of coal mine death due to a positive geographical condition in North Korea is a further motivation. In 2002, the overall number of casualties in Chinese coal mines was between seven and eight thousand (Xinhua Net, 2008). Although that number has reduced to less than two thousand, in 2011 the death rate for every million tons of coal in China was still thirty times higher than that of the US (Xinhua Net, 2008; Central Government of PRC, 2012). The low education level of workers and the dangerous natural conditions of coal mines are recognised as two key reasons for such high casualty rates in China's coal production (Hao, 2007; Chen, 2009). In the latter case, 95 percent of coal mines in China are underground mines. They are easily threatened by gas explosion, natural fire, heavy earth pressure, and flooding (Xinhua Net, 2008). In the past, the high casualty rates in China's coal production did not result in heavy economic losses nor in any moral pressure on companies and local governments because of media control, but now conditions have changed (Chen, 2006). With the spread of modern information technology, the effort of hiding coalmine accidents is increasingly difficult. The central authorities are determined to be involved in the supervision of coalmine production and have allowed China Central Television (CCTV) to broadcast live the rescue of miners during coalmine accidents (Cai and Xu, 2010; Yi, 2008). Compensation claims cannot be denied or dealt with in secrecy by the owners of the coalmines.

The conditions in North Korean mines are comparatively better. As explained by one interviewee, coal deposits in North Korea are shallower than those in China. In some places, the use of surface mining is sufficient. The interviewees (Anonymous Interviewee 1 and 2, 3-5 July

2011.) said: 'The conditions in North Korean coal mines are so good that you can even use a hammer to ascertain the depth of a coal mine. That's why Chinese companies are willing to build roads in North Korea in exchange for exploration rights. Nobody will die in that kind of open-cast mine unless you dig a hole and jump into it'. Thus, to the private enterprises and other local state-owned enterprises, who either lack advanced security facilities or are very sensitive to the potential economic cost and weak moral reputation, North Korea is a suitable choice for the development of coal mines. In short, the economic concerns, both the survival of SMEs and the potentially reduced costs as a result of better mining conditions, motivated Chinese economic activities in coal mining in North Korea. These economic concerns are relevant to the national strategy of coal liquefaction, a high economic cost project.

Divergence between actors below the state and central government

From the analysis of different motivations to the economic activities in North Korea in the sector of coal mining above and the view of multi-level governance, at the two different levels of jurisdiction (state level and the level below the state), the general target of jurisdiction at the state level about promoting coal liquefaction is not represented. In contrast, for the specific target of jurisdictions at the level below the state, the main drivers are the survival of the SMEs and the reduction of costs from better geographical conditions. It is clear that the specific activities in the field of coal mainly represent the will and interests of actors below the state.

Firstly, the activities are significant to the survival of a few companies, either the regional local state-owned companies or private companies. To the local state-owned companies who develop the coal liquefaction technology, their expansion into the control of coal mines is important for their survival in the future for two reasons. On the one hand, the local state-owned companies cannot compete with central state-owned companies for the ultimate priorities of

policy-making from central government. Although coal liquefaction is a national strategy with a long history, it is no longer the core of the grand national strategy because coal is no longer the most essential resource for China. The oil produced from coal liquefaction is an alternative step to diversify the sources of the oil supply. The central state-owned companies, such as SINO PEC, are following the will of central government and playing the most crucial role of securing the oil supply through the practical implementation of the inter-government agreement on the oil, and also gas, co-operation between China and DPRK. The national strategy of coal-liquefaction benefited the regional SOEs, who followed the central SOEs, to gain the policy priorities. To the private enterprises from Shandong Province, it has been noted that their activities are actually an active response to the prospective reduction of their share of local coal mines due to the integration of several big coal companies. In other words, these activities represented a relatively weak position of local state-owned companies and private enterprises because the difficulties created which threaten their survival are made from the top rather than from the bottom. They did not benefit from the decision-making of central government while their interests were more or less harmed so that they responded by way of implementing economic activities in North Korea.

Secondly, the motivation of economic-interest shows the self-motivated, rather than top-commanded, characteristic of actors below the state. On the one hand, the price reform of coal-fired power stations is recognised by the coal companies as a chance to increase profits by promoting the price of coal. That is the reason for some companies to go to North Korea, for the prospectively larger gap between costs in North Korea and the domestic price of coal. However, in recent years many coal companies came to the edge of collapse under a relatively free-market-price-decision domestic situation. On the other hand, the better geological conditions for coal

mining in North Korea is a clear motivation in meeting the intention of lowering economic costs by reducing, and even avoiding, casualties during the exploration for coal. The central government in China is always concerned about the security of working conditions. The law of safe production was also approved in 2002. However, the real reason for companies to consider compensation for workplace death is the increasing amount of information spread through the internet, rather than the law because, in China, the law is not as effective as in the West. The fast spread of information about industrial accidents via the internet made it difficult for companies, or even local authorities, to hide the news. Even the active involvement of CCTV in reporting mining accidents is a response to public criticism of the inability of central government to ensure a safe working environment at the local level. This is at the root of the increasing costs of casualties during exploration, whereas in North Korea the mining conditions are much better and surface mining only is needed.

To sum up, the economic activities are mainly driven by the actors below the state. Their motivations do not represent the will of central government while in many conditions their responses represent the shortage of preferences from the policy-making of central government.

3.4 Drivers and consequences of China's economic activities in North Korean Rare-Earths

State level: sustain China's control of the international market for rare-earth minerals

Firstly, to Beijing, assisting the Liaoning company to invest in North Korea helps to broaden the origins of rare-earth and sustain the long-term strategic domination of the international rare-earth market. China has 30 percent of global rare-earth deposits, but supplies over 90 percent of rare-earth to the world market at a very cheap price (Wu, 2011). Since 1998

Beijing has implemented a rare-earth quota system to limit its export. This quota system was so restrictive that it led to frequent diplomatic protests from the European Union, and other countries, who considered the quota system to be a type of resource war (Ministry of Commerce, 2011; Zhong, 2010) (see Appendix 3). However, the quota system has not been effective in the avoidance of a net loss of Chinese rare-earth reserves due to rare-earth smuggling of up to 20 thousand tons per year (see Appendix 4). Thus, even China will become a net rare-earth import country by the end of the 21st century making investment in North Korean rare-earth mines a significant activity. According to one report, the deposit of rare-earth minerals in North Korea is evaluated at 20 million tons (Wang and Cheng, 2011). If the global demand for rare-earth minerals stabilises at its 2011 level (i.e. 70 thousand tons), the North Korean rare-earth deposits, which could in fact fulfil the requirements of the global rare-earth market for almost three hundred years, would assist markedly in China's control of the rare-earth market (Wang and Cheng, 2011). According to KOTRA (2013, 2014), Liaoning company's investment in North Korea rare-earth mines saw its exports of rare-earth minerals begin at the end of 2013. In 2014, still at the early stage of mining development, China imported about 500 tons of rare-earth from North Korea. Although this amount is still small in contrast to the 20 thousand tons of smuggled rare-earth, with the increase of mining scale and output, as well as strengthened official curbs on rare-earth smuggling, the import of rare-earth should be effective to balance its loss of rare-earth through smuggling.

Actors below the state: environmental concerns

Differing from the long-term target of Beijing, the consideration of both regional governments and companies is to reduce the pollution associated with the extraction of rare-earth

minerals in China. However, separating rare-earths from the original chemical mixtures may create huge pollution. Producing one ton of rare-earth products normally creates ten tons of waste pollution. The rare-earth companies are required to deal with the waste they produce and to avoid polluting the environment (Xie and Liang, 2011). They need to pay extra tax because of the potential risks to local water resources. Unlike in China, North Korean mines are concentrated in its northwest mountainous area where they are isolated from the sources of rivers and from major cities such as Pyongyang and Gaesong. Thus, by investing in rare-earth mines in North Korea, the heavy cost of reducing environmental pollution and dealing with the waste created during the production in China may be reduced significantly. In this way, economic activities in North Korea in the rare-earth sector meet short-term requirements of local authorities in the prevention of environmental pollution and the reduction in economic costs, rather than the national interest of sustaining control of the global rare-earth market.

3.5 Drivers of China's economic activities in North Korean iron mining and central-local divergence

Iron ore is another key mineral for China in heavy industry and construction. With the economic reforms since 1980s, and the accompanying rapid urbanisation, China faces the problem of a low domestic supply of iron ore. Domestically, China produced around 30 percent of its iron ore consumption at the beginning of the 2000s, and this increased to 40 percent almost a decade later. At the state level, urbanisation in China requires an enormous supply of steel products. In the 2000s, China moved over 100 million rural residents from villages to towns and has now reached an urbanisation rate of 50 percent (Zhao and Ni, 2012: 10-13). In the short term, there is a problem of excess production capacity in China. However, experts foresee that the

speed of urbanisation in China will continue to increase in the next two decades, reaching an urbanisation rate of 65 to 70 percent in the 2030s (Wang, Feng and Zheng, 2012: 1-3). This implies a new wave of urbanisation with a corresponding development of urban infrastructure. Thus, it is essential for China to ensure a safe supply of iron ore in order to achieve this target.

Although investments in North Korea iron mines fit the resource control strategy of Beijing, such investments should be recognised as a local-development oriented economic activity. There are two reasons for this. Firstly, investment in North Korea provided approximately one third of China Faw Group's consumption. This is a small amount of the regional resource requirement of Jilin province. In contrast to China's import of iron from Australia, who is China's largest supplier providing over half of its total import of iron ore, the amount is very limited, under one percent of the imports from Australia (see Appendix 5). Thus, the economic activities in North Korea in the iron ore field are actually locally oriented, rather than strategically driven.

Secondly, Chinese investment in North Korean iron ore mines comes from the regional SOEs of Jilin Province, in particular the Tonghua Iron Corp which is controlled by the province. This is related to Jilin Province's local development plan which is closely linked to the steel industry and dependent on the regular supply of iron ore. On one hand, Jilin Province aims to construct a Changchun City based centre of vehicle production. Changchun, the capital of Jilin province, is called "China's Detroit" due to the industrial cluster around China Faw Group Corporation. Changchun is now in the process of an industrial upgrade in preparation for the production of a million cars, transmissions, and engines per annum (Jilin City NDRC, 2006; Cai, 2012: 30-31; Wang, 2012: 12-18). Meanwhile, the local development strategy of Jilin indeed ran against the core domestic grand development strategy of Beijing which recognized traditional energy, steel, and vehicle industries in Northeast China were actually the industries with surplus

production capacity which should be reduced and transformed. Even though China has occupied the status of the largest vehicle producer in the world since 2009, its vehicle manufacturing industry met a long-term serious problem of surplus production capacity (see Appendix 6). As early as September 2010, at the Tianjin International Vehicle Expo, Chen Bin, the Department Chief of the Industrial Co-ordination Department of the China National Development and Reform Committee, warned of the deepened risk to China's vehicle industry under its rapid expansion in the different regions occurring under the support of local governments (SINA, 2010). In PwC's China vehicle industry analysis report (2015: 5-7), from 2011 to 2018, China's vehicle industry will have an average of 20 percent surplus production capacity with the highest point of 28.5 percent in 2012, and the expected lowest point of 15 percent in 2018.

On the other hand, apart from the support to the development of the automobile industry, North Korea's supply of iron ore is also significant to the construction of the physical infrastructure in Jilin Province, including railways, a new airport, and new towns in its 11th and 12th five-year Plans from 2006 to 2015 (Anonymous Interviewee 4, Aug 11 2014). In the sector of railway construction, during the 11th five-year plan, from 2006 to 2010, Jilin Province paid most attention to the construction of its first high-speed railway between Changchun and Jilin City. This high-speed railway was also the first high-speed railway in Northeast China. During the 12th five-year plan from 2011 to 2015, Jilin Province made remarkable progress on its railway development. It invested 190 billion RMB in 25 railway programmes (see Appendix 7), constructed 4180 kilometres of railway and increased the total length of the line in Jilin to 6,330 kilometres, which is almost three times its length in 2010 (Jilin.gov, 2016). Meanwhile, the density of the railway network in Jilin Province is 338 kilometres per 100 thousand square

metres (万平方公里). This amount is 2.7 times the national average railway density in China, and 4.5 times the provincial railway density in 2005. Jilin Province has thus connected all its towns by rail and built high-speed railways between all its major cities (Jilin.gov, 2016).

Apart from such railway expansion, the steel industry also supported the construction of other physical infrastructure in Jilin Province prior to 2015. During these years, on the one hand, in the sector of airport construction, Jilin Province enlarged the civil-use areas of Baicheng airport and Tonghua airport, and took the further step of opening flights between these two airports to major cities in China, such as Shanghai, Beijing, and Guangzhou. Meanwhile, the civil-use airport in Songyuan, and the second enlargement project of Changchun airport were also started in 2015. The construction of these airports formed the airport transport network of Jilin Province. This network of 'one major & several secondary' projects centred on the airport in Changchun (Jilin's provincial capital) and connected the neighbouring airports in smaller cities, such as Baichang and Yanji (Jilin.gov, 2016). On the other hand, by entering the era of high speed railway, Jilin Province started to construct four new cities (towns) along the Harbin-Dalian high speed railway: De-hui West Station West New City; Changchun West Station West New City; Gongzhuling South Station West Mountain New City; and Siping East Station Southeast Natural New City. Apart from the final new city in Siping, which mainly focused on the development of leisure and agriculture, the other three, which concentrated on the area of multi-functional business, required large amounts of steel during their construction (Jilin.gov, 2016). Therefore, in the economic participation of iron ore in North Korea, the target of jurisdiction is also at the level below the state with the specific target of advancing local development, rather than the general target of resource control.

4. Conclusion

In conclusion, from the view of complex interdependence, it can be found that there are several major channels at multiple levels on the China side in Sino-DPRK economic interaction in the sector of mineral resources. First, at state level, Beijing no longer maintains its previously dominant role of the Cold War era in decisions concerning both big and small economic affairs in Sino-DPRK relations. Apart from sustaining oil and coke supplies to North Korea for many years, it rarely became directly involved in these activities, especially after the end of Cold War. However, it still provides institutional support in terms of legalising Chinese economic activities in North Korea by signing general agreements to promote and protect Chinese investments. It also offers necessary diplomatic aid for the achievement of economic co-operation programmes relevant to central-state owned companies and strategic resources, such as rare-earth. Secondly, at the level below the state, local government, local state-owned companies, and private SMEs formed multiple channels with North Korea. The non-state actors, such as private enterprises, played an increasingly significant role in Sino-DPRK relations, in particular in economic participation with actors outside Northeast China, who are historically considered the major source of Chinese economic actors in North Korea. At the same time, due to the rapid increase of engagement from multiple economic actors, economic co-operation in mineral resources became of primary importance in Sino-DPRK relations. The income, and the relevant technological support to North Korea deepened its dependence on China, and offered opportunities for Beijing to turn the heat on Pyongyang, thereby showing its dissatisfaction with North Korea. Beijing supported a UN resolution in April 2016 and imposed the strongest sanction on North Korea by forbidding the import and export of major mineral resources in Sino-DPRK trade. On April 5th, 2016, China's Ministry of Commerce (2016) announced that, except in the case of a

humanitarian emergency, China would forbid the import of coal, iron ore, gold, and rare-earth products from North Korea. This still allowed room for China to play a flexible role in the trade of these mineral resources with North Korea in order to meet the requirements of actors below the state.

Furthermore, from the multi-level governance view, Chinese economic activities in North Korea in the mineral resource sector could be explained through a co-ordination of clashed concepts in the two governance modes: target jurisdiction; limited level of jurisdiction; non-overlapped level; and flexible ways of jurisdiction. The number of jurisdiction levels is limited at one, i.e., single regional SOEs and authorities, or SMEs, and two, i.e., central governments, central SOEs, and local SOEs). The activities of SMEs only refer to the single local level below the state. The participation of central state-owned companies and the support from central government is also at the single state-level. The only two levels of jurisdiction take place in central government's support of the economic participation of local state-owned companies from Liaoning in North Korea. As the level of jurisdiction is so limited, there is no overlap between the state level and actors below the state level. The involvement of multiple actors diversifies the ways of jurisdiction. Central government could offer aid to push economic co-operation. The state-owned companies and private SMEs also participate in different ways, including single investment, economic co-operation programmes, technology transfer, and the foundation of joint-enterprises. The specific mode of jurisdiction is also a major target jurisdiction. The national strategy of developing coal liquefaction is indeed the driver of central state, and its owned companies, to participate in North Korea. However, this direct engagement from the state-level is only a part of the economic activities occurring in the field of coal mining. The other actors, especially SMEs, are driven by the other specific targets of reducing economic cost

and sustaining their own survival, which are not necessarily concerns of the actors at the state-level. Meanwhile, in the economic participation on rare-earth and iron ore, their drivers are also irrelevant to the national strategy. Although investment in North Korean rare-earth mines could help to extend China's control of the international rare-earth market, this long-term target could be better achieved by the strong control of the smuggling of rare-earth. This administrative issue at the national level is not considered by companies at the local level who are more concerned about the potential economic cost of dealing with environmental pollution. Furthermore, the economic activities in iron ore for the development of the vehicle industry and the railway network in Jilin Province, also ran against the national strategy of transferring and reducing the industries with surplus production capacity. The amount of iron ore imported from North Korea to Jilin Province is also extremely limited at the national level. Therefore, the jurisdiction of China's activities in North Korea in the sector of mineral resources is mainly driven by the actors below the state with economic and environmental concerns.

Chapter 5 China's economic activities in the North Korean fishing industry

1. Introduction

The previous chapter discussed China's economic activities in DPRK's mineral sector. It found that Chinese economic activities in North Korea in the sector of mineral resources were mainly implemented by actors below the state, such as provincial and city level governments, local state-owned companies, and private enterprises. These activities were driven by NTS concerns, such as resource scarcity and environmental considerations, as well as other reasons such as reduction of economic cost, improvement of social welfare, and local industrial transition. This chapter will continue the preceding analysis by focusing on Chinese investment in North Korea's fishing industry.

Access to clean and affordable food is an important priority for the Chinese government who has to feed the world's largest population. Just as access to strategic mineral resources, like coal and iron ore, are vital for the country's continued development, so too has securing access to large quantities of seafood been a major objective for the Chinese government at all levels. In recent years China's fishing industry has come under attack from the Sino-ROK inter-state agreement to reduce China's fishing area. This situation, along with the need for protection from environmental hazards and over-fishing, has driven Chinese economic activities in the fishing sector to expand rapidly overseas. This chapter argues that China's economic activities are motivated by NTS issues, especially the food safety problems caused by environmental concerns. It analyses how these activities in North Korea can reduce such threats. In doing so, it distinguishes between the objectives of the central government in Beijing and those of actors

below the state, mainly regional governments and private fishing companies. The paper also argues that the actors driving these policies are mainly those below the state level, such as local government, private and state-owned companies, and non-government organizations. Except as the broker of fishing opportunities in North Korea and the provider of diplomatic support to contingencies, the central government rarely plays an essential or active role in these activities. During the Cold War era, it relinquished its unchallenged role of organizing negotiations over fishery co-operation by signing all the agreements (as a part of general treaty) with North Korea.

The following paragraphs outline the specifics of China's economic activities in North Korea's seafood sector in the post-2003 era. This information includes, the purchase of fishing licenses, technology transfer, civil co-operative programmes, joint-enterprises, and direct investment. After that, the NTS issues, including the reduction of traditional fishery areas, environmental pollution, and the short-term impact of the Fukushima nuclear accident, which influenced the seafood security and pushed the actors to implement seafood activities in North Korea, are discussed with the positive influences of these economic activities in North Korea on China's seafood supply identified.

2. China's economic activities in North Korea in the fishing industry

Before 2003, the fishery co-operation between China and North Korea was directly controlled by the central governments of the two countries. The first agreement to include fishery is the Sino-DPRK Economic and Cultural Cooperation Agreement signed in 1953 in support of Liaoning Province and North Korea's construction of a reservoir, with China's assistance in fishery management in the reservoir area. The first single ocean fishery agreement between China and North Korea (official fishery representative groups) was signed on August 10th, 1959, after one week's dialogue which briefly discussed the fishing areas of the two countries in the

Yellow Sea. After that, Beijing signed the same agreement with North Korea regularly in 1969 and 1981. These agreements hold more symbolic than practical meaning because, before the 2000s, neither China nor North Korea had strong requirement, nor ability, to send large fishing fleets to fish in the ocean territories of others, especially in the exclusive economic zones. The normalisation of Sino-ROK diplomatic relations in 1992 became a turning point in Sino-DPRK relations because in the next decade top official interaction and visits completely stopped and China and North Korea did not sign any further fishery agreements. However, in the late 1990s, during the great famine of North Korea, in order to reduce material shortages, Beijing asked North Korea, through its embassy in Pyongyang, to allow Chinese fishermen to develop a barter trade with the North Korean navy in the coastal areas in order to gain permission to fish in North Korea's ocean territory; permission was indeed granted.

Since 2003, China's economic activity in the sector of fishery has become a significant part of the activities among all the sectors in North Korea. In 2003 and 2004, as the largest product imported by China, seafood achieved over 52 percent of North Korea's total export output. Although seafood products lost the status as the product with the top import output, due to the rapid increase of mineral-resource imports from North Korea after 2005, they remained among the top five products imported from North Korea (Lin, 2009: 39-40). There are six types of economic activities in the North Korean fishing industry (for specific information see Table below). Firstly, buying fishing licenses to fish in North Korea is the major choice. From 2003 to 2011, The Ministry of Agriculture in Beijing played the role of general agent for collecting information from sub-level governments and buying fishing licenses from North Korea. From 2012, this duty transferred to the China Distant Fishing Association (CDFA), whose members are made up of public fishery institutions, fishery companies, and other relevant individuals in

China. The corresponding partner in North Korea is the North Korean Fishery Association. However, due to the sensitivity of the special relationship between China and North Korea, although CDFA succeeded in dealing with fishery disputes between China and other countries, it still only took responsibility for communicating with North Korea for buying fishing licenses. China's Ministry of Foreign Affairs still has to deal with any disputes and conflicts with North Korea in the fishery industry. As the real consumer of fishing licenses in North Korea, there are many local governments buying fishing licenses. For example, as early as 2004, Rongcheng government from Shandong province bought fishing licenses for 10 local boats. Then in 2005, the rapid increase of boats from 10 to 92, which required fishing licenses for the North Korea East Marine territory, enlarged the fishing area in North Korea. As another city in Shandong Province Weihai's local government bought fishing licenses and sent 362 local boats to North Korea in 2012.

The second type of activity is investing in new facilities located in the coastal area of DPRK, such as the fish seedling project of Penglai Xingdong Fishing in North Korea. Penglai Xingdong Company, which developed a project named 'Domestic Seedlings for External Cultivation 内育外养', constructed its fishery facilities in North Korea by funding 5 million RMB in 2009. It cooperated with Penglai local research institutions to develop advanced fishery seeds and used North Korea's clean environment for production. Thirdly is training in the fishing regulations provided by the sub-level governments (e.g. Changhai local government) to both Chinese fishermen and North Korean officials in order to clarify important issues, such as specific formalities, significance of equipping regular GPS facilities, allowed and prohibited fishing areas (not only the exclusive economic zones of North Korea but also the disputed areas between

North Korea and South Korea), and avoidance of illegal cross-border fishing activities. What is more, Chinese companies also joined the North Korean fishery development programme by setting up joint-ventures with North Korean commercial partners. From 2010 to 2012, two companies from Liaoning province, Baohua Group and ChangPing Corp, joined the Great West Sea Programme with the co-operation of the North Korean Success Firm. From 2011, the Baohua Group also funded 30 million dollars to found a joint-venture with the North Korean LongXing Firm and to construct a Sea Cucumber Cultivation Base (13 kilometres square) in Haeju. Another type of economic activity is that of fishing technology transfer and support. For example, fishing boats from Zhoushan Putuo Distant Fishery Company offer explanations and assistance on the technology of double-ship trawling (See appendix 1) to North Korean partners who only use under-developed single-ship trawling (See appendix 2). Usually they give advice about the suitable types of double-ship trawling facilities for North Korean partners according to the real condition of North Korean boats. They also invite North Korean fishermen to observe the practical control required for co-operation of two fishing ships in the double-ship trawling progress, especially how to keep two boats in step at the same time (radio interaction between the captains and chief mates of two boats), as well as the co-operation of sailors in the close-net stage. Finally, in addition to these official, legal activities, there are also media reports about underground interaction between Chinese individuals and North Korean troops about the sale of illegal fishing licenses and monopolisation of fishery resources by attacking Chinese fishing boats in the name of illegal cross-border fishing in the Sino-DPRK ocean border near Yalu River (See appendix 3)

Table 5.1 Chinese economic activities in North Korea on fishery industry

Actor	Activities	Time	Output Value	Sources
Liaoning Baohua Group; Liaoning Changping Industry and Commerce Company (North Korea; Success Commercial Firm)	Sino-DPRK civil fishery co-operation programme; Joint Venture (Great West Sea Programme by the North Korean side)	2010.5.28-2012 (350 fishing boats in 2010, 500 in each of 2011 and 2012)	2 billion RMB in 2010 2.2 billion RMB in 2011 2.3 billion RMB in 2012 (whole industrial chain)	Liaoning Ocean and Fishery Bureau (2010); Anonymous Interviewee 8, 14 Sep 2012)
Joint-Venture Sino-DPRK Investment, Cooperation and Trade Commercial Firm (Liaoning Baohua DPRK Long-Xing Economic Community	Sea Cucumber Cultivation Base (13 sq kms) in Haeju, North Korea	Started from 2011	Baohua Group funded 30million USD, Annual output 150 million RMB	LnBaohua.com (2011)
Changhai town (under Dalian city)	Fishing activities and officially-offered training sessions	2010.4-9 (96 fishing boats)	240 million RMB (Seafood only) 5 million RMB per pair of ships	Liaoning Ocean and Fishery Bureau (2010)
Weihai City	Fishing in the east marine territory of North Korea	2012.6-8 362 fishing boats		Weihai News (2012).

Rongcheng Ocean Fishery Company (local state-owned company) (North Korea: Yuliu Commercial Firm)	Fishing in the east marine territory of DPRK	2004 10 fishing boats	500 ton's squid per pair of ships	Weihai News (2011).
Rongcheng Ocean and Fishery Bureau; Rongcheng Ocean Fishery Company	Developing the new fishing area in the North Korea East Sea.	2005.6-10 92 fishing boats	600 ton's squid per pair of ships	Weihai Fishmarket News (2005).
Penglai Xingdong Fishing Seedling Cultivation Company (Private enterprise)	Trade of technology transfer from CN to DPRK on the fish seedlings; Investment of research and development on the cultivation of Fish Seedlings	2004 and 2005 (trade); 2009 (investment)	200 thousand RMB (trade); 30 million RMB (investment) Import of 70 tons of shrimp (5 million RMB) in 2010 Import of 150 tons of shrimp, (11 million RMB) in 2011	Yantai Daily (Mar 14 2010, p1); Anonymous Interviewee 4; 10 Aug 2012.); Shui Mu website (2010)
Zhoushan Zhengyang Deep-Sea Fishing Corporation Putuo Deep-Sea Fishery Company (local state-owned companies)	Co-operative programme with Dandong companies; Buying Fishing License; Technology support	2005; 2010	Slight financial loss in 2005	(Siyang Mofcom, 2005); Anonymous Interviewee 1, 2&3: 9 Sep 2011, Zhoushan.)
China Distant Fishing Association (North Korea: mutual fishing)	Signing fishing agreement with DPRK on developing the eastern marine	2011; 2012	The general framework and rule that should be followed by	CFFA (2012)

association)	territory resource	fishery		all the Chinese fishing boats working in North Korea eastern marine territory	
--------------	-----------------------	---------	--	--	--

According to the information above, it is clear that over the last ten years there have been multiple channels of interaction at both official and non-official levels between China and North Korea. The inter-state interaction still continued, but it weakened from the dominant control of Sino-DPRK fishery affairs in the Cold War era, to a single diplomatic channel for emergencies. At the level below the state, cases concerned co-operation between sub-level governments on training officials and sessions for Chinese fishermen about fishing regulations in North Korea. At the same time, social fishery associations of the two countries followed the de-centralised power for dialogue and the trade of fishing licenses. There was also illegal co-operation between companies of the two countries concerning investment in marine facilities, technology transfer within the fishery industry, construction of joint-ventures and mutual development of fishery programmes, as well as the underground, illicit sale of fishing licenses.

Chinese economic actors in the North Korean fishing sector are driven by particular concerns. These include the reduction of traditional fishery areas and access to fresh fishing stocks, as well as fears of environmental pollution, including nuclear contamination from Fukushima. The next section will discuss what prompts Chinese companies to involve themselves in DPRK, paying particular attention to the impacts of the fishery agreement between China and South Korea, signed in 2000, on reducing the scale of China's traditional fishing area.

3. Drivers 1: Response to the reduction of China's fishing area caused by the signing of the China-ROK fishery agreement

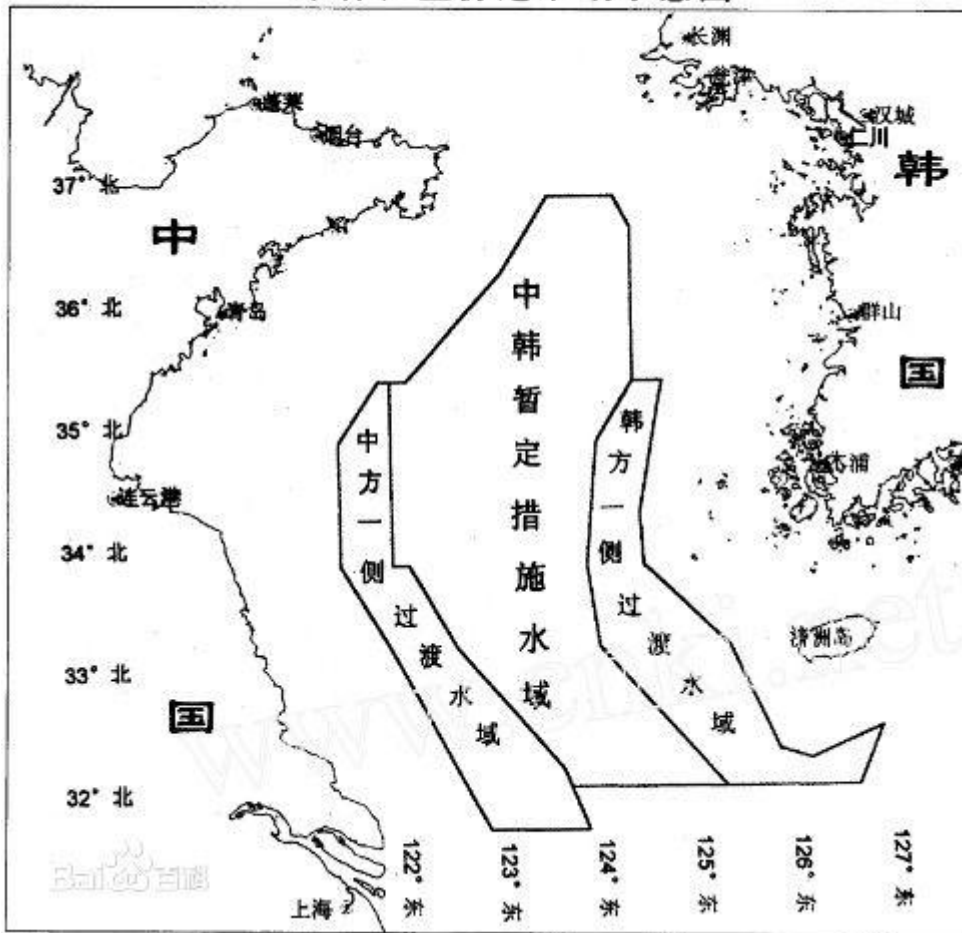
After outlining China's specific activities in the sector of seafood in North Korea in the previous section, three motivations for these activities, their background, and their implications, are discussed. This section mainly focuses on the first motivation: the response to the reduction of China's fishing area caused by the signing of the China-ROK fishery agreement.

3.1 Difference between old & new agreements

In the past, agreements between China and neighboring countries were signed under the principle that international waters are open to commercial fishing. In other words, all the fishing boats that choose to fish in the international waters outside the 12 sea-mile exclusive economic zone can benefit from unrestrained fishing without any supervision by authorities. The old principle caused damage to natural fishery resources near small countries due to the unsustainable fishing carried out by fishing fleets from large countries. For example, large numbers of Chinese fishing boats can fish wherever they can reach, except in the exclusive economic zones (Li, 2004:13-5).

The new agreements between China and neighboring countries, especially South Korea and Japan, were signed under the Ocean Law Treaty of the UN in the early 2000s. Despite the 12 sea-miles special economic zone, the authority of central government has expanded to cover 200 sea-miles and the final achievement of continental shelf. Under this treaty, China now has a 300 square sea-mile fishing area, 20% less than previously. Furthermore, the 300 square sea-miles includes the overlapping ocean between China and neighboring countries, which is 70 percent of the total scale and has to be supervised by both authorities under the institutions of Tentative Measures waters (Li, 2004:16).

中韩渔业协定水域示意图



中国 China; 韩国 South Korea; 中韩暂定措施水域: China-South Korea temporary resolution ocean area

中方一侧过渡水域: China side transition ocean area

韩方一侧过渡水域: South Korea side transition ocean area

This is the Chinese version of Sino-ROK fishery agreement (Gu and Li, 2013: 75). The temporary resolution ocean area are the mutual free fishing area where two countries' fishing boats could fish under the administration of home country. From 2001 to 2005, China and South Korea need to take the responsibility of reducing the amount of own fishing boats in the other country's transition ocean area. After 2005, the transition area is managed as the Exclusive Economic Zones. In other words, except the temporary resolution ocean area in the center, China has its

Exclusive Economic Zones at the left side from the continent and South Korea has the right side. Each country also designs the quota of fishing licenses for the fishing boats from the other country (Jin, 2010:30-31; Gu and Li, 2013: 75).

From the fundamental picture of this agreement, it seems two countries' fishing interest is protected fairly according to the UN Ocean Law. In fact, the similar scale of Exclusive Economic Zone cannot represent the quality of fishery resource. The South Korea side influenced by the marine current has better fishery resource than the China side. Therefore, before signing this agreement, South Korea side is the historical traditional fishing area of China fishing boats. However, according to the rules of agreement, since the strict quota was imposed by South Korea, only about five percent of previous amount of Chinese fishing boat was allowed to fish in the South Korea's Exclusive Economic Zone (Zhan, 2013:61-70; Zhang, Li and Tang, 2015:65-71).

Sino-ROK fishery agreement: Impacts

The Sino-ROK fishery agreement has been effective since June 30th, 2001. It has resulted in a large reduction in the number of Chinese fishing boats in historical fishing areas such as Tsushima and Chejudo, previously there were over 20,000 fishing boats in these areas, however, from 2001 to 2005, the number has been reduced to below 5,500, and after 2005 a further reduction has been made in order to ensure the number of fishing boats from China stays under 2000 (Sino-ROK Fishery Agreement). In other words, almost 90 percent of fishing boats have been removed from traditional external fishing areas and forced to compete inside the domestic off-shore fishing areas for very limited fishing resources (Li, 2004:16).

The new fishery agreement was recognized as a major problem in three ways at that time, and led to the rapid rise of discontent among fishermen (Xu, 2002:5). The permanent loss of traditional fishing areas caused the huge reduction in number of fishermen. The original off-shore natural environment had already been very weak and now this condition must be worsened with huge numbers of fishing boats forced to return from traditional fishing areas. The fishermen normally followed a traditional family path in entering the fishery business. According to the record of Lin and Liu (2006: 71-74), in Liaoning province alone, from 2000 to 2004, the fishery agreement between China and South Korea caused the loss of forty percent of the traditional external fishing area and thirty percent of fishing boats in the mutual fishing area. In 2005, in the Yellow Sea and the East Sea, the number of fishing boats reduced to one third of the amount in 2000. Meanwhile, the final fishery quota in 2005 was less than 10 percent of that in 2000. Over 4000 fishermen and 700 fishing boats have been forced to retire or seek new jobs. Liaoning is the tip of the iceberg.

Implications: Solution and Competition

The loss of traditional fishery areas due to the Sino-ROK agreement is one of the main drivers behind China's engagement with DPRK in the area of fishing. It pushed the coastal areas near Bohai and the Yellow Sea to implement solutions, such as changes to fishing areas and upgrading the industry to maintain the livelihood of fishermen affected by the agreement. North Korea is one of the most significant alternative places to replace the lost traditional fishing areas. Take Shandong province as an example, depending on the different financial conditions, several cities in Shandong province chose to buy fishing licenses and go fishing in North Korea in different periods after 2001. The local authorities and fishery companies of Rongcheng, a less developed town in Shandong, responded to the reduction of traditional fishing areas quickly by

starting to apply for fishing licenses in North Korea from 2003. In contrast, the fishermen from Weihai, a relatively developed city in Shandong, chose Chile as their first alternative fishing area in the early 2000s, and did not buy licenses for fishing in North Korea until 2012 (Weihai Year Book, 2013: 204). According to the Shandong Fishery Year Book (2007: 33-35; 2012: 50-52), during the first decade after 2001, the yearly amount of Shandong boats that went fishing in North Korea increased from 30 to more than 700. With the enlargement of permitted fishing areas, around 4,000-5,000 people in Shandong province who had originally lost jobs due to the signing of China-ROK fishery agreement, continued their original business as boatmen, or in fishery product transport and food processing.

Apart from being an alternative to the traditional fishing areas, North Korea's ocean territory also became the front line of competition between Chinese and South Korean fishing boats. Although the Inter-Korea fishery co-operation started as early as the 1970s (See appendix 4), the number of Chinese fishing boats still had an overwhelming advantage over the South Korean side. Needless to say about the amount of boats from other cities, 'One example of this is the 300 fishing boats under the control of Dandong companies which remain unchallenged by South Korea's boats the 300 fishing boats under the name of Dandong companies have already been unchallenged to South Korean boats (Ifeng, 2013). Especially for the fishing fleets from Shandong Province, which are the major victims of the Sino-ROK fishery agreement, the competition with South Korean fishing boats can be seen as a type of revenge by China on South Korea, particularly by the use of their advantages in terms of the number of fishing boats they have. In 2005, one year after the signing of a contract between the North Korean Shangming Trade Corporation and the Beijing Huatong Trade Company on opening the marine territory of DPRK near Wonsan to Chinese fishing boats, South Korean media expressed strong concern

over the potential negative impacts, especially the decline of fishery migration to South Korea, because this area partly covers the Inter-Korea mutual fishing area (Yonhap News Agency, 2005). In 2010, the serious decline of squid migration from the Yellow Sea to Russia via the South Korea coastal line was confirmed by Mr. Choi, the leader of the Goseong fishery association, because the permanent numbers of Chinese fishing boats in the North Korea sea area increased threefold, from 20 to 60 (Yonhap News Agency, 2010). However, although the South Korean fishermen called for a response from Seoul, Seoul could do nothing because the allowance of Chinese fishing boats to fish in North Korea is a domestic affair for Pyongyang.

Therefore, Chinese economic activities in North Korea in the fishery sector, successfully provide an empirical grounding for the co-existence of jurisdiction concepts in the two different modes of multi-level governance. It was a target jurisdiction which represented the will of the victims of Sino-ROK agreements in the coastal areas, and specifically aimed to use North Korea's under-developed fishery resources as an alternative to the resolution of fish scarcity, in turn due to the reduction in the traditional fishing area in the Yellow Sea caused by the Sino-ROK new fishery agreement. The diversified economic activities, such as the investment of coastal marine facilities and buying fishing licenses, are evidence of flexible jurisdiction. There are also very clear, limited numbers of jurisdiction levels with no overlapping fields between Beijing and the actors below. On the one hand, the central government in Beijing provided an institutional framework for Chinese economic activities in North Korea during the early period of operating the Sino-ROK fishery agreement. In China's economic co-operation with North Korea, it paid most attention to the transmission of information from North Korea about commercial fishery opportunities. In other words, Beijing played a mediating agency role by mainly collecting the specific requirements from the actors below the state, and providing

information about the opportunities from North Korea. It neither pushed all the affected fishermen to choose North Korea as an alternative fishing area through top-down administrative commands, nor influenced the quota of fishing licenses on the North Korea side because, under the market-oriented principle, the quota is determined by the requirement from China. On the other hand, the regional governments, local state-owned companies, and private enterprises took responsibility for developing relations with North Korea under the inter-state framework to develop the under-developed North Korean fishery resources as an alternative seafood source, and thereby make up for the loss of traditional fishing fields. The responses of actors below the state to the Sino-ROK fishing agreement, especially Beijing's compromise on reducing the scale of China's fishing area, can be seen as evidence of their core status and subjectivity in the jurisdiction of this issue. Although the Sino-ROK fishery agreement came into effect in all the relevant provinces and cities at the same time, the impact on actors below the state in the coastal area was not equal in terms of their purchase of fishing licenses and sending fishing boats to North Korea. For example, in Shandong Province, as early as 2003, Rongcheng became the first city to apply for fishing licenses in North Korea. In contrast, other cities such as Weihai and Penglai, did not implement the resolutions until several years later. It can be seen that, in resolving problems of seafood security (i.e., scarcity), Beijing played a relatively limited role in contrast to its superior, unchallenged status in Sino-DPRK relations during the Cold War era. The actors below the state became the real drivers of China's economic policy towards North Korea. This section has shown how the Sino-ROK fishery agreement caused the long-term, in fact an almost permanent, reduction to China's traditional fishing fields. This incident pushed North Korea to be selected by many Chinese fishery companies and local governments in the coastal area as their alternative fishing field. The section below analyses how Chinese actors

below the state are motivated by environmental pollution, another mid-term (though probably long-term) factor with a negative impact on fishery resources, to develop North Korea marine resources.

3.2 Driver 2: Seeking a clean alternative fishing area due to the heavy environmental pollution in the offshore area of China

In addition to the driver of fishery resource scarcity due to the loss of traditional fishing fields seen in the section above, environmental pollution is another major driver of Chinese economic activities in North Korean fishery industry. This section firstly outlines the background to China's environmental pollution in the coastal areas, and the negative impact on the coastal fishery industry. After that, it explains specifically how China's fishery industry has benefited from North Korea's clean ocean environment.

Environmental Pollution: Background and Impacts

Environmental pollution, especially water pollution, is a serious new NTS threat to China and includes ground-water pollution and underground water pollution. Ocean pollution is considered as the worst of the ground water pollution problems due to its large scale and difficulties of recovery. In 2011, Wu Xiao-qing, the Vice Minister of the Ministry of Environment Protection of People's Republic of China, made a speech about the protection of the sea in the Seventh Chinese Ecology and Health Forum. As she pointed out,

'Although all levels of Chinese governments have made a great contribution to protect the sea in the Eleventh Five Years Plan Period, the condition of protecting Chinese immediate offshore area is still very difficult. The major expressions are: the problems of pollution and ecological damage in the immediate offshore area are still serious; the conflict between coastal business development and bearing capacity of resources-environment is increasingly sharpen;

the abilities of environmental monitoring and supervision are still needed to improve.' (Chen, 2011)

For example, in the period 2000 to 2008, in Liaoning Province, the nearest coastal province to North Korea, the Bohai Sea near Liaoning was the most polluted area in China (Dai, 2005: 255-260). Between 2000 and 2003 there were 32 red tides (See appendix 5) with over 100 thousand square kilometres of the Bohai sea affected. From 2004 to 2008, the number of red tides increased to 48 and the affected area doubled (Lin, 2008:1-5).

The environmental pollution had three negative impacts on the local fishery industry. First of all, the pollution directly reduced the amount of production and decreased the patterns of the seafood catch. The red tides in the Bohai Sea resulted in the reduction of marine production fishery output by 5 to 10 percent every year (Lv, 2005). The annual economic loss of seafood production caused by red tides in the Bohai Sea reached 500 million RMB on average (Li, 2006:122). For Liaoning Province, the productive area of Liaodong Bay in the northeast part of Bohai had a 3% yearly drop. It produced 650 thousand tons of seafood in the Ninth Five Year Plan Period (1995-2000), 550 thousand tons in Tenth Five Year Plan Period (2000-2005), and 480 thousand tons in the Eleventh Five Year Plan Period (2005-2010) (Li, 2006:124-5). Secondly, the ocean species diversity decreased. Since the 2000s, only five of the 11 traditional major fishery products in the Bohai Sea remain. In contrast, output of the other six types dropped by 80 percent (Wang, 2007:117-119) (See appendix 6). Thirdly, environmental pollution also indirectly led to overfishing. As the continuative structure of fishery products in the Bohai Sea has been damaged, in order to maintain the quantity of production under the condition of fish scarcity, the fishermen have started to catch the small fish. The specific case can be found in the first table in appendix.

Effectiveness of fishing activities in North Korea

As mentioned in the section above, environmental pollution, which causes fishery resource scarcity directly and overfishing indirectly, is the main threat to Chinese seafood security. The ocean condition of North Korea, where fishing is relatively under-developed and the water is clean (See appendix 7), has benefited the fishery industry in China's coastal areas in two major ways.

Firstly, developing the fishery industry in the North Korean ocean territory has promoted the quality and quantity of fishery products by avoiding the negative impacts of environmental pollution to the fishery seedlings. Take the example of the Penglai Xingdong Company, which developed a project named 'Domestic Seedlings for External Cultivation 内育外养', and constructed its fishery facilities in North Korea. Its first batch of 179.78 tons of mussel products grown in North Korea were of a better quality, even under the shortened cultivation period (2 years in North Korea, 3 years in China), than the same domestic products (China Fish Market, 2010). During its four years of investment in North Korea, the Xingdong company succeeded in achieving mussel output of fifty percent more than its normal domestic output (Anonymous Interviewee 4:, 10 Aug 2012.).

What is more, the successful cases of Chinese economic activities in the North Korean fishery industry also reduced the pressure on domestic fishing and offered opportunities for local authorities to implement programmes of fishery resource recovery. For example, from 2005, the Ocean and Fishery Department of Shandong province started a regional fishery resource recovery programme after getting positive feedback from Rongcheng's first-year fishing activities in North Korea in 2004 (Shandong Ocean and Fishery Department, 2005). In the

following years, local authorities in Shandong also set up special policy priorities to encourage local enterprises to develop fishery programmes in North Korea. Thus, with the reduction of local fishing activities, the fishery resource recovery programme increased the number of cities and partners involved from four regions and 28 partners in 2007, to 15 regions and 114 partners in 2012 (Shandong Ocean and Fishery Department, 2007; 2012). Indeed, not all regions and partners were involved in the economic activities in North Korea, although cities such as Weihai and Rongcheng, and their relevant companies, remained on the list.

In general, besides the fishery scarcity caused by the Sino-ROK fishery agreement, Chinese economic activities in North Korea in the sector of fishery, are also motivated by environmental requirements, in particular the avoidance of pollution in the ocean. In the case of this second motivation, the jurisdiction concepts in the different modes of multi-level governance still co-exist in a similar way to the first motivation of fishery scarcity. There remain flexible ways of jurisdiction, limited levels of jurisdiction that provide institutional support at the state-level and deal practically with specific problems below the state level, without overlapping responsibilities. As a target jurisdiction, the actors below the state, particularly the fishery companies, were anxious to leave the original heavily polluted fishing areas. This target is still irrelevant to, and different from, Beijing's general purpose of keeping regional peace and stability. It cannot be denied that environmental protection was recognised by Beijing as a national strategy since economic reform, in order to prevent contamination from happening in the first place. However, Beijing's overwhelming attention to economic profits and development made it difficult to implement this strategy at the regional level and lacked effective restraint on the unsustainable development of regional administration. In this section and the one above, Chinese economic activities are seen to be motivated by the long-term impacts brought about by both environmental

pollution and the inter-government fishery agreements. In contrast to these two causes with their long-term impacts, the next section will discuss how Chinese fishery companies were pushed by the short-term, temporary impact of the Japanese nuclear accident in 2011.

3.3 Driver 3: Influence of the nuclear accident in Japan

Background and Impact

The Japanese nuclear accident at the Fukushima nuclear plant in March, 2011, is also an important driver for Chinese fishing boats to choose North Korea's marine territory as an alternative fishing area to the North Western Pacific near Japan. The accident was caused by the breakdown of the electrical supply to two nuclear plants and eventually led to fire and the explosion of nuclear facilities. Indeed, the radioactive particles from Fukushima did not directly enter the air to spread with the same speed as occurred in the Chernobyl accident in 1986. However, because the Fukushima nuclear plant is located in the eastern coastal area of Japan very close to the Northeast Pacific Ocean, the Japanese government pumped ten thousand tons of polluted waste water into the nearby ocean under severe international criticism (SINA, 2011). The Hong Kong media pointed out two major directions for this nuclear pollution: one towards the southeast, the major ocean currents would come close to the nearby sea area of the first island chain rather than to the coastal area of China; and one towards the northeast, taking the radioactive particles into the deep Pacific Ocean and away from the continent. However, the latter direction results in the pollution of ocean-living beings in the Northeast Pacific. As the French Research Center of radioactive prevention and nuclear security claimed at its New Release Conference on Oct 27, 2011, 27.1 quadrillion Becquerels of the radioactive element Cs-137 spread into the ocean during the first week after the accident (Sohu, 2011; Xinhua net, 2011). The Japanese nuclear accident in Fukushima has become the largest issue in history concerning

human-made radioactive particles entering the ocean. Although the ocean currents could thin the concentration of these radioactive elements to a safe level after several years, the deep water fish, the fish at the top of food chain, and molluscs are the easiest living creatures to be polluted due to their living conditions, or through the effect of food chain enrichment, which leads to an accumulation of toxins in the bodies of the beings at the top of the food chain.

Response: Fishing to North Korea

As mentioned in the section on economic activities, the fishing fleets of the companies from ZhouShan have changed their fishing areas for large squid from the Northwest Pacific to North Korea's marine territory. Two responses from Chinese society motivated companies to fish in North Korea. One response is the Chinese public's awareness of the influence of the Japanese nuclear accident on ocean products. It caused a short-term reduction in the sale of ocean fish products. The other response is the official implementation of radioactive examinations. This becomes a long term increase to the cost of the seafood production.

Firstly, public awareness in China of the security threats of nuclear contamination on ocean production created a short-term reduction in the sale of ocean fish products. During the first two weeks after the accident, seafood sales in the coastal area and in Northeast China decreased rapidly. Although several local governments made an official denial of possible nuclear contamination to seafood, and promised to implement radioactive examination of seafood products, these activities only strengthened the confidence of local dealers rather than that of consumers (SINA, 2011; Qingdao News, 2011). For example, the sale of seafood at both the terminal market and the supermarket in Dezhou decreased by over 70 percent compared to the previous sale one week before the rumors (Dezhou Daily, 2011). Changchun fell into a worse situation where its seafood shops were forced to close down (Xinwenhua, 2011). To the social

anxiousness about nuclear pollution, one top manager of a fishery, admitted the negative impacts but also denied it to be a big problem:

'Our sale is indeed influenced by the news of possible pollution. Many small companies tried to use this chance to lower the price in order to promote their market-share. A small number of business partners in Southwest China stopped buying seafood products from us. However, it is not a big problem. Our company does not fear. I am very confident about our products. They are completely safe. We have rented a temporary place to store our products. The price is not cheap, but still affordable. Next year our company will build a new food-store with the enlargement of the company's scale. This is only an automatic emergency response to the disaster, just like the knee-jerk reaction, which you have learnt about in the biological classes of Junior Middle School. It is involuntary. We can sell them a few weeks later after the end of social panic. It is only a very small reason for us to our change fishing area.' (Anonymous Interviewee 2, 9 Sep 2011)

Compared to the short-term reduction of seafood sales due to social panic, the official implementation of radioactive examination has more influence on the companies. In order to prevent any possible risk of selling the seafood products in China which are contaminated by radioactive particles from Japan, the relevant local governments ordered the establishment of special inspection and supervision departments to implement examinations. The fishing boats which had worked in the Northwest Pacific, with either freshly frozen or processed dry seafood products, had to go a specified port to undergo an official inspection for nuclear pollution, and even to destroy products on the spot if necessary. For example, the fishing fleets which belong to companies from Zhoushan are required to berth in Shanghai, before returning to their home port, for radioactive examination. Due to the temporary nature of this process, huge numbers of

fishing boats created long queues in the port and the examination can take two or three days. According to another interviewee (Anonymous Interviewee 1, 9 Sep 2011) the decision to set up temporary radioactive examinations created huge inconvenience in terms of sales. Secondly, because of the higher of transport costs of reaching an inspection port, the cost of retaining the freshness of the food, fuel and electrical costs also increase. Thirdly, although the payment for the radioactive examination of seafood in one fishing boat is relatively low (200 RMB per type per boat), to a fishing fleet which has about 20 percent of China's squid-fishing boats, the cost is no small amount. After all extra costs are taken into account, the estimation for every boat is over 1,000 RMB if it only carries five fishermen. Moreover, if the companies decide to continue their fishing plans in the Northwest Pacific, they have to buy and build special facilities on their boats to check for nuclear pollution in the seafood.

Thus, fishing in the North Korea marine territory is becoming an economic choice for the seafood companies who have fishing programmes in the Northwest Pacific. The same as the responses in the previous sections towards the loss of traditional fishing areas due to the Sino-ROK fishery agreement and the decline of seafood products under the worsened ocean environment, this was another target jurisdiction that aimed to save time and avoid extra cost around the radioactive examinations. In contrast to the two motivations above, the impact of the nuclear accident in Japan is temporary, meaning it may be more effective to show the subjectivity of the actors below the state. In Zhejiang Province there are many fishing boats. However, only a few companies from Zhoushan, rather than all of the fishing companies in Zhejiang Province chose to go fishing for squid in North Korea. Many other companies sent boats to fish in the South China Sea and West Africa as different companies had different coping strategies according to their own financial condition and scale of operation. Again, different

levels of jurisdiction concerning the potential risk of the nuclear accident did not overlap because the local governments mainly declared the real condition and implemented radioactive checks in order to satisfy an anxious public, while the fishery companies paid most attention to the selection of substitute fishing areas. Similar ocean conditions, with the same fishing target (squid) is also a reason for the companies to make the decision to fish in the North Korea area in order to replace the previous working area in the Northeast Pacific near Japan. The fishing facilities can continue to be used. The companies need not upgrade the facilities nor worry about the waste of their boats, with their advanced equipment, because of the extra cost of many idle functions. After discussing how the negative impacts of three factors influenced Chinese actors motivated to develop economic relations with North Korea in the fishery sector, the next section makes a further examination of the independence of actors below the state level, especially local state-owned companies and private enterprises, through the negative impacts of their economic cooperation with North Korea, from Beijing's general foreign and domestic strategy.

4. Divergence between central government and local actors

The sections above discussed three major drivers of Chinese economic activities in the North Korean fishery industry. In these sections the central government in Beijing played the role of broker by introducing potential opportunities in North Korea. Meanwhile, the actors below the state are the main actors of different economic activities in North Korea. Although two activities of Beijing, the signing of the Sino-ROK fishery agreement, and the administrative decision to implement radioactive checks of fishery products, have created a negative background which pushed actors below the state to fish in North Korea, generally, securing access to fishery resources is still the mutual target of Beijing and actors below the state. However, there remains divergence between central government and local actors on the

distribution of North Korean fishery resources. The central government tries to regulate fishing activities and provide equal, regular opportunities for fishing in North Korea to all the fishing boats from different provinces, whilst the local actors aim to maximise their own economic profits by monopolising the fishery resources and selling illicit licenses.

4.1 Background of fishery incident

From the specific details of Chinese economic activities in North Korea in the section above, it is found that there is a clear distribution of North Korean fishing areas. Only boats belonging to companies from Dandong, and their partners (such as companies from Zhoushan), could fish in the west marine territory of North Korea. In contrast, the fishing boats from other cities in Liaoning, and other provinces, such as Shandong, could only fish in the east marine territory of North Korea. Although both of these marine territories are relatively under-developed and clean, the west side near the Yellow Sea has the advantage of better conditions, with warmer water and a larger amount of natural fish feed spread around the mouth of the Yalu River as it meets the sea. This area was indeed monopolised by North Korean military strength in the coastal area and its Chinese agent in Dandong based on a historical relationship.

The 5.8 fishery incident was the first well-known North Korean kidnapping of a Chinese fishing boat in China. On May 8th 2012, three Chinese boats (from Dalian) with 29 Chinese fishermen on board, were fishing in the China side and were attacked by unidentified North Korean armed men, kidnapped and taken to North Korea. The Chinese fishermen were asked to call their relatives in China for a 1.2 million RMB ransom (increased to 2.7 million RMB on May 18th). The relatives called police and contacted the Liaoning Province government for help as the news was released through internet. China's Ministry of Foreign Affairs became involved

in this affair from May 16th. After one week's diplomatic communication and interaction, the three Chinese boats with all the fishermen returned to China safely (Chinanews, 2012).

Although the Chinese fishermen and the boats were returned safely after the emergency diplomatic dialogue between China's Embassy in Pyongyang and North Korean top officials, the Chinese media unearthed the history of North Korea's frequent attacks on Chinese boats in order to get a ransom. Several scholars discussed this incident during the interviews. Lv Chao, from Liaoning Academy of Social Science, admitted that their internal research had already found the existence of underground sales of North Korean fishing licenses through local Chinese agents in Dandong (Ifeng, 2012). Even Zhang Liangui, the top scholar in North Korean studies in China, confirmed the involvement of North Korean military units, rather than the mafia, in these incidents, and in an interview with the media criticized North Korea saying it should not have allowed the incident to happen (Ifeng, 2012).

4.2 Beijing's punishment: worsened Sino-DPRK relation

Monopolizing the fishery resources of the North Korean west marine territory, especially allowing North Korean local partners, in fact they are military units, to rob other Chinese boats who fish with legal license in North Korea, and even attack those who fish in the Chinese marine territory, in the name of illegal cross-border fishing, has worsened Sino-DPRK relations from the original disagreement on the nuclearisation of North Korea. The kidnapping incident discussed above became a turning point in China's domestic view of North Korea. Beijing met huge domestic pressure on the direction of developing a relationship with North Korea. Chinese people are increasingly dissatisfied that this neighbour is turning from a being a blood-ally to being a trouble-maker. As a medium of the CCP, a Global Times' editorial (2012) pointed out that Pyongyang should understand the Chinese public's anger over this incident and realise what

influence support from Beijing could provide to Pyongyang in the future. Another Global Times' editorial (2015) also claimed that after the latest nuclear test in North Korea, Chinese public opinion of North Korea has changed since the incident of kidnapping Chinese boats. Now over 60 percent of Chinese citizens recognise North Korea as a burden, or even as a bad neighbour to China. Although in the end, due to the sensitivity of Sino-DPRK relations, there was not any further news about the real identity of North Korean military units and their Chinese agents in Liaoning who were involved in the underground sale of fishing licenses and activities of quashing dissenters from other provinces, Beijing's response shows its changed position to some extent. One month after the incident, in June, 2012, Beijing temporarily stopped the import of North Korean fishery products and then withdrew this prohibition after dialogue and communication with North Korea (CanKaoXiaoXi, 2012). Then on June 28th, 2013, Beijing issued an emergency announcement to forbid all Chinese boats to fish in the North Korea Eastern Marine Territory from July (CNTV, 2013). These two responses, especially the latter, cut off North Korea's major income of selling fishing licenses to China, except for the income from their agents, and were recognized as punishment from Beijing to North Korea for its connivance of local units to develop underground connections with their agents in Liaoning Province.

Although Beijing has tolerated previous similar violations by North Korea in order to sustain their traditional friendship, under strong domestic pressure it still took the first step of punishing North Korea for issues irrelevant to its nuclear development. The traditional friendship between Beijing and Pyongyang was weakened by the traditional underground relationship between Dandong companies and North Korean coastal units. Beijing played the role of a

passive responder in the face of divergence between its general strategy and the interests of actors below the state.

5. Conclusion

In conclusion, from the view of complex interdependence, it is found that there are several major channels at the multiple levels in Sino-DPRK economic interactions in the sector of seafood. First, at the state level, Beijing no longer retains its previously dominant role of making decisions on both big and small economic affairs in Sino-DPRK relations, as it did in the Cold War era. It rarely became directly involved in these activities, especially after transferring its power to issue fishing licenses in the territory of North Korea to the fishing bureau of Liaoning Province. Even the recent signing of the fishing co-operative programme was achieved between North Korea and the national fishing association. However, Beijing still provided institutional support by legalizing Chinese economic activities in North Korea through the signing of the inter-state treaty in the beginning. Besides, it also offered necessary diplomatic channels for emergency inquiries, such as the kidnap of Chinese fishermen by North Korean military units. Secondly, at the level below the state, local government, non-government organizations, local state-owned companies, private enterprises, and even social groups formed multiple channels with North Korea. Especially the non-state actors, such as private enterprises and social groups, played an increasingly significant role in Sino-DPRK relations. On the one hand, the non-government national association replaced the official department to sign treaties with North Korea. On the other hand, through underground trade with North Korean militants, a few private enterprises even created negative impacts on the Sino-DPRK relationship by weakening the Chinese public's positive emotions towards North Korea. At the same time, as a part of Sino-DPRK economic interaction, with the increase of the fishery actors from the coastal areas,

fishery co-operation became progressively important again after being exceeded by the mineral co-operation and third-industry co-operation. The income and relevant technology support to North Korea deepened its dependence on China and offered opportunities for Beijing to turn the heat on Pyongyang to show its dissatisfaction.

Furthermore, from the multi-level governance view, Chinese economic activities in North Korea in the sector of fishery, may be explained through a co-ordination of clashed concepts in the two governance modes: target jurisdiction; limited level of jurisdiction; non-overlapped level; and flexible ways of jurisdiction. By using North Korea's fishery resources as a substitute for historical fishing areas, and for clean seafood products from unpolluted waters, the actors below the state were motivated to resolve NTS problems in both the short and the long term. This target was irrelevant to Beijing's general purpose of maintaining regional peace and stability at the strategic level. Thus, these activities practically promoted the relevant independence of North Korea's peripheral areas from the control of Pyongyang, increased the uncertainty of Sino-DPRK relations, and led to a rise in domestic dissatisfaction in China towards North Korea. With the decentralisation of Beijing's power to the local administration, the levels of jurisdiction were limited and did not overlap. Beijing provided an institutional framework and diplomatic channels for emergency inquiries. The local government and the departments below it mainly operated administrative activities. Despite providing training for the restraint of illegal cross-border fishing activities, the local government of different provinces, particularly the local bureau of ocean affairs, normally played a double role, either as decision makers, which directly recognized the North Korea marine territory as the alternative fishing area, or as the agents who collected the information about what local fishermen required, and offered fishing licenses after buying them from the Liaoning marine bureau. In some cases, the role of local governments also

extended to assistance on food quality inspections. The local state-owned companies and private companies were the practical actors of fishing activities in North Korea's marine territory whose decision-making was independent from Beijing, as it did not push them to fish in the North Korean marine territory from several choices. The specific activities, such as buying fishing licenses, technology support, and setting up branches in North Korea, were diversified to govern these NTS problems. It can be seen that China's economic activities in the sector of seafood are motivated by the NTS concerns over environmental factors and fishery safety. The actors below the state are the major policy-drivers. In contrast, central government plays a less important role as a broker providing potential economic opportunities in North Korea, and as a diplomatic supporter in the event of emergencies between the two countries, in contrast to its historical dominant role of controlling all Sino-DPRK affairs.

Chapter 6 Chinese cross-border economic activities in North Korea

1. Introduction

The previous chapter discussed China's economic activities in DPRK's fishing industry. It found that Chinese economic activities in North Korea in this sector were mainly implemented by actors below the state, such as provincial and city level governments, local state-owned companies, and private enterprises. These activities were driven by NTS concerns such as resource scarcity and environmental considerations, as well as for the reduction of economic costs and the impact of the Japanese nuclear accident. This chapter will continue the preceding analysis by focusing on Chinese cross-border activities in North Korea's sectors of light industry, physical infrastructure, agriculture, and the tourist industry. These economic activities are summarized as cross-border activities because they involve the flow of people and equipment between the border areas of China and North Korea and connect the border areas of the two countries. They are different from the activities discussed in the two previous chapters where only Chinese economic actors participated in North Korea.

Maintaining the social stability and safety of the border area is an important priority for the Chinese government as China borders numerous countries and encompasses over fifty ethnic minority groups. Just as access to fishery resources are vital for the country's daily public consumption, so too has securing the border areas been a major objective of the Chinese government at all levels. The border between Northeast China and North Korea is 1400km long. Unlike the threats of separatism, terrorism and religious extremism, and the drug trafficking problem in Southwest China, the NTS problems in northeast China have received less attention. The target of reducing population outflow and labour shortages which in recent years have

occurred as Northeast China has become less attractive to youth, as well as preventing illegal immigrants from North Korea, have driven Chinese cross-border economic activities in North Korea to expand rapidly. This chapter argues that China's economic activities are motivated by NTS issues, especially the cultural decline and border control problems caused by geographical isolation and the difficult economic situation in North Korea. It analyses how these activities in North Korea can reduce these threats. In doing so, it distinguishes between the objectives of the central government in Beijing and those of actors below the state, mainly regional governments and private companies. The chapter also argues that the main actors behind these activities are those below the state, such as the local government, private and state-owned companies, and non-government organizations. Except as the signatories of a few inter-state agreements, the central government rarely plays an active role in these activities. This is what multi-level governance argues for - that central government act at a distance and they regulate rather than govern directly.

The chapter begins with a discussion of the drivers of Chinese cross-border economic activities in North Korea's border areas in two parts: economic security; and border security. Economic security refers mainly to the socio-economic problems associated with labour shortages in northeast China. Border security refers to illegal cross-border activities, particularly escapees from North Korea (illegal immigration in the official announcement of Beijing). The background to, and the negative impacts of, these security threats are discussed. After that the China's economic activities in the border area of North Korea near China are outlined for several different fields: construction of physical infrastructure (roads and railways); light industry co-operation; border policing; agriculture; and tourism. Thirdly, the effectiveness of these economic activities in resolving, or at least mitigating, the security threats above are discussed.

2. China's drivers for implementing economic activities in North Korea border areas.

2.1 Economic security

The labour shortage problems in Northeast China are presented in two major ways: purely labor outflow in the major area of Northeast China; and a combination of labour shortage and a reduction in the ethnic Korean population in Yanbian Ethnic Korean Autonomous Prefecture. This is called Ethnic Shrinking in Chinese. These problems not only influence normal industrial operations, but also threaten cultural continuation.

Following the opening-up policy in the 1980s, changes were made to the national developing strategy shifting from heavy to light industry. Apart from in the energy industry, e.g., oil, there has also been a transition in the focus of development which has shifted from Northeast China to the Eastern coastal area. As a result, Northeast China lost its previous priority and became less attractive to its own citizens. Recently the central government implemented a national strategy called the Northeast Rejuvenation Plan, and in some young cities in Liaoning province, such as Dalian, the human capital inflow exceeded the outflow by a factor of two. However, most cities in Northeast China still lack the attractiveness to keep their younger citizens in their hometowns. This has caused serious shortage of labour in Northeast China, since the late 1980s the yearly human capital inflow to Jilin province has averaged 57% of outflow. A worse condition exists in Heilongjiang with an outflow as great as three times that of inflow. Youth, especially highly educated students, account for the majority of the outflow (Liu, 2012).

In Yanbian Ethnic Korean Autonomous Prefecture, the establishment of formal relationships between China and South Korea in 1992 worsened the labour problem. Due to its geographical isolation, Jilin province, in particular the Yanbian Ethnic Korean Autonomous

Prefecture, cannot attract enough external investment to employ local cheap labour. This caused a large population outflow towards South Korea from Yanbian Ethnic Korean Autonomous Prefecture for nearly 20 years up to 2011. As they have dual identity in terms of both culture and ethnicity, Chinese Koreans can easily find jobs in both South Korea and the inner lands of China which have attracted large amounts of investments from South Korea. In 2008 over one million Chinese Korean civilians left for other places: 380,000 to South Korea; 100,000 to Japan, the US, and Australia; and a further 500,000 to other areas of China (Jin, 2011; Guan, 2010). These one million Chinese Korean civilians represent half of the Chinese Korean population.

The population outflow caused a crisis in the shrinking ethnic Korean's settlement in Yanbian. Firstly, the outflow of population from Yanbian is bad for local enterprises who cannot employ enough workers because they cannot pay the high salaries that companies in South Korea pay to their workers. In 1993, the salary of construction workers in China was 80 US dollars per month, while in South Korea it was 850 US dollars. Currently, the lowest salary in Jilin has increased to 300 US dollars per month. However, this amount is still lower than it was in South Korea even a decade ago. Secondly, the outflow of population deepened the problem of the aging population. In 2008, the population in the 60+ age group represented more than 15% of the total population, this is considerably higher than the international standard of 10% (Jin, 2011). This ageing population structure, especially the rapid increase of aged people living alone, forced local government to re-design and reduce its administrative region so that between 1993 and 2008 this reduced by 17%. This part of the administrative territory under Yanbian was redistributed to the neighboring cities. Finally, within the population outflow, 42% of those leaving are women which is a large amount. Several thousand of these women are of reproductive age and marry South Koreans, which lowers the birth rate and adds to the reduction

in the population of Chinese Koreans. In the previous 20 years, over 18 ethnic Korean schools have shut down due to lack of students (Jin, 2011). Yanbian Ethnic Korean Prefecture also experienced a continuation of negative population growth rate for a decade until 2011. Thus, it is clear that local economic security problems, especially labour shortage and population outflow, are major NTS threats to Northeast China. This problem belongs to low-politics, rather than to the military threat of high politics, the latter especially relevant to the nuclear issues of North Korea.

2.2 Border security: illegal immigrants

North Korean escapees are the illegal immigrants from North Korea who have entered China and other neighboring countries since late 1990s. The estimated number of escapees is between 500,000 and two million according to different academic scholars and research centres. Over 95% of escapees first enter China and then over half of them successfully enter South Korea (Piao and Li, 2011). Apart from a few famous people, such as the previous chairman of DPRK Workers' Party Hwang Jiang-yep, who escaped from North Korea for political reasons, most North Korean escapees are ordinary civilians. They and their relatives live near the Sino-DPRK border areas and are motivated to leave for economic reasons. In contrast to the North Koreans who live inland (excluding Pyongyang) and have no idea about external conditions, these escapees usually have a good understanding of the changes in China and of the real conditions in South Korea. In the late 1990s, many hungry North Korean entered China due to the famine in their own country. In contrast, from the late 2000s the North escapees want to live in China, enter South Korean institutions through China, or use China as a hub to enter a third country for further repatriation to South Korea.

Indeed, apart from the escapees captured by Chinese policemen and sent back to North Korea, most of the North's escapees who successfully enter China and South Korea has improved their own living condition. However, their existence creates social problems, in particular adding to local unemployment and criminal activity in the border areas of China with North Korea, especially in the Yanbian area.

Illegal immigrants increased local unemployment

As noted above, with the change in the national development strategy, Northeast China's traditional heavy industrial bases lost their previous developing priority. Since the beginning of economic reforms in the 1980s, most previous industrial companies, not only a large number of small companies under privatisation, but also large local state-owned industrial companies in the key areas such as steel and coal, began to implement Western-style structural reforms and lay off their employees. In the original plan of regional governments, unemployed civilians and people who lost their jobs (Chinese word 'Xia Gang', 'stepping down from one's position') could be recruited by the new businesses, especially in the tertiary industry or the service sector, such as tourism or food.

North Korean escapees influenced the original official plan because they provided extremely cheap labour. They did not create the unemployment but just worsened the situation. A part of victims of local state-owned companies' reform gave up the idea of keeping face. They turned to other jobs such as doing private businesses. The rest formed a huge unemployed team with many lazy and poor-educated labor who were unable to join the official-organised team to work in the South Korean light industry. In contrast to these people, the illegal immigrants took the advantage of age, salary and education level. Furthermore, their extremely strong will of

survival drove them to work hard in order to exchange the food and accommodation. (Yan, 2012:37) Thus, the local employers of North Korea's escapees saved costs and also used some of them to corrupt local policemen and administrative officials in order to avoid the routine inspections. In Dandong, Hunchun, and other border cities near North Korea, the business of illegal agents/people traffickers for the introduction of illegal laborers from North Korea has been an open secret. Indeed, the employers of these escapees, agents, and local inspectorates, all benefited from this chain while local unemployment increased with the occupation of at least several thousand positions by the escapees. (Piao and Li, 2012:7)

Illegal immigrant and their later generations' problems on influencing the public security

Despite the seizure of job positions, North Korean escapees, and their second generation, also contribute to the increase in public security problems. Since the early 2000s the majority of Chinese Koreans in the Sino-DPRK border areas did not welcome the North Korean escapees because two generations of escapees account for the a lot of public security problems in the Sino-DPRK border areas (Yan, 2012:37).

On the one hand, for the escapees themselves, their journey to China remains risky even after successfully leaving North Korea. Since the mid-2000s, border-crossing for escapees have been organised by human traffickers. Under an increasingly strengthened level of border supervision and inspection, if the illegal agents could not succeed in corrupting, or avoiding, border inspectors, the escapees must continue their journey alone with no further help from the traffickers. In the China/North Korea border region of other Chinese provinces with fewer ethnic Koreans, such as Dandong, escapees are easily captured by local police as they use a different

language to the local dialect. Therefore, the escapees always use illegal ways to get food and money in order to survive and wait for the agents. This is the first type of social problem created.

On the other hand, the second generation of North Korean escapees in China met worse conditions in China than their parents. Because the female escapees did not have Chinese Citizen ID and Hukou, these children are all 'black children' without Hukou, education, social welfare, or even basic skills. According to the words of one ethnic Korean professor in Northeast China, the second generation of North Korean escapees became a new social problem in the border area. The number of social problem among escapees' children has steadily increased every year, although the total number of this group is only several thousand.

“They bring nothing but only dissatisfaction to the environment and even to their families. Maybe they can find temporary work but will soon lose it because they have to move up and - hide. They have nothing to lose so they can do whatever they want to do. The worst result, either being killed in the violent conflicts, or being sent back to North Korea, is actually same to them”.
(Autonomous Interview, Sep 2012, Dalian)

Many interviewees used the word ‘*违法犯罪 weifa fanzui*’ violation of law and crime to describe the public security problems, such as stealth and robbing, brought by the North escapees and their second generation. However, according to the thirteen regulation of China's Criminal Law (*刑法 XingFa*), the case which has slight circumstance without huge negative social impact is not recognised as the commit a crime. It should be seen as the violation of the Law of PRC on punishments in public order and security administration (*治安管理处罚法, Zhi-an Guanli Chufa Fa*) and given the administrative punishment only, without criminal punishment (2013, Chapter1):

刑法第13条规定情节显著轻微,危害不大的,不认为是犯罪.....如果符合以上规定,就可以不采用刑罚,而给予治安管理处罚即可.....

Xingfa di 13 tiao guiding, qingjie xianzhu qingwei, weihai buda de, burenwei shifanzui.....ruguo fuhe yishang guiding, jiukeyi bu caiyong xingfa, er geiyu zhian guanli chfua jike.

Most of North escapees' activities, which caused social problems, could be found in the third chapter 'The activities which violate the public order and security administration; Punishment' of Law of PRC on punishments in public order and security administration (2013, Chapter 3)

(第三章:违反治安管理行为和处罚 Di san zhang: Weifan Zhian Guanli Xingwei he Chufa; Chapter 3: Weifan Zhi-an Guanli Xingwei he Chufa)

第十九条 有下列扰乱公共秩序行为之一,尚不够刑事处罚的,处十五日以下拘留、二百元以下罚款或者警告:

(一)扰乱机关、团体、企业、事业单位的秩序,致使工作、生产、营业、医疗、教学、科研不能正常进行,尚未造成严重损失的;

Di 19 Tiao, you xialie raoluan gonggong zhixu xingwei zhiyi, shang bugou xingshi chufa de, chu 15ri yixia juliu, 200yuan yixia fakuan huo jinggao:

1.Raoluan jiguan, tuanti, shiye danwei de zhixu, zhishi gongzuo、shengchan、yingye、yiliao、jiaoxue、keyan buneng zhengchang jinxing, shangwei zaocheng yanzhong sunshi de;

No.19 The case that has one of the activities below which interrupt the public order but not enough for criminal punishment, should be given to custody under fifteen days, fine under 200 RMB or warning: 1. Interrupting the order of government departments, groups, enterprises and public institutions and preventing the normal daily work、producing、management、medical treatment、education and scientific research but haven't created huge loss;

第二十二条 有下列侵犯他人人身权利行为之一，尚不够刑事处罚的，处十五日以下拘留、二百元以下罚款或者警告：

(一)殴打他人，造成轻微伤害的；

(二)非法限制他人人身自由或者非法侵入他人住宅的；

Di 22 Tiao, you xialie raoluan gonggong zhixu xingwei zhiyi, shang bugou xingshi chufa de, chu 15ri yixia juliu, 200yuan yixia fakuan huo jinggao:

(一)*Ouda taren, zaocheng qingwei shanghai de;*

(二)*Feifa xianzhi taren rensheng ziyou huozhe feifa qinru taren zhuzhai;*

No.22 The case that has one of activities of violating public or private wealth below but not enough for criminal punishment, could be given to custody under fifteen days or fine under 200 RMB.

(1) Beating other people and creating slight injure;

(2) Illegally restraining other people's individual freedom or illegally entering other people's house.

第二十三条 有下列侵犯公私财物行为之一，尚不够刑事处罚的，处十五日以下拘留或者警告，可以单处或者并处二百元以下罚款：

(一)偷窃、骗取、抢夺少量公私财物的；

Di 23 Tiao, you xialie qingfan gongsi caiwu xingwei zhiyi, shang bugou xingshi chufa de, chu 15 ri yixia juliu huozhe jinggao, keyi danchu huo bingchu 200 yuan yixia fakuan:

(1)Touqie、 pianqu、 qiangduo shaoliang gongsi caiwu de;

No.23 The case that has one of activities of violating public or private wealth below but not enough for criminal punishment, could be given to custody under fifteen days, warning or fine under 200 RMB.

(1) Stealing, cheating and robbing small amount of public or private wealth

Therefore, driven by the requirement of food and money for survival in China or seeking asylum in foreign institutions (mainly South Korea), the North escapees might have violated the Law of PRC on punishments in public order and security administration frequently and caused large amount of small social problems. However, their activities are not criminal. This should be differed from the relatively rare case of North Korea soldiers' cross-border killing to China's villagers in the border areas. The ideas of interviewees about the type of escapees' activities, in particular about the large percent of illegal immigrants' activities in the local crime cases should be misunderstanding. Two major reasons might have caused this misunderstanding. On one hand, common citizens are shortage of knowledge about the laws such as Criminal Law and the Law of

PRC on punishments in public order and security administration which are relatively distant from their daily life. Their moral judgment and standard in Chinese society deepened the confusion to these activities such as stealth which should be measured as crime or administrative violation of law according to the level and impact to the society. On the other hand, the public view in China to North Korea turns negative due to the frequent reports of North Korea nuclear problems and domestic dictatorship. The North escapees, which are rarely known by the public, could be easily recognised in a negative way due to their nationality.

Thus, local border security problems, especially illegal immigration from North Korea, is a major NTS threat to Northeast China, particularly in Yanbian of Jilin province. Not only does this problem belong to low-politics, rather than to a military threat within high politics, and especially the nuclear problems of North Korea, this threat to human security, which originates in North Korea but impacts heavily on China, also blurs the differences between external and internal affairs.

To sum up, labour shortages, population outflow, and illegal immigration from North Korea causes different types of social problems and negative influences in the border area of China near North Korea. Because the origin of escapees is North Korea and not China, this pushes Chinese local authorities to resolve these problems by implementing economic activities in North Korea. Although it seems that the number of North Korean escapees who have entered Northeast China may compensate for the population outflow, there are two reasons why this is not the case. First of all, the quality of outflowing population is higher than that of the illegal immigrants. Secondly, North Korean escapees mainly enter South Korea through China rather staying in Yanbian,

3. Economic Activities

Having outlined the local NTS problems above, this section details specific information about China's cross-border economic activities in North Korea with regard to the mutual management of the Rason Special Economic Zone, and co-operation on infrastructure use and construction, light industry, agriculture, and tourism, implemented by actors on different levels and within relevant agreements. These specifics are preceded by a short introduction about the targets of these initiatives.

3.1 The Mutual management of the Rason Special Economic and Trade Zone

On September 2nd, 2010, Li Longxi, the mayor of the Yanbian Korean Autonomous Region, and Kim Xiuyue, the chairman of the North Korea Rason Special City People's committee, signed an agreement on a framework for building a co-operative arrangement between their respective institutions (Hunchu.gov.cn, 2010; Xinhuanet, 2010) (See appendix 1).

Two years later, on August 14th, 2012, China and North Korea reached a mutual development agreement for Rason economic trade area, Golden Floor, and Granville Island. Chen Deming, the minister of China's department of Commerce, and Jang Sung-taek, the central administrative minister of the North Korea Workers' Party, inaugurated the two economic zones' committees of mutual management. (Sohu, 2012). The information released by China's department of Commerce claims that the agreement includes the foundation of an operations management committee, economic technological co-operation, agricultural co-operation, and electrical supply from China to Rason. The signing of this agreement marked the operation of these two economic zones coming into practice. Jilin's local government agreed to send at least 100 officials to enter and manage the Rason economic zone (Sohu, 2012).

On Oct 26th, 2012, after the opening ceremony of the Yuan-ting to Rason highway, representatives from China and North Korea joined the management committee of the Rason Special Economic and Trade Zone to hold a ceremony marking the formation of the Sino-North Korean Management Committee for the area (Hunchun.gov.cn, 2012) (See appendix 2). This mutual management of North Korean Special Economic Zones (SEZ) means that Chinese officials take a direct role in the border management of North Korea, especially border control and construction, in order to reduce the number of escapees by improving living standards and administration of North Korean border areas.

3.2 Physical infrastructure co-operation and Chang-Ji-Tu Project

Since 2002, there have been three major co-operative projects regarding physical infrastructure in the Sino-DPRK border area. They are: the repair project of the cross-border Tumen River Bridge; the project known as, 'Domestic trade with external transportation: Jilin-Rason Transport Experiment Cooperation'; and the Sino-DPRK Road-Harbor-District Integration Project (see appendix 3). These projects aim to change the historical, geographical block of China's access to the Sea. At the same time, the improved physical infrastructure, with advanced inspection facilities, is also helpful to border control. These projects are under the Jilin province-led National Strategy called "Chang-Ji-Tu Developing Strategy 长吉图开发战略" which aims to seek the access to Japanese Sea by connecting Jilin province and North Korea Rason Harbor in order to promote the local economic development.

On Dec 29th, 2009, an agreement was signed by Jiang Hu-quan, the city mayor of Yanji, and Kim Xiuyue, the chairman of the Rason SEZ People's Committee, regarding the repair

project of the cross-border Tumen River Bridge, which connects Quanhe port of Hunchun in Jilin with Yuantingli in North Korea (Hunchun.gov.cn, 2009). The local top officials also reached agreement on repairing the road from Yuantingli to Rason and building a new bridge from Quanhe port of Hunchun to Yuanting. The repair project started on March 15th, 2010 and was expected to finish by the end of June, however, it was in fact completed one month earlier than the original plan at the end of May, 2010. (Yonhapnews Agency, 2010).

Hunchun and Rason reached agreement on co-operation in an experiment by China with regard to domestic trade and cross border transport (Hunchun Gov.cn, 2010; Jilintv.cn, 2010). The experiment was supported by China's Custom Hall in its official announcement on Aug 4th, 2010. On Dec, 7th 2010, 11 heavy trucks with 380 tons of coal, produced by Hunchun Mineral Corporation, left Hunchun's Quanhe border port for Shanghai and Ningbo and onwards to North Korea's Rason Harbor. This was the first group of products (coal products from Hunchun Mineral Company) used to test China's domestic trade via cross border transport. In Rason the work took place in a special port rented by China's company. (Hunchun Gov.cn, 2010; Shanghai.Gov.cn, 2011)

On July 10th 2005, two Chinese investors, Jilin Hunchun Dongling Economic Trade Corporation and Bonded Company of the Hunchun Border Economic Co-operation Zone, and their North Korean partner, Rason People's Commission's economic co-ordination firm, signed a co-operation agreement and formed the North Korea Rason International Linguist Co-management Company in order to push the development of the “Road-Harbor-District Integration Project”. On August 23rd 2005, this company received its company registration license from Rason City and, up to the end of 2006, the company has since gained license from North Korea for ocean transport and oil management with the aim of opening up the customs &

product transport businesses from Rajin to Southeast China, Japan, and South Korea. It signed a co-operation contract with South Korea's Daya High Speed Ocean Transport firm and reached co-operative intentions with several big logistics companies in Shanghai, Zhejiang, and Shandong. In September 2005, the agreement on the Hunchun-Rason Road-Harbor-District integration project was formally signed. In order to gain access to the sea from Jilin, and even Northeast China, Donglin Economic & Trade Company provided support to road construction around Rajin port in Rason, effectively ending 50 years' of single operation rights at the port. Meanwhile, Hunchun also gained the use of five to ten square kilometres in Rason to construct an industrial region. The Jilin local government permitted changes to the rules of combined land-sea transport from Hunchun to Southeast China through North Korea. They also reached agreement with the Rason side with regard to the tax preference policy for the China-oriented North Korea-processed products. These products were not subject to the same custom inspection process as those goods imported from other countries.

In July 2007, Hunchun Dongling Economic and Trade Company, and US Madeli Corporation signed the co-operation project for Sino-DPRK Road-Port-District Integration. The total amount of the investment is 8 billion RMB; Chinese companies will invest 6.53 billion RMB through equipment and funds; North Korea's Rason side will invest 1.47 billion RMB through the licensing of land use and harbour operations (See appendix 4).

In September 2012, the re-construction of North Korea Yuantingli-Rason road was finished. This road connects Quanhe port in Hunchun in the north of the SEZ, with Rason port in the south. The whole length is over 500 kilometers. The reconstruction project comes under the mutual development and management of China and North Korea but is constructed by Hunchun city. The project, which aims to strengthen road transport in the area, began in June 2011, lasted for

more than 3 months and cost 226.8 million RMB. (Mocfom.gov.cn, 2006; China news, 2007; Jilin.gov.cn, 2008.)

Indeed, the majority of this thesis aims to examine the key role of China's actors below the state in the implementing stage of China's foreign economic policy to North Korea. However, in the policy-making and designing stage, from the extremely limited amount of open-accessed materials, 'Chang-Ji-Tu National Strategy' is a special case which could show the dominant and subjective status of local government at the province level in policy-making by changing the idea of central government. The Chiang-Ji-Tu Initiative mainly targeted to connect Jilin province to Rason in North Korea through physical infrastructure. It covered the original geographical scale of UNDP cooperative program in Tumen River Region. Therefore, on 25 Mar 2008, in the discussion about designing regional development strategy, Du Ying, vice director of National Development and Reform Committee and the leader of the Tumen River Developing Coordination Group, suggested that Jilin province should still keep the name of Tumen River developing program, keep Changchun and Jilin (current and previous capital of Jilin province) away from the center but focus on the Tumen River region and set it as the core of total program. An interviewee introduced the general ideas of officials from Beijing about Chang-Ji-Tu Strategy (Interviewee 12, 2014):

'The officials from Beijing asked us whether this developing strategy will focus Chang-Ji-Tu Cooperative Zone or Tumen River Opening and Developing Cooperative Zone. In other words, whether it locate at Tumen River, or Tumen River plus Jilin and ChangChun with all of these three regions as the policy-priority zone? In their view, we should pay all the attention to develop Tumen River zone now and then properly expand it to Changchun and Jilin as the support of Tumen River border areas. At the same time, the name of developing

strategy/initiative is still Tumen River in order to keep coherence with the UNDP and understanding of international society but expanding to Chang-Ji-Tu is the issue in the future. However, we had different ideas with them and still insisted our main strategic scale of Tumen River zone, Changchun and Jilin and submitted the proposal. Finally our plan was still approved.'

From the interview above, it can find that Jilin province has the divergence with Beijing on the scale of regional developing plan. Jilin province attempts to cover its important area as many as it could in the plan but the central government tries to restrain the scale only in Tumen River. However, from paragraphs below, the reply of China's National Developing and Reform Committee to Jilin province's proposal about China's Cooperation and Development Strategy of Tumen River Region, it could be found that apart from keeping the characters of Tumen River in the title of developing strategy, central government's suggestion was almost rejected by Jilin province. Changchun and Jilin are still recognised as the core of Tumen River zone. They share the same status with Yanbian Prefecture (the historical Tumen River zone in UNDP Tumen River developing program) as the policy-priority regions. However, central government still made compromise to approve this regional development strategy.

(原则同意《中国图们江区域合作开发规划纲要——以长吉图为开发开放先区》(以下简称纲要), 请认真组织实施.....吉林省长春市、吉林市部分区域和延边州(以下简称长吉图)是图们江区域的核心地区.....)

(Yuanze tongyi <<Zhongguo Tumenjiang quyue hezuo kaifa guihua gangyao ——yi Chang-Ji-Tu wei kaifang kaifa xianqu>> (yixia jiancheng gangyao), qing renzhen shishi.....Jilin

sheng Changchun shi, Jilin shi bufen quyue he Yanbian zhou (yixia jiancheng Chang-Ji-Tu) shi Tumenjiang quyue de hexin diqu.

Agreeing <<China Tumenjiang Region's Cooperation and Development Plan Proposal——Setting Chang-Ji-Tu as the Developing and Opening Pioneer zone>> (Proposal in short) in principle. Please carefully organise and implement it.....Jilin province's Changchun City, Jilin City and Yanbian Prefecture (Chang-Ji-Tu in short) is the core region of Tumen River Zone. (Chinanews, 2009)

Therefore, it could be examined that in contrast to central government, Jilin province has played a dominant role in designing this Chang-Ji-Tu developing strategy which actually guided the cross-border economic cooperation between Jilin province and North Korea Rason region in the sector of physical infrastructure cooperation and further cooperative programs in tourism and agriculture.

3.3 Labor/ Light industry co-operation

There are two co-operative arrangements between Jilin province and North Korea on the labour use in the light industry. The first is known as the 'Going abroad processing' experiment. This experiment was approved by Jilin province with co-ordination and co-operation from North Korea. On Dec 11th 2012, Changchun Custom Hall's request to implement 'going abroad for processing and returning business' was agreed to by China's Custom Hall. Four local clothes processing companies (Hunchun Yunda Clothes Corporation; Jilin Telai Clothes Company; Hunchun Hongfeng Clothes Company; and Small-Island Clothes Corporation) make up the first experimental group to use the perfect labour resource of North Korea. Those four companies are

allowed to start “going abroad business” from Jan, 2013, for two years (Hunchun.gov.cn, 2012) .

Apart from the co-operation discussed above, Jilin and Liaoning Provinces also reached labor co-operation agreements with North Korea. In January 2012, Jilin province and North Korea completed negotiations on the use of North Korean labour in Jilin. As a result, in the next decade, over 20 thousand North Korean labourers will work in the Tumen Sino-DPRK Labour Co-operation Zone and in other cities in Jilin Province (Globaltimes, 2012). In April 2012, Liaoning Province and the North Korea Co-operation Committee reached agreement on using North Korean labour in Liaoning Province. Around 40 thousand North Korean technicians will enter Liaoning provinces to work in the following years (Globaltimes, 2012). After two years almost 6000 North Korean labourers are working in China under this scheme: 3000 in the Tumen co-operative zone; 1000 in Hunchun; 1500 in Dandong; and 500 in other towns in Northeast China. These initiatives aim to counter the population outflow from Jilin and Liaoning.

3.4 Tourism cooperation

Since 2007, several cooperative projects on tourism have been achieved between China's border cities and North Korea. They provide numerous jobs for ethnic Koreans, in particular as tourist guides and drivers. In 2007, the Dandong Tourism Bureau and its North Korean partner reached agreement for two tourist trips into North Korea: Dandong-Sinujiu one to two day trip; and a longer Dandong- Sinujiu-Pyongyang trip. The latter includes a seven days' plan to tour Pyongyang, Kaesong and Sinuiju with a visa-free policy for all mainland Chinese citizens. It changes the previous non-landing tourist trip available to Chinese citizen whereby Chinese tourists can only stay on boats in the Yalu River to view North Korea but cannot land in in the

country. Before 2007, the one-day-border tourist trip in Sinujiu was in an experimental period and only open to 210 Dandong local citizens each year. (Sina, 2007; China news, 2012; Anonymous Interviewee 3, 14 Aug 2014)

From 2008 to 2011, Tumen tourist Bureau developed two tourist projects and one tourist rail-line in North Korea. The two projects are the Onsong one-day trip and the Namyang two-day-walking trip (Yanbian News, 2011). The rail-line is the Tumen-Namyang-Qibao Mountain line which first ran on Oct 8th 2011. Tumen River International Tourism repaired the trains and improved the accommodation standards for tourists by adding soft sleeper compartments (CNTA/ China's National Tourist Administration, 2014).

From May, 2011 a sea tour began which was developed by Dafeng International Corporation under the opening of Kumgang Mountain Special Tourist Zone (STZ) by the Rason started. Yanbian Tianyu International Tourism Group is the deputised partner of Dafeng International in China. The first tour was organized from August 29th to Sep 2nd, 2011 (Yanbian News, 2011).

On April 26th, 2011, After a two-week-field research trip from the end of March to early April of 2011, the Hunchun local government signed agreement with the Rason local authorities on cross-border tourism co-operation. It started the first self-driving tourist line to North Korea and allowed Sino-Russia-DPRK round-trip cross-border tourism (Hunchun. Gov.cn, 2011). One month later, on June 1st, 2011, Hunchun started the first tourist group of Sino-DPRK self-driving. Both Hunchun and Rason local governments have achieved agreement on the length, range, security checks and guarantees, cross-border tourist licenses and normalization of this tourism project (Hunchun. Gov.cn, 2011).

On July 12th, 2012, Yanji Tianyu International Tourist Company signed agreement for direct tourist flights from Yanji to Pyongyang with North Korea's airline. There are two tourist flights to Pyongyang every Thursday and Sunday. (China News, 2012) The passenger transport line between Yanji and Rajin has been opened since August 17th, 2012. From then up to November 6th, 2012, the traffic line was in an experimental operation period. After November 7th, 2012, with the completion of the road from Yuanting to Rason, the international bus transport line formally came into existence. The cost of this traffic line, 3 million RMB, is invested by two local companies: Jilin Northeast Passenger Transport Corporation and Jilin Yubieer Transport Corporation. Both Chinese and North Koreans can take this transport line to enter the two countries with specific cross-border documents (Mofcom.gov.cn, 2012; Yanbian Dongbeiya.com, 2012). On August 4th, 2014, based on the experience of the foundation of the previous transport line in 2012, Yanji opened a direct-line for tourists to Rason (one per day) for the two-day-trip in Rason (Xinhuanet, 2014). On May 2nd, 2014, Tumen developed a bicycle trip for tourists to Namyang (Yanbian News, 2014).

On Dec 3rd, 2013, the government of Ji-an (town), under Tonghua City, signed an agreement with North Korea Tourist Administration to begin a one-day tourist trip to Mampoo. The first three tourist groups from Ji-an to Mampoo left Ji-an on Dec 25th and returned by Dec 28th (China News, 2014). These initiatives aim to provide jobs to attract the large outflow of females to return to Jilin, especially to Yanbian.

3.5 Agricultural Co-operation

Hunchun-Rason Agriculture Co-operation Projects

The Hunchun-Rason agricultural co-operation project started from April, 2011. In 2011, the Hunchun Agricultural Bureau finished the design of the construction plan of mushroom and rice planting demonstration zones in Rason. Then three agricultural cooperative projects between China and North Korea were launched in Rason area. They included greenhouse construction (See appendix 5), chicken farm construction and stock-raising experience sharing (See appendix 6), pig farm construction and stock-raising experience sharing. The greenhouse and chicken farm projects successfully passed the test period and continued, while pig farm failed and was stopped (See appendix 7) (Hunchun.gov.cn, 2013, Anonymous Interviewee 1, 12 Aug 2014).

Yatai Agricultural High Efficiency Test Zone

The BeiDahuang agricultural branch of Yatai Corporation, a local state-owned company of Changchun, signed agreement with the Rason People's Committee in August, 2012. The aim of BeiDahuang is to build a high efficiency agricultural demonstration zone with 500 hectares of rice in Rason (People's com.cn, 2012). In 2014, following a successful test, the size of this zone increased to between 2000 and 3000 mu, the Chinese unit of field measurement, which is as much as 1300 to 2000 hectares (Anonymous Interviewee 1, 12014).

To sum up, in the specific cross-border economic activities discussed above, on China's side, central government at the state level, and the actors below the state level at regional and local level, formed multiple channels between China and North Korea. The central government in Beijing, as well as its departments such as China Custom Hall, mainly provided institutional

support, such as signing general agreements with North Korea and approving a domestic regional development plan. The actors below the state, such as local governments and local state-owned companies, mainly implemented the specific cross-border economic activities in North Korea. Thus, the jurisdictions of governance are only limited at three levels: state level, regional level, and local level below the state. The intersecting memberships are also very limited because the approval from the state level to the level below state only happened during the limited time of the experimental exercises. Furthermore, under the general framework agreement signed between Pyongyang and Beijing, the governments at the city and provincial levels also signed agreements with North Korea. Although agreements signed at the central state-level are more general and of larger scale than the ones signed at the regional and local level below the state, they still represent a system-wide architecture.

4. The effectiveness of Chinese economic activities in North Korea on resolving and mitigating the non-traditional security issues in the China border areas near North Korea

4.1 Labour shortage and population outflow

Labour shortage and population outflow have been mitigated by the labour co-operation in light industry, the successful construction of the Road-Harbour Integration project and co-operation on tourism.

Labour co-operation

Labor co-operation in light industry directly relieved the labour shortage in the textile industry of Northeast China border areas. According to interview from Jilin (Anonymous Interviewee 4 and 6, 15 Aug 2014), in the past two years, there existed 5,000 North Korean

labourers in Jilin province who worked as hard as 6-7,000 Chinese workers. Most of the companies who employ North Korean labourers, and who have labour co-operation with North Korean communes, improved their production load from less than 40% to 90%. Some companies even offered extra prizes for workers (mainly the team leaders) to persuade the North Korea labour team leader to extend working hours. By paying only half the wages paid to Chinese workers, these companies achieved a rapid increase in nett profit from 16% to 84%. 'One North Korean labourer could save 1500 RMB at least per month and produce over 30% productivity with simple training. You could count how much the companies can earn from them', the interviewee said. Introduced by another local official (Anonymous Interviewee 8, 10 Aug, 2014), due to the concerns of management conditions, currently co-operation only occurs in light industry. All the companies who use North Korean labour can only hire the amount below one quarter of Chinese workers to keep their percentage below 20% of total amount. The interviewee said, 'The use of North Korea labor has attracted the attention of companies from other parts of China and even of international companies. We are doing research into the current advantages of using North Korean labour in China and applying to ease the restrictions in labour co-operation.' Thus, the labour co-operation between North Korea and cities in Liaoning and Jilin provinces is the first task-specific jurisdiction at the level below the state which aims to resolve local labour shortages. Indeed, currently China also faces the problem of rapid national ageing, although this problem has not shown a clear negative influence on China's economic development yet. Meanwhile, the population problem in the Yanbian area is much more serious than at the national level.

Road-Harbor Integration

The successful construction of the Road-Harbour integration has changed the isolated geography of the Yanbian Ethnic Korean Autonomous Prefecture. As noted above, the failure of regional integration of Yanbian, Russia's Far East, and North Korea kept Yanbian in an isolated geographical position and hampered it from attracting its local citizens to remain, or from gaining external investments. Thus, the connection between Yanbian and North Korea's harbour resolved the problem of population outflow and ethnic shrinking in two ways: by attracting foreign investments with the massive creation of jobs; and by improving the salary level of Chinese workers.

On one hand, Yanbian has attracted a large number of foreign companies who hold positive views on the prospects for regional economic development, but could not previously open branches in North Korea. Take Hunchun as an example, from 1993 to 2010, almost 150 foreign companies (80 from South Korea, 20 from Japan, 12 from US, and a few from other countries such as Russia and Ireland) have invested in Hunchun, but only 25 of them, less than 20 percent, entered Hunchun before 2005 (Hunchun gov.cn, 2008). These companies have created 70, 000 jobs for local ethnic Koreans. In April 2011, Posco, a South Korean company in the world top 500, started a 2 year co-operation programme for the construction of a logistic district in Hunchun. This logistic district can prospectively create over 10 thousand jobs (SEAC, 2012; Mofcom, 2011). With the rapid increase in the requirement of local workers to develop business with Japan, Korea, and Russia, salaries increased quickly. In 2013, the salary of a normal waiter in Hunchun is around 2000 RMB. Foreign trade agents can earn a basic salary of 4000-5000 RMB, which is commensurate with a white-collar salary in the secondary cities of China.

On the other hand, with the increase of foreign companies in Hunchun and improvement of income for local workers, the outflow of population still continues, but it has decreased significantly. Compared to the huge annual population outflow in the 1990s, and with illegal immigration to South Korea, since 2006 the structure of the outflowing population has changed (Li, 2007). Mid-level technicians, who go overseas to receive short-term professional training, and the businessmen who leave to develop businesses in Southeast China now represent the majority of that outflow. To the former group of ethnic Korean citizens in Yanbian they normally returned Hunchun to take up a higher position, such as that of technician manager in a foreign company. The jobs created in Yanbian will make local workers stay rather than emigrate to South Korea. Even though they earn less than what they would in South Korea, the high cost of living there and the competition from South Korean workers, who have better education and skills, is distant asserts to immigrant South Korea. Liu (2012) and Gao (2011) claim that due to the increased attraction of Chinese Korean workers and intellectuals to move overseas, and under the internationalization of Yanbian, in 2009, there has been a balance between human capital outflow and inflow, while since 2010 the inflow has been slightly more than the outflow (1%). While the internationalization of Yanbian has stopped the long history of serious human capital outflow, it can be expected that with increasing regional integration there will be a large turnover of human capital flow in Yanbian, and even in the whole Northeast China. Thus, the co-operation of using North Korea's Harbour in Rason is another task-specific jurisdiction at the level below the state (regional and city level). As with labour co-operation, this aims to reduce local population outflow by providing access from the landlocked Yanbian region to the Sea of Japan, thereby improving the attractiveness of the area to external investment and increasing the number of better-quality jobs.

Tourism co-operation

Booming tourism has benefited Yanbian by reducing the outflow of females. Since the beginning of border tourism with North Korea, the need for tourist guides, especially female guides, has increased enormously with the growth of tourist co-operation with other domestic tourist enterprises, and the growth in the number of tourists every year. According to a border-tourist businesswoman in Hunchun, who also has working experience in Dandong, during 2007, the first year in which North Korea offered its visa-free tourist policy to Chinese citizens, less than 40,000 tourists (25,000 from Dandong and 10,000 from Jilin) went to North Korea (Anonymous Interviewee 3, 12 Aug 2014) . Half of them chose to go to Sinujiu for one day. However, in 2012, 40,000 was only the number of tourists who went to North Korea from Hunchun for one peak month in the summer and autumn. The annual average of tourist numbers to North Korea after 2012 is over 200,000 from Hunchun and 250,000 from Yanbian Prefecture (including Yanji, Hunchun, Tumen and Ji-an). In other words, the number of tourists from Yanbian to North Korea increased 25 times in five years. Thus, the number of ethnic Korean tourist guides increased correspondingly.

Two factors attracted local young females to stay and work as tourist guides, market requirement and considerable salary. Firstly, under the positive background seen above, the gender concern of tourist enterprises was a decisive factor in offering jobs to local females. Meanwhile, most of the tourist guides in North Korea for Chinese tourist groups are female, so that for convenience Chinese tourist companies also employ female tourist guides for tourist trips to North Korea. Currently, there are dozens of tourist enterprises in Yanbian with several thousand positions for professional tour guides, part-time tour guides, and other relevant workers. One official (Anonymous Interviewee 1, 10 Aug 2014) says, ‘Now Yanbian only has developed

two large cities in North Korea (Pyongyang and Rason) as tourist targets. These two cities' tourism has created several thousand positions here. Last year there were a few other new SEZs in North Korea with tourist co-operation programmes. I believe that a large number of young local girls will choose to work in the tourism field.'

Secondly, the salary level is another essential factor of consideration. Indeed, tourist enterprises could hire female tourist guides by offering a salary lower than that for male tourist guides, but this does not mean a low income for female guides. This is because, apart from the mid-level basic salary they receive, they gain considerable bonuses from the large consumption by Chinese tourists of adequate non-polluted natural products, especially medical materials in North Korea. Male tourist guides mainly take responsibility for tourist groups to Far East Russia because of potential risks. A professional tourist guide could have a very comfortable life in Yanbian. Although local daily costs are not low, the price of flats is around 5,000 RMB, which is relatively low compared to the national average (Anonymous Interviewee 3, 11 Aug 2014). Therefore, in Yanbian Prefecture, work as a tourist guide, and in other positions related to the industry, is considered a respectable job for local young females. This has had a clear impact on the decreased female outflow from Yanbian as local females are increasingly attracted to stay in their hometown rather than to emigrate. This can be examined from the annual growth rate of ethnic Korean population in Yanbian. Before 2011, ethnic Koreans in Yanbian had a decade of negative annual growth rate (-1% per year), whereas in 2011, for the first time this index turned into a positive growth rate at 1%. The gender comparison of Yanbian also dropped from 104.5 to 102 (Yanbian Yearbook, 2014: 30). Thus, the numerous co-operative projects on tourism between Chinese and North Korean cities on the Sino-DPRK border are the third and final task-specific jurisdiction at the regional and local level below the state. The aim had been to stop the

local population outflow, especially that of young females of fertility age, by offering attractive working opportunities with competitive salaries, and changed the local negative annual growth rate to a positive one.

4.2 North escapees

According to Reuters (2013) the number of North escapees who arrived in South Korea reduced significantly from 2706 in 2011, to 1509 in 2012. UN officials recognised the reduction as the result of strengthening border control under the command of Kim Jong-un.

However, since the 2000s, North Korea has had a strict policy of border control. For more than a decade, Chinese villagers in the Jingxin village on the Sino-DPRK border became used to hearing the noises of shooting and finding the floating corpses of North Korean escapees in the Tumen River. They did recognise the reduction of escapees but denied the possibilities of strengthened control because the deaths in the river in 2014 were relatively less than in the past (Anonymous Interviewee 3, 11 Aug 2014. Yanji). Thus, the explanation of strengthening border control is not persuasive.

During the interviews and discussions with local officials and scholars, the operation of Sino-DPRK mutual management of Rason SEZ, especially the use of China's own experience, was considered as the most important reason for the strengthening of border controls. One Scholar (Anonymous Interviewee 2, 14 Aug 2014), in Changchun, argues, 'Why did Hunchun try to develop itself as the second Shenzhen? What experience of Shenzhen has been learnt by Hunchun? Hunchun should develop itself as a second Hong Kong because now China is much more developed than North Korea and Rason is learning Shenzhen under Chinese management'.

This section shows how China's previous experience of avoiding escapees has been used in Rason with adjustment to North Korean local conditions. It outlines the reproduction of Shenzhen's experience in Rason first and then discusses extra targeted activities, with North Korean characteristics, to local conditions. In contrast to the sections above about resolving the problem of labour shortage and population outflow through domestic means on local and regional level, this section shows the connection between local problems of North Korean illegal immigrants in Jilin and the effects of Chinese cross-border economic activities in North Korea on preventing these illegal immigrants escaping from North Korea.

Applying Shenzhen's experience to Rason

China has a longer history of refugee output than North Korea. From the mid-1950s to the end of the 1970s (with the continuation of small number of escapees following the return of Hong Kong to the PRC in 1997), almost 1 million illegal immigrants walked or swam across the border between Shenzhen and Hong Kong. This incident is called the Big Flee to Hong Kong and is recognised as the largest group escapee incident of the Cold War era due to the numbers involved and the length of time over which this occurred. The reasons for the creation of these escapees from China, are almost the same as the historical motivations of the North escapees: famine; political torture; and the expectation of better living standards in the neighbouring areas. However, with the implementation of two policies & activities in Shenzhen, the historical escapee wave was almost stopped.

The first policy was called 'second border'. This policy did not aim to strengthen the border control between Shenzhen and Hong Kong, rather its purpose was to build an additional border between Shenzhen and the other parts of China with extremely strict entry inspection. In June,

1982, the State Council No.92 document approved the set up of the management line (the second line) of Shenzhen SEZ. The border inspections, which maintained the management standard of the border supervision between Shenzhen and Hong Kong, began during the first half of the new border construction. Four years later, with 10 supervision stations, the construction of this 84.6 km 'iron net' between Shenzhen and other parts of mainland China was finished and fully operational run. Before 2003, visitors to Shenzhen could not get across this management line without a special border pass which had to be issued by both the Shenzhen SEZ government and their original local government. Thus, the second line of Shenzhen played the role of filtering out suspicious persons. From 1986 to 2003, the supervision stations on this second border stopped 6 million people entering Shenzhen illegally.

One interviewee says that when the Rason SEZ was first founded in 1984, there was a similar plan of special pass inspections, however, North Korea had no idea about how to develop a SEZ. As a result Rason was left for almost twenty years without any strong border inspection in practice (Anonymous Interviewee 6, 13 Sep 2012. Dalian). Rason is geographically very similar to Shenzhen, as can be seen in Table below:

Table 6.1: Comparison of Geographical condition of Shenzhen and Rason

	Shenzhen	Rason
Escapees' target	Hong Kong	Hunchun
Ethnic relationship	Yes (Cantonese)	Yes (Ethnic Korean)
Geographic blockade	River and Sea	River and Sea
only origin of	Yes	No (but very

escapee		important)
Size	395 km square	470 km square

(Jilin Province Map, 2012; Anonymous Interviewee 5, 15 Aug 2014. Changchun; Anonymous Interviewee 6, 13 Sep 2012. Dalian)

After the foundation of a mutual agreement committee, Chinese officials started to implement a similar policy in Rason as had been done in Shenzhen. However, in Rason they met difficulties, especially the limitation of mutual management scale. The mutual management area does not cover the whole of Rason City but only 470 of 830 sq.km. The ‘iron net’ only separated the mutual management zone from the rest of North Korea. As an important exit route for North escapees, the rest of Rason remained connected to the rest of North Korea. When one official was asked about the number of escapees who were blocked by the ‘second border’, he said, ‘It reaches up to a thousand. The second border is still too short, otherwise the reduction of North escapees will be more than the current amount.’(Anonymous Interviewee 3, 11 Aug 2014).

To the escapees from places outside Shenzhen, the local authority of Shenzhen constructed the second border. Meanwhile, in order to increase the confidence of local people by improving local living conditions, a policy of trade relaxation was implemented in the villages of Shenzhen in early 1980s. Except for special forbidden products, such as poppies, in the certain markets villagers were allowed to sell their own agricultural and fishery products to Hong Kong citizens in order to earn extra income to improve living standards. This policy is now copied in Rason. According to one scholar (Anonymous Interviewee 7, 12 Sep 2014), who visited Rason in August of 2014, a similar special market was also established in the mutual management zone of Rason in order to provide opportunities for local citizens to gain through trade with Chinese

tourists. Most importantly, in Rason, RMB and the DPRK WON are both used freely. Thus, local citizens always ask Chinese tourists to pay in RMB because, to these people whose annual income is as low as 300 to 400 RMB, every RMB is extremely valuable.

Effects of physical infrastructure co-operative construction

Although Chinese officials could not apply the experience of Shenzhen to the whole of Rason due to the limited area of mutual management, Chinese experience was still applied in another co-operative project in order to strengthen the border control directly. The reconstructed road and railway from Rajin to Yuanting Port requires a special pass to enter. These new traffic systems are closely inspected by camera facilities, a new experience popularized from China. Currently there are tens of thousands of cameras set up in each large or middle city of China. Besides being used as tools of recording traffic violations, the cameras also are very useful for tracking criminals. The camera inspection system is connected to both China and North Korea. This activity aims to push the two countries towards the promotion of good border control and, at the same time, to negate the responsibility of allowing escapees to get across the border. In the past, both China and North Korea believed that the other side should take the major responsibility of allowing escapees to get across the border; North Korea criticized Chinese shortage of border inspection troops, while Chinese newspapers pointed out bribery issues in the exchange of money and freedom between North Korean soldiers and escapees.

Effects of other activities

Apart from the administrative methods discussed above, Chinese economic activities in Rason were also effective in reducing the existence of economic-oriented illegal immigrants in

North Korea, especially in Rason. As seen in the administrative methods used, these activities also were non-military ways of reducing North Korean illegal immigrants.

Agricultural programme ensures the supply of food

As the largest agricultural country in the world before economic reform, apart from the serious famine from 1958 to 1960, Beijing did not need to worry about a shortage of food in the country. Like other places in China, Shenzhen also has its agricultural foundation, therefore the construction of the Shenzhen SEZ did not require the attraction of external agricultural projects.

In contrast, after the end of the Korean War, because the northern part of the Korean Peninsula is mountainous and not suitable for agriculture, North Korea never achieved self-sufficiency of agricultural products, especially the major grains. During the Cold War it imported grains from the Soviet Union and China. After the end of Cold War, it mainly received aid in the form of grains and fertilizers from China. In Rason, the shortage of food is also a problem. Co-ordinated with food distributed from Pyongyang, the agricultural co-operation program offered a basic grain supply for Rason. If the relaxation of trade is an extra gift to the citizens in Rason, the consolidation of grain supply and the increase of plant varieties are the foundation of stabilizing the Rason local condition. As noted above, a considerable number of Rason citizens are from families related to the politicians and the army. Pyongyang cannot ignore the requirement of these people because their families are more important to the regime than ordinary civilians. Meanwhile, it cannot be denied that sometimes the natural desire for food under extreme hunger can still motivate people to give up their original loyalty, especially to the new generation of interest groups sent to the Sino-North Korea border who do not have memories of the most difficult period in North Korea's history. Thus, ensuring the food supply to Rason SEZ is

significant in order to consolidate the loyalty of local North Korean elites to their regime and avoid their escape because of hunger.

Tourism co-operation

North Korea has a different political background from China's background. The most important one is the totalitarian domination of the country. It blocks external news in order to prevent the overthrow of the regime. Under external sanctions North Korea is short of foreign currency, resulting in a compromise by North Korea to allow the participation of China in the construction and mutual management of SEZ in its border area. This is different from the experimental reality of Shenzhen SEZ in China. Therefore, the blockade function of North Korea SEZ is clear, but despite its original role of screening and stemming external information, the effects of preventing North escapees during the construction of its tourist zone, and its further transformation to SEZ, should not be ignored.

Tourism co-operation can be considered as a warm-up preparation period for Pyongyang to relocate a large number of young elites to the border cities and to train another part of youth to be skilled labourers in the special economic zone. These people are recognised in North Korea to have the highest loyalty to the regime. Meanwhile, North Korea has also relocated a few original citizens in the region to the other side. From the song *'The Story of Spring'(In Chinese ChunTian de Gushi)*, the setting of Shenzhen SEZ is described as 'An old man drew a circle on the coast of South China Sea', the 'tourist zone –Special economic zone' mode in the border area of North Korea can be seen as a mode of 'small circle, big circle & point, line and area'. When North Korea agreed to open one border town as a tourist zone, it drew a circle on its border and cleaned the fields inside the circle. Chinese is moving forward and closely to them so Pyongyang does

not want its citizen to escape again. Then with the foundation of a special economic zone based in, or near, the tourist zone, another circle will be cleaned. With the increase and enlargement of cleaned circles in the border areas, the original lines formed by a few points become cleaned areas in the Sino-DPRK border and form a comprehensive blockade to the escapees from inland of North Korea. Chinese interviewees (Anonymous Interviewee 1, 14 Aug 2014; Anonymous Interviewee 5, 19 Aug 2014) said 'North Korea set up 14 SEZs in its border area at the end of 2013. Kim Jong-un hurried to popularise the successful experience of Rason in attracting funds and stopping escapees. He did not learn from the failure of his father and grandfather in developing Rason. It is another Great Leap Forward. Without Chinese involvement in infrastructure construction, it can be expected that these SEZs will be abandoned again. They will still become paper windows made in North Korea but not steel fences made in China.'

To sum up, no matter copying China's general experience of Shenzhen to Rason, or developing the agricultural industry and tourism with North Korean specific characteristics, Chinese economic activities in North Korea use economic, and administrative, ways of resolving the problem of North Korean illegal immigrants in their homeland rather than in China. These ways are different from the North Korean traditional military way of resolving the problem by asking soldiers to kill the illegal cross-border citizens. They blur the difference between the domestic requirement of reducing local unemployment and social instability caused by North Korean illegal immigrants, and external issues of developing tourism and the agricultural industry in North Korean border areas through resolving the problem of North Korean illegal immigrants.

5. Reasons for Beijing's distant-governance in Sino-DPRK cross-border cooperation

From the specific information of Chinese economic activities in the second paragraph, it can be found that Beijing was almost absent from these co-operation and mutual management activities. This section explains the reason these NTS issues are important to local authorities, such as ethnic shrinking, but are not influential at the national level. In other words, reducing NTS problems, such as North escapees, labour shortages and population outflow, is the task-specific jurisdiction at the regional (Jilin and Liaoning provinces) and local levels (Yanji Korean Autonomous Prefecture), rather a general jurisdiction directly dealt with by Beijing.

5.1 Illegal immigration

The central government in Beijing rarely becomes involved in the problem of North escapees for two major reasons. The first is that human rights are no longer an effective tool of external criticism of Beijing. China's human rights have always criticized by the West, particularly after the incident in Tian'anmen in 1989. The assistance of Beijing to Pyongyang on returning illegal escapees has been criticized as a violation of human rights. The human rights issue was a very strong tool used by other countries to increase diplomatic pressure on China in the 1990s and early 2000s, especially the negotiation of China's WTO membership (Nathan, 1994; Dittmer, 2001). However, with the increase in China's economic strength, Beijing is more confident to face these criticisms and even use its soft power, particularly its economic power, to ease external criticism on human rights issues. The economic interests from economic interdependence between China and other countries, especially the requirements of the huge market in China, and huge funds from China, have weakened the voice of criticism and made a few countries (See appendix 8) stop talking human rights issues with China as an extra

requirement of joining WTO, and China even began to build its own reputation for human rights in the world (See appendix 9) (Potter, 2007; Macfarland and Mathews, 2005).

The second reason is that the direct political negative impact of North escapees on Beijing is not very big. This is a result of the unwillingness of Seoul to criticise Beijing on human rights issues due to the deepened economic interdependence between China and South Korea. Meanwhile, two further factors help reduce the criticism about North escapees to China. On the one hand, in contrast to other human right issues, such as the Tibet problem under the frequent activities of the Dalai Lama, and apart from the incident of the Shenyang Consulate about North escapees in 2002, during this time information about China's treatment of North escapees was rarely released. Most information is about China's capture and return of these people to North Korea. Although China's official choice to return these people to North Korea is always questioned because it always leads to the torture of these people in North Korea, the number of returned North escapees, usually several hundred, actually is only a very small proportion of the thousands of North escapees. As reported by South Weekly (2013), there have been tens of thousands of North escapees travelling across the whole of China, from Northeast China to Southeast China, to enter Southeast Asia. In other words, Beijing actually has a very relaxed policy towards North escapees. On the other hand, the condition of North escapees who have successfully entered South Korea is good in general especially who were in high positions in North Korea, received awards, priority treatment, and protection in South Korea. However, most escapees who were normal citizens in North Korea still struggle in South Korea because of isolation from society, social discrimination, and weak official support from the South Korean government (Anonymous Interviewee 9, 14 Sep 2014; Anonymous Interviewee 10, 23 Nov

2014). Recently, with improved economic conditions in North Korea and a softened policy towards North escapees, a few of those escapees have actually chosen to return North Korea. They are seen as heroes in North Korea by describing the difficult days in South Korea and criticising the corrupted life of capitalism. They also encouraged other North escapees in South Korea to return home. Thus, to Beijing, the North escapee problem itself is actually a very small diplomatic issue. In other words, it only needs to be resolved from a task-specific jurisdiction at the regional and local levels rather than from a top-down general-jurisdiction at the national level. The stand-by role of Beijing to the decision-making and policy-implementation of local government also presents a non-intervening independent jurisdiction condition.

5.2 Cultural decline and labor shortage

The cultural decline of Chinese Koreans is actually not a problem to central government at all for two reasons, the official policy of nation building, and the special status of ethnic Koreans in China and the world. Firstly, central government does not care about cultural decline under its policy of nation building; Beijing always aims to popularise recognition of China as a civil nation beyond the identity recognition of ethnic minority groups through modernisation. Beijing actually pushes ethnic assimilation by offering priorities on policies concerning ethnic minority groups to motivate them to move from rural areas to urban areas and speed up their integration into the developed Han-dominant society (Kipnis, 2012). Under the effects of urbanisation and modernisation, apart from special ethnic and religious characteristics very different from the Han culture, most normal ethnic characteristics disappeared, or at least rarely appeared, in daily life except in the special situations, such as the traditional holidays of those ethnic groups. In terms

of cultural protection, central government pays more attention to the historical research of ethnic minority groups.

Secondly, the cultural decline is also caused by the special status of ethnic Koreans in China and the world. Compared to other ethnic minority groups, such as the Uygur and the Tibetans, Ethnic Koreans in China are not a large group, though they do have clear ethnic differences from Han in terms of race and religion; and their special ethnic characteristics are language and costume. However, in contrast to Uygurs and Tibetans, who only exist within China, or whose majority ethnic population lives in China, ethnic Koreans around the world have their own countries and the same language and culture as Chinese Koreans. This means that the ethnic assimilation of Chinese Koreans will not influence the existence of ethnic Koreans at the international level. Deepening globalization also promotes communication and interaction between Chinese Koreans and Koreans in the two Koreas to sustain the survival of cultural characteristics (Cui, 2004; Xu, 2013). Meanwhile, according to some South Korean scholars, the existence of Chinese Koreans is a potential risk to China. In the future, once the two countries in the Korean Peninsula achieve unification, the ethnic Koreans in China could become the new Kosovars in Far East (Anonymous Interviewee 11, 26 Nov 2014). Thus, the central government in Beijing does not need to worry about the ethnic shrinking of the Chinese-Korean autonomous region. In contrast to the issue of North escapees, which still attracts diplomatic attention to some extent, the ethnic shrinking of ethnic Koreans in Yanbian is a problem which exists, and impacts, only at the regional and local levels, but not at central government level. Resolving this problem also only requires a task-specific jurisdiction at the regional and local levels.

6. Conclusion

In conclusion, there are two major types of NTS problems in the low-politics field in Jilin and Liaoning Provinces in Northeast China: socio-economic security; and border security. The former problems include the ethnic shrinking of ethnic Koreans in Yanbian Korean Autonomous Prefecture and labour shortage. The latter problem concerns illegal immigration from North Korea (North escapee). Firstly, the problem of ethnic shrinking is caused by the reduced attraction to local labour and qualified personnel of underdeveloped local economic conditions in the Yanbian Korea Autonomous District, as well as in the whole of Northeast China. This contrasts strongly to the developed areas of China in big cities and the Eastern coastal area. It made a potential crisis of the existence of the Yanbian Korea Autonomous District due to the net outflow of population, which also caused the rapid ageing population. Secondly, North escapees also created big social problems in Northeast China, particularly those who lost contact with their illegal immigration agents in China. They always cause big problems: in the past, they tried to enter every type of foreign diplomatic institutions in China for asylum which always led to diplomatic clashes; and recently, because the illegal immigration agents in China chose a new route from Northeast to Southwest China, the escapees, who cannot deal with this type of complicated issue, created increased crime in the border area.

The local governments and enterprises in Northeast China have implemented many economic activities, such as economic investments in social infrastructure, economic co-operation in the field of agriculture, the establishment of special economic zones, and implementation of tourist programmes in North Korea. These activities could help to resolve the socio-economic and border security problems in Northeast China to some extent. In contrast to the previous military ways of the North Korean side, these non-military means are more effective.

To the problem of labour shortage and ethnic shrinking, a few local private enterprises have developed OEM relationships with North Korea business communities; the economic investments in the social infrastructure of Rason port, as well as the 50-year-lease of Rason port, is a big step in the promotion of regional integration. It has attracted a few foreign companies to enter Yanbian and seize local markets to prepare for future developments. These companies have created many attractive job opportunities and slowed down the tendency of population outflow. To the problem of North escapees in Northeast China, the economic activities cannot fundamentally resolve the problem because the root cause, i.e., the underdeveloped conditions in North Korea, cannot be resolved easily in the short term. These economic activities can only provide some help. The tourist programmes in North Korea are also helpful to reduce the illegal escapees by pushing population relocation in the border area; members of interest groups come to replace the original citizens. The agricultural co-operative programme can be helpful to consolidate the food consumption of the local population in the North Korea border area in order to lower the possibilities of illegal immigration due to the shortage of material. The setting up of cameras in the border areas, and especially the construction of roads, is also useful to monitor the activities of illegal immigration. Thus, the origins and resolutions of these problems, which directly and indirectly exist in North Korea, blur the differences between domestic and external issues. The economic activities are also more effective than the traditional military ways of border policing in North Korea.

These activities are rarely done by central government because the negative influences of security threats are mostly limited in the region of Northeast China rather than on the national level. The human rights issues can no longer pressure Beijing, as well as the increasing failure of well-treating North escapees by South Korea, made the previous problem of North escapees not

a problem anymore. Now the existence of escapees provides opportunities for Beijing to show its kindness to Seoul because some captured escapees are returned to South Korea. The special status of ethnic Koreans in China, and in the world, also determines that central government pays little attention to any resolution to the outflow of population and the subsequent reduction in the local population of Yanbian. It shows the task-specific jurisdiction with independent levels at the regional and city levels, without intervention from the central government. The role of central government is limited to signing agreements with Pyongyang. Thus, dynamic provincial and city governments, as well as non-state actors, have diversified the multiple channels of interaction between China and North Korea on the China side.

Chapter 7 The Regional Impact of Chinese economic activity in North Korea

The chapters above outlined the specificities and motivations of Chinese economic activities in the mineral resources sector, fisheries, and cross-border issues, such as tourism and physical infrastructure, and examined the leading role of actors below the state in these economic engagements in contrast to a weakened role of the central government in Beijing. This chapter

discusses the regional impact of these economic activities on the Korean Peninsula. It first shows a positive impact in terms of how Chinese economic activity reduced domestic barriers within North Korea and advanced the process of economic reform there. Then two kinds of negative impact are discussed. One is the prevention of the resolution of the Sino-ROK Ieodo Island dispute, accompanied by an escalation in China-South Korea struggles for fishery resources in the Yellow Sea. The other is the reduction in the bargaining leverage of aid from the US and South Korea to North Korea in the Six Party Talks, and which directly led to both the withdrawal of North Korea from Six Party Talks and further uncertainty over the nuclear weapons of North Korea, a setback for Washington and Seoul as well as a negative impact in the sense that tensions remain in the Korean Peninsula.

1. The Implications for North Korea Economic Reform and Opening Up

Under its totalitarian regime and planned economy, North Korea is seen as the country most isolated from external conditions in the world. For a long time North Korea also experienced failure of its economic reforms. Since the mid-2000s, with the rapid increase of Chinese economic engagement in North Korea, the country is increasingly opening up. This section aims to show that North Korean economic reform and opening up has benefited from Chinese economic activities. First, it reviews the history of failed economic reform and opening up in North Korea. Then it outlines the domestic barriers to reform. Finally, it discusses the positive impact of Chinese economic activities on the reform process in North Korea.

1.1 The history of failed North Korean economic reform and opening up

North Korea has been ruled by the Kim Family for more than half century, from the late 1940s at the end of the Second World War. In contrast to its socialist neighbours in East Asia,

such as China and Vietnam, its pace of economic reform had been slow. Economic reform has been delayed over various incidents, i.e., the sudden death of Kim Il-Sung, Kim Jung-il's focus on nuclear weapons, and the coming to power of young Kim Jong-un.

The trend of economic reform in the era of Kim Il-Sung

North Korean economic reform was first known to the external world when, in 2002, Kim Jong-il implemented the '7.1 Reform'. However, the earliest trend towards economic reform and opening up began under Kim Il-Sung more than one decade before. North Korea experienced economic difficulties at the end of the Cold War and the collapse of the economic system in the socialist camp. Kim Il-Sung began to consider the possibility of economic reform and opening up to avoid economic recession, and as a result he visited the Eastern European countries which had recently experienced economic reform. North Korea also signed agreements with West Germany and France to found joint-companies for developing its oil reserves (Cha, 2013:77-79). However, Kim Il-Sung died of a heart attack in 1994 before he could implement significant economic reforms.

The failed economic reform of Kim Jong-il

As the second leader of North Korea, contrasted to his father, who was unable to turn the idea of economic reform into reality, Kim Jong-il successfully implemented some economic reforms, although the overall experience was a failure. In 2002, he implemented economic reform policies in several fields under the general name of the '7.1 reform'. In the ideological field, Kim Jong-il developed his Juche idea and called for new thinking to abandon the old collective ideological blockade to economic development. However, Kim Jong-il only pushed his new ideas for economic reform for several months without reviewing the old collective ideas. At

the end of 2012, he emphasised the significance and continuation of the planned economic system in North Korea in a public talk (Tudor, 2015: 40-43). In the agricultural field, Kim Jong-il copied the Chinese experience of releasing the subjectivity of peasants on agricultural production by encouraging the free-trade of agricultural products and allowing the people to use individual idle land and water to raise chicken and fish. However, without corresponding policies, his experiment failed again and he was forced to cancel it because, in the short-term, the underground economy, or black-market, quickly grew out of control and threatened state-owned firms (Tudor, 2015: 50-54). The third failure of Kim Jong-il's reform was the establishment and operation of North Korean special economic zones (SEZs). He set up four special economic zones in North Korea: Kim-Kong Mountain; Kaesong Industrial Zone; Rason; and Sinuiju. Apart from the well-managed Kaesong Industrial Zone with the support of South Korea, the others were not successful. The Kim-Kong Mountain International Tourist Zone was closed due to the breakdown of co-operation with South Korea (Abt, 2014: 77-79). Due to poor infrastructure, the Sinuiju SEZ remained unattractive to external investors and failed to develop; because of its favourable geographic location near the Sea of Japan and the efforts of Jang Sung-Taek in cooperation with China, in 2011 the Rason SEZ attracted funding and mutual management and joined the Kaesong SEZ to become the only two properly run special economic zones.

The only real success of Kim Jong-il's economic reform and opening up was the modernisation of North Korea's Information Technology sector. Under his leadership, information technology rose in the government's economic agenda and developed rapidly. With the foundation of the North Korea Computer Center, the Computer Scientific Technology University, and the Kim Il-Sung Comprehensive University, North Korea successfully formed its own national scientific research system of IT skills (Bechtol, 2013: 175-177). Under the policy

of concentration on the development of software, North Korean IT teams succeeded in developing document processing software, e.g., the North Korean Linux Operation System, Red Star, and Go Chess software. The rapid development of the IT sector also benefited a few other fields, such as productivity and resource efficiency in the manufacturing, mining, light industry, and agricultural industries which improved with the popularisation of a corresponding upgrade in IT skills (Bechtol, 2013:178). After outlining the general history of North Korea's economic reform under its previous two leaders, the following section considers the more recent specifics of North Korea's opening up under its third and current leader, Kim Jong-un.

Economic reform under Kim Jong-Un: The Legacy of Jang Sung-Taek

After the death of Kim Jong-il at the end of 2012, Kim Jong-Un started his rule of North Korea. In contrast to his conservative father, Kim Jong-Un made numerous changes to his public image, such as allowing Mickey Mouse to join North Korea's official evening parties, becoming the first North Korean leader to be accompanied by the first lady and seen in the media, extending the first official invitation to a US basketball team to visit North Korea, and discarding Kim Jong-il's signature in the official dressing (French, 2014: 366). However, even though at the beginning of his governance Kim Jong-un noted the importance of economic development in his public speeches, he did not make a great economic contribution because he continued to reinforce the significance of nuclear development at the same time. Although he was responsible for the execution of Jang Sung-Taek, currently Kim Jong-Un continues to follow Jang's original opening-up strategy in terms of setting up mutual-management economic zones with China, but without any further steps of economic reform.

1.2. The domestic barriers to North Korea's opening up

North Korea's three leaders have made some efforts in pushing economic opening up in North Korea. However, due to three domestic barriers, North Korea's economic reforms mostly failed. This section discusses these major blocks to reform: concerns about political stability; limited domestic economic conditions; and the lack of public support and leadership for economic reform.

“Dare not reform”: concerns for political instability

North Korea is a highly centralised country under a traditional socialist Juche ideology and military-first doctrine. The economic reforms of other ex-socialist countries were implemented with the transformation from a planned to a market economy. Pyongyang worried about the attraction of external investment, especially from South Korea, Japan, and Western countries. Such concerns are based on the belief that the cultural invasion caused by the entrance of these external sources of funding could lead to the ideological decay of North Korean officialdom, and the citizenry at large, and result in a crisis of legitimacy for the ruling Kim family. Meanwhile, the awareness of the need for political stability also came from the imbalance of economic strength between North Korea and its neighbours. On the one hand, North Korea continued to be anxious about its over-dependence on China. In ancient history, the Korean Kingdom in the Peninsula always tried to escape from the domination of a central empire on the continent, although it accepted its status as a vassal state. There have been several wars between the Korean Kingdom and Chinese Emperors, such as Han and Tang, until the Japanese invasion and occupation of the Peninsula following its victory in the Japanese- Qing War in the late 19th Century. Even after the Korean War, Kim Il-Sung required China's Volunteer Army to withdraw

from North Korea as soon as possible (Cumings, 2005:73-75). In order to avoid an overwhelming Chinese presence in the North Korean economy, Kim Jung-il even chose an Egyptian telecommunication company to develop its domestic mobile phone market, rather than accepting the experienced Chinese companies. He also allowed a few young Norwegians to monopolize jean production in North Korea (Chosun.com, 2013 and 2014).

On the other hand, in contrast with the historical struggle against China, Pyongyang's awareness of the threat from South Korea is stronger. In the post-Cold War era, South Korea experienced a steady increase in its economic strength. Compared to North Korea, South Korea's GDP is several times higher and the average salary in South Korea is more than 40 times higher than that of North Korea. No matter the soft Sunshine policy of Kim Dae-Jong and Roh Moo-hyun, or the 'Denuclearization, opening up, 3000' plan of the pro-American Lee Myung-bak doctrine, due to the huge economic disparity between the two Koreas, Pyongyang continues to pay attention to the prospect of what may be termed as 'the second collapse of Berlin Wall' in the Korea Peninsula.

“Don't want reform” : The little will of leadership to opening up and public opinion of pushing economic reform

Apart from the concerns of regime collapse, the problematic leadership and the lack of public support in North Korea also prevented economic reform in contrast to China, whose economic reform has been successful.

Firstly, in non-democratic countries, the political leaders are usually very powerful in the decision-making on national affairs. As the neighboring country of North Korea, China had the same totalitarian system and planned economy as North Korea during the first thirty years of the

Cold War. On the decision making of economic reform and opening up, China's powerful leadership played a determining role. As the major designer of China's economic reform, Deng Xiaoping had a very clear understanding of the target, the principles, and the steps required for economic reform. He gave up the planned economy and replaced it with a limited market economy. He also used his personal influence and gave speeches during his visit to South China (Shanghai, Shenzhen, Wuhan, and Zhuhai) in 1992 to strengthen confidence in the economic reform. This trip happened when the top leader of China at the time, Jiang Ze-min, lacked the confidence to instigate economic reform. He even expressed doubt about the opening up policy in his talk reviewing Mao Zedong's Rectification Campaign in the early 1940s towards right-wing capitalist ideology in Yan'an (Vogel, 2011: 354).

By contrast, neither Kim Il-Sung nor Kim Jong-il held a strong will during their rule of North Korea. Indeed, as outlined in the section above, a few opening up activities were made, such as the establishment of joint companies with France and West Germany on oil exploration, the setting up of SEZs in the final days of Kim Il-Sung era, and the July-first opening up strategy of Kim Jong-il. However, because these activities were recognized as temporary resolutions to North Korea's economic difficulties by attracting foreign funds, without a long-term plan most of them were suspended soon after they began. The two SEZs in North Korea, Rason and Sinuiju, are a case in point. As SEZs founded before 2000, there was no specific development strategy for them, especially Sinuiju. Sinuiju's development failed in the beginning with the imprisonment of first Head of City (Yang Bin) in China due to financial crime. However, since then, North Korea stopped its attempt to look for his successor (French, 2014:44). As the second leader of North Korea, and although he visited China several times, Kim Jong-il mainly praised the results of Chinese economic reform in exchange for limited economic aid from China. Once he returned to

North Korea, he nevertheless stressed the significance of the Juche ideology and the planned economy in his public talks (Tudor, 2015: 106-108). More importantly, from the late 2000s and until his death in 2012, his trips to China served to secure Chinese support for his third son, Kim Jong-un, who was about to become the third generation of the Kim family of North Korean leaders. Kim Jong-il's visits to China were an opportunity for his cousin, Jang Sung-Taek, to learn from the Chinese experience of economic reform and to launch economic co-operation with China. However, the short-term practical control of North Korean power by Jang Sung-Taek, and the Sino-DPRK top-level co-operation, were actually not expected by China in Pyongyang's power-transfer era (from Kim Jong-il to Kim Jong-un), according to the one decade freeze in bilateral interaction at the top level from 1992 to the early 2000s, and the disagreement on the North Korean nuclear problems.

Secondly, in China, strong public opinion also contributed to creating an atmosphere conducive to economic reform. Since the end of the Cultural Revolution, public opinion supported economic reform, especially when the introduction of the world's advanced technology, by intellectuals, to the public consolidated the foundation of mass citizens (Vogel, 2011:97-103). By contrast, there is no significant public support for economic reform in North Korea. There is little dissatisfaction with the current regime in North Korea, i.e., the Kim Family, and any dissatisfaction voiced is quickly dealt with by the secret police. The propaganda of North Korea is under strict control and everything is praised in order to maintain the domestic status quo. Most officials and citizens have no idea about the external world. Thus, North Korean leaders have not been under domestic pressure to implement economic reform.

“Unable to reform”: North Korea's domestic limitations to economic reform

In addition to blockage from the leadership and public apathy, North Korea also had other problems which negatively influenced its short-term economic reform. On the one hand, the condition of the fundamental physical infrastructure of North Korea was not attractive to external investors. North Korea experienced severe power supply problems from the 1980s onwards. In the 2000s, even in Pyongyang, the only stable power supply at night was used to light up Juche Tower and the buildings of Kim's family. The SEZs in Rason and Sinuiju also faced the problem of insufficient supplies of electricity and water. This was seen by external businessmen as a lack of sincerity on the part of North Korea to attract external investment. North Korea's imperfect legal system was another negative factor. Although North Korea had enacted specific laws on foreign investment, problems remained in the implementation of those laws. In particular, the laws failed to protect external investors when they faced problems caused by the local economic actors who intentionally provided false commitments in contracts, or even scrapped contracts without justifiable reason. For example, Xiyang Corp from China was forced to withdraw from North Korea after its first year of experimental production because its contract was cancelled by the North Korean commercial firm which had benefitted from the technological transfers from Xiyang. This incident resulted in a loss to Xiyang of over 200 million RMB (Ifeng, 2013).

Thus, the concerns over political instability, weak leadership, and limited domestic economic foundation were the three major barriers to North Korea's economic reform and opening up. It lacked confidence to allow external economic engagement or temporary and tactical opening up without long-term plans and provided little attraction to external funding. The following sections discuss how helpful Chinese economic activities are in pushing forward the economic reform of North Korea by resolving the domestic barriers discussed above.

1.3 The role of Chinese economic activities in North Korea in promoting North Korea's own economic reform and opening up

After introducing the history of North Korea's failed economic reform and opening up under Kim Jong-il and the major corresponding domestic barriers, this section discusses the role of Chinese economic activities in pushing North Korea economic reform forward, especially making North Korea accept opening up and to gain confidence in reform by supporting ideological change, and reducing the concerns of external impacts by offering benefits.

'Accept opening up': Driving a top-down ideological reform through elite co-operation and increased external interaction through training

From the section above about North Korean domestic barriers to economic reform, it is seen that the ideological blockade by the top elites of North Korea is the most important factor to cause the regression of North Korea's economic reform with very limited progress. However, North Korean economic reform and opening up still benefited from Chinese economic activities from the mid of 2000s, in a top-down mode, with the entrance of Jang Sung-Taek into the core group of the Kim family. Moreover, although Jang Sung-taek was executed by Kim Jong-un in 2014, his political legacy in the economic reform has been continued by Kim Jong-un, and even enlarged to an advanced level with the support of Chinese economic activities.

Chinese economic activities made a breakthrough on the ideological blockade to economic reform through co-operation with Jang Sung-taek. During the last years of the Kim Jong-il leadership, as the cousin-in-law of the top leader, Jang actually stayed away from the the centre stage of North Korean politics for several years until the mid of 2000s. As the highest pro-China member of the elite in North Korea, and with no political or military background, it had to be

significant for Jang to co-operate with China, and thereby to gain political kudos in order to consolidate his status in the central power. Jang successfully used the visits of Kim Jong-il to China to legitimise and popularise Chinese-style economic reform among the top officials. Kim Jong-il's real target was to gain aid from Beijing as encouragement to learn the Chinese style of economic reform and to express his concerns about the next leadership of the Kim family in his final years (Lim, 2006). Jang and Jilin Province together met each other's needs through co-operation in a positive cycle. For Jang, achieving economic cooperation with Jilin Province and Yanbian consolidated his status in Pyongyang by demonstrating his ability to attract external funding, at the same time Jilin province resolved its local NTS problems. Also, in order to consolidate its co-operation with Jang, Jilin Province in return offered training to North Korean officials, practically built a pro-Jang team, and extended Jang's role in North Korea. The co-operation between the two increased again to reach the ultimate co-operation of the mutual management of the Rason SEZ in North Korea, which legitimised the Chinese style of economic reform in the form of inter-state agreements (Kim and Park, 2014:110-115). Thus, to the North Korean economic reform, although Kim Jung-il's stand for Chinese economic reform remained doubtful, to some extent Chinese economic activities managed to break through the ideological opposition of the North Korean elite through co-operation with Jang Sung-taek.

During Kim Jong-un's period, Chinese economic activities still play two major roles in supporting and extending economic reform in North Korea with some flexibility. Kim Jung-un has a stronger leadership style than his father which he uses to push through economic reform. The words he used in his early speeches when focusing on economic development and improving normal citizens' living conditions, always appeared independently without mentioning the significance of nuclear programme (Sweeney, 2013:14-15). Although Jang was executed by

Kim Jong-un, this simply meant the transition of reform leadership from Jang to Kim Jong-un, rather than the abandonment of economic reform itself. This can be examined from Pyongyang's criticism of Jang over the sale of national wealth in a cheap way, and the organisation of small private groups with the intention of occupying power (Alton and Chidley, 2013: 8). By contrast, Jang's efforts of pushing through reform in North Korea were not the cause of his execution. North Korea officials still confirms the foundation of 13 economic co-operative zones in the Sino-DPRK border area with the denial of negative impacts from the death of Jang. Kim Jong-un also visited the many Sino-DPRK joint-economic programmes, such as mushroom planting and processing companies. Under this condition, the steady increase of Chinese economic activities in North Korea represents a strong positive response to Kim Jong-un's attitude of implementing a progressive reform on the economic front: limited ideology relaxation; increased external funding, especially from China; larger local economic gains; and larger support to open up (Piao, 2013:34-36). By encouraging economic opening-up, Kim Jong-un benefits from the ability to distribute huge funds originating mainly from Chinese economic engagements. He promotes the economic gains a special class in North Korea in order to gain support for ideological relaxation, as described in Pyongyang's propaganda for the development of the economy and nuclear weapons at the same time. The deepened ideological relaxation and the stronger personality of Kim Jong-un can be seen from the introduction of Disney cartoons and NBA basketball into North Korea at the beginning of his era, to the more recent, and key, issue of the disappearance of Kim Il-Sung's and Kim Jong-il's signatures from Kim Jong-un's normal dress

On the other hand, Chinese economic activities continued in a flexible way, adding to continued ideological change and extension of North Korea's opening up. After the top-down political cleansing of Jang's group, North Korea lost its original team who held Chinese

ideological characteristics. However, Kim Jung-un had no choice but to continue the training of his own team to make sure that the mutual management and construction of North Korea SEZs were sustained at the previous level. Thus, the training of North Korean officials continued and represented flexibility. In the past, when Jang was in the top group of Pyongyang, Northeast Chinese governments and universities trained North Korean officials independently, without external support. During Kim Jong-un's period, the previous close individual relationships between Jang and Northeast Chinese officials were collapsed with Kim Jong-un's political cleansing, whereas the training of North Korean officials still continued, mainly in North Korea. The trainees spent limited time in China. After the beginning of mutual management of North Korean SEZs, the training of North Korean officials became a part of Chinese economic engagement with North Korea.

The flexibility of Chinese training is shown through the acceptance to the invitation from the UN ESCAP on the joint-training of North Korean officials. In other words, with the attendance of some UN ESCAP officials, China offered to train North Korean officials under the auspices of the UN ESCAP. This change was made at the time of frozen Sino-DPRK top level relations and relatively better relations between the UN and North Korea. Indeed, there were criticisms from the UN Security Council over North Korea's missile satellite tests, whereas the UN Security Council did not adopt any new sanctions against Pyongyang in the Kim Jong-un era. The US-ROK military exercises created a major clash in Inter-Korean relations when North Korea's nuclear issue met a deadlock with the suspension of Six Party Talks. In the connection-building between North Korea officials and the UN training team, apart from the traditional economic reform sessions, the Chinese side also selected training programmes in the low-politics field, such as environmental co-operation and animal protection. These measures aim to relax

North Korea, reduce their concerns over external ideological influence, and avoid any possibilities of being accused of provocation by the North Korea side. One interviewee from UN ESCAP (Anonymous Interviewee 1, 28 Nov 2014) admitted that although the economic condition in the North Korea rural area was extremely under-developed, the local natural condition is perfect. He admitted that the China-led joint training programme for North Korean officials, especially in balancing the interests of environmental protection and developing tourism, was effective in shortening the psychological distance with North Korean officials and to help them to accept the idea of economic reform: 'In the past, the UN-DPRK relation was a nightmare. Needless to say about the UN troops in the Korean War, several years ago Pyongyang withdrew from the Great Tumen Program under UNDP as a response to UN sanctions against North Korea on its nuclear development and missile tests. Now our relations have improved from another acceptable way for them. Except the top-level diplomats, normal North Korean officials were always nervous in daily communication and interaction with us. However, they were more friendly after the field trip for environmental and animal protection because their national pride was fulfilled after receiving our praise of their natural environment. Then it was much easier for us to build connections between their original ideas and our economic reform' (Interviewee 9, 2014).

'Dare and be able to reform': Reducing the concerns of over-dependence on China and political instability as a result of openness

Although under the co-operation with North Korean top elites, mainly Jang Sung-taek, in Kim Jong-il's era, and the ideological support of opening up from Kim Jong-un, North Korea's opening up progressed steadily with strengthened acceptance at the top-level. However, leaving

aside China and South Korea, the existence of external economic actors in North Korea always leads to anxiety in Pyongyang about openness to external sources of information which could result in domestic political instability (Wei, 2005: 22). The huge economic strength of China also made Pyongyang worry about over-dependence on China. Thus, Chinese economic activities reduced these concerns in two major ways.

Firstly, to the concerns of causing political instability, Chinese economic activities in North Korea followed the rule of self-restraint and non-intervention in North Korea in order to avoid unnecessary negative impacts. On the one hand, although the amount of Chinese economic activities in North Korea varies, they remain distant for normal North Korean citizens. Most of the projects in the mineral resources, seafood, and social physical infrastructure are located in the Sino-DPRK border areas and other peripheral regions of North Korea. Even the Chinese tourist guides in joint tourist programmes persuaded Chinese tourists to keep their distance from the North Korean public, a Chinese local government official said (Anonymous Interviewee 2, 12 Aug 2014). The North Korean labourers in China are also isolated from Chinese society in order to avoid an external impact on them. Thus, it is almost impossible for these economic activities to cause political instability in North Korea. On the other hand, Chinese local-level officials in the mutual management of North Korea SEZs mainly play the role of advisers and trainers, rather than hosts or managers. They mainly monitor the Sino-DPRK economic co-operation in the SEZs and also give suggestions to the North Korean side on legislation and the regularisation of law implementation. However, they do not weaken or replace the role of the North Korean side in decision making, despite the fact that the legislation in Rason SEZ is still lacking (Lee and Jin, 2014: 95-103). One interviewees said: ‘South Korean scholars worry about the transformation of North Korea into a fourth province of Northeast China. They are over-

suspicious. We are strongly self-restrained and do not want to take extra responsibilities for North Korea. The legislation of law in North Korea SEZ is developing under a suitable speed which matches the expectations of North Korea.' (Anonymous Interviewee 2, 14 Sep 2012)

The non-intervention principles and self-restraint rules of Chinese economic activities directly reduce Pyongyang's concerns about the potential consequence of economic openness on political stability in the country, and improve its confidence in 'deepening the scales of opening up to external funding'. North Korea not only increased the frequency of the Pyongyang International Expo from once a year during the period from 1994-2006 (only in spring) to twice a year from 2007 onwards (both in autumn and spring). It also enlarged its scale from 12 enterprises in 6 main fields in 1994, to more than 400 enterprises in 50 fields in 2014, and even started a new annual international expo in Rason SEZ from 2010 (Kr-expo, 2014).

By improving its fundamental attractiveness to external investment, Chinese economic activities also made North Korea more confident to accept the short-term rapid increase of those activities. The shortage of necessary physical infrastructure was the most important barrier for North Korea to attract external economic investment. The risk of regional war decreased once tens of thousands of businessmen from China and abroad calmed down over the frequent North Korean nuclear tests. They had warned of the outbreak of war as well as the risks of corresponding UN resolutions and economic sanctions, 'We are scared by the first nuclear test of North Korea. Then we know that from the Kaesong Industrial Zone in 38th parallel to the North Korea SEZs on the Sino-DPRK border, each square metre of North Korea territory is safe. North Korea is only good at threatening enemies by propaganda but will not have a comprehensive war with the South. At the same time, the US and South Korea dare not to attack North Korea because they are anxious about China's response.' (Interviewee 8, 2014).

Rason in North Korea aimed to develop itself to become the second Shenzhen in Northeast Asia. Before the beginning of the Chang-Ji-Tu programme and Sino-DPRK mutual governance of Rason in 2011, neither Rason nor other North Korean SEZs had a level of infrastructure construction to match that of Shenzhen. Even Pyongyang, which is not very modernised and faced problems with its power supply in the late 2000s, made a compromise with a Chinese private investor. A businessman from Wenzhou gained the operational rights to the largest shopping mall in Pyongyang in 2007 because part of his investment included the reconstruction of roads and other social facilities in the neighboring area (Yan, 2012: 70).

In this condition, the construction of physical infrastructure played, and continues to play, a permanent role in attracting foreign funding. In Rason and Pyongyang this has been immediately effective. A large number of companies originating from outside mainland China and South Korea, such as an Australian beef restaurant, a Singaporean supermarket, and a Hong Kong casino, rushed into these two areas. From 2011 to 2014, non-PRC & ROK investments in North Korea increased from 11 to 56 (Zou, 2013: 30-31). Although at the general level neither market occupation nor the absolute amount of non-Chinese investments in North Korea could be comparable with China. However, in contrast to the previous decades, there has been a steady increase in the diversification of sources of investment in North Korea. To Pyongyang, the rapid increase of Chinese investments in the short-term, with the construction of physical infrastructure, was less concerning than ever before because the short-term investments on physical infrastructure have brought the long-term attraction of non-Chinese funds. This fitted the strategy of Pyongyang to use third-party funds to balance Chinese economic impacts on North Korea. Pyongyang welcomed Chinese investment which funded the country and also paved the way for other countries to invest in DPRK.

To sum up, in the three generations of North Korean leaders, Kim Il-Sung failed to put into practice his ideas for economic reform before his death. Kim Jong-Un only followed the previous progress of economic reform in the short length of time he has been in power thus far. The major barriers to Kim Jong-il's economic reform were the concerns about political instability, domestic law, poor infrastructural conditions, and the weak will for economic reform amongst the leadership. Chinese economic activities promoted the attractiveness of North Korea as an investment destination through the improvement of the fundamental physical infrastructure and legal reform. Through the co-operation between Northeast Chinese economic actors and Jang Sung-Taek, Chinese economic activities strengthened the will to open up among the top elites of North Korea through training. The self-restraint principle and non-intervention rule of Chinese economic actors reduced the North Korean concerns of political instability due to the injection of external information. Thus, Chinese economic activities indirectly promoted North Korean economic reform and opening up. As the tendency of learning from China's experience of entering the world, North Korea's economic opening up is what Beijing would like to see. After discussing the role of Chinese economic participation in advancing North Korea's economic reform, the following section discusses the implications of China's economic activities to North Korea's fishery industry and the dispute between China and South Korea.

2. Implications of the China-South Korean Ieodo Island-centred dispute of economic zones

Although the section above discusses the positive impacts of promoting North Korea economic openness by reducing the ideological barrier, building sound physical infrastructure, and avoiding political instability through openness to new ideas and information, Chinese

economic activities in North Korea still have negative impacts on inter-state relations in Northeast Asia. This section examines how Chinese economic activities in North Korea in the fishery sector strained Sino-ROK relations by escalating the confrontation around the Ieodo Island dispute. It first outlines the background of the Sino-ROK dispute over Ieodo Island. Then it explains the two factors which made this dispute extremely difficult to resolve, especially the impacts of Chinese economic activities in North Korea on the field of fisheries.

2.1 Background

Ieodo Island is located in the northern part of the East China Sea, close to the southern part of the Yellow Sea. It is 147 km away from South Korea's Jeju Island, and 247 km away from Tong Island in Zhoushan, China. Although called an island by South Korea, in fact it is an underwater reef covered by three to four metres of water. According to the principle of island recognition in UN Ocean Law, an island is the natural land area which is surrounded by water and stays above the water line at high tide (Chung, 2008:482).

Before the 2000s, China claimed that Ieodo Island is an extension of China's continental shelf and therefore under Chinese sovereignty. South Korea attempted to legitimise its control of the island by following the principle of Exclusive Economic Zone's middle line, although it does not have continental structure in its southwest territorial direction (Zhang, 2012:9-10). Although China and South Korea held 16 rounds of dialogue and negotiation, this dispute has not been resolved. Additionally, even though China and South Korea clarified the status of Ieodo Island as an underwater reef and reached mutual recognition that this dispute was about economic zones rather territory, South Korea still made several small steps to consolidate its control and change the identity of Ieodo Island from a rock to an island (Shi, 2014: 52).

For instance, in 2001, The Korea Institute of Geology formally changed the previous name

of the rock to Ieodo Island. Two years later, the South Korea Ocean Research Institute constructed the South Korea Ieodo Island Comprehensive Ocean Scientific Base on Ieodo Island. This base, which is 15 metres above sea level, houses eight permanent research officials, a living area, helicopter parking zone, a harbour, and a lighthouse. South Korea also uses airplanes and battleships to inspect Ieodo Island. Furthermore, the Jeju local constitute have frequently attempted to establish an official 'Ieodo Island' Day. Seoul also planned to build a battleship fleet called 'Dokdo Island and Ieodo Island' in the Jeju Marine Base in order maintain its occupation of Dokdo Island and Ieodo Island (Shi, 2014: 53-54). Thus, although South Korea officially claimed that the dispute with China over Ieodo Island was to do with the economic zone rather than being a territorial dispute, South Korea still tried to use the occupy-first policy to strengthen its sovereignty in practice.

2.2 The obstacles to resolving the dispute

After this introduction to the background behind China-South Korea Ieodo-centred disputes of the economic zone, this section clarifies the real blockades which prevent the resolution of this dispute, especially the role of Chinese economic activities in North Korea in fisheries. It first reduces the number of blockades by denying the significance of the energy factor in the dispute. Then it discusses the other two blockades: the single status in the disputes; and the disappearance of the 'buffer zone' between China and South Korea in the sector of fishery under Chinese occupation of North Korean marine territory.

Energy sector: a previously over-estimated blockade in this dispute.

Some articles claim that Ieodo Island is similar to Diaoyu Island in terms of its reserves of underground natural gas and oil. Indeed, the location of Ieodo Island is in the Yellow Sea - East China Sea underground resource area. However, one interviewee denies the potential for

exploring energy resources at the same level as Diaoyu Island, and other islands in South China Sea. This interviewee explains that 'theoretically Jeodo Island is in the general scope of underground gas and oil, whereas in fact its geographical condition is quite different from other disputed islands. The neighboring geographical condition of other islands, such as Diaoyu Island and Sino-Vietnamese disputed islands, is very flat and in the middle of the resource area. Jeodo Island is at the very edge of this area. The total store of energy resources in the region is huge, but the real amount around Jeodo Island is very limited. I don't think that the amount is larger than the one tenth or even five percent of the estimated amount. Developing Jeodo Island will definitely harm the potential strength of the neighboring area. Meanwhile, in contrast to the flat geographical condition of other disputed islands that are easy for the construction of exploration facilities, Jeodo Island exists at changing locations with huge height distances between its two sides. That's why South Korea could construct the research platform only on the island itself. It is very difficult to find a suitable position to construct the platform, which is much larger than the sum of a living zone and helicopter parking area, and maintain balance, especially when the island is in the moving path of typhoons in the summer. Thus, the exploration activities in Jeodo Island would cost a lot, no matter the use of powerful machines to get the resources dozens of kilometres away, or keeping balance for a group of huge facilities' (Anonymous Interviewee 3, 11 Aug 2015). Therefore, It seems that the dispute around Jeodo Island should be easily resolved because it is caused by the competition over fishery resources. However, due to two factors, this dispute is only resolved after dozens of meetings.

The first blockade (the single status without dilemma): occupying and occupied.

Although China and South Korea reached mutual agreement on recognising the dispute over

Ieodo Island as a dispute over economic zones, it cannot be denied that the two countries still treat it as a territorial dispute in practice, especially the South Koreans who have taken steps to consolidate their control. The single status of both China and South Korea in other relevant disputes is the first factor. For several decades South Korea has succeeded in implementing the occupy-first policy in disputes with other countries: the Ieodo Island dispute with China and the Dokdo Island dispute with Japan. China is involved in three areas under dispute: Ieodo Island with South Korea, Diaoyu Island with Japan, and islands in South China Sea with many Southeast Asian countries. In all these disputes, China always makes a passive response to the islands being occupied by other countries (although China maintains control of a few islands in the South China Sea, the majority of its claimed islands are occupied by numerous Southeast Asian countries).

The single occupied status of China and the occupying status of South Korea avoids the dilemma of Japan in the dispute. Many scholars, such as Tow (2014: 12-21) and Daugirdas and Mortenson (2014: 522-530), stress the importance of the US in restraining Japanese activities in disputes, especially with China. Thus the dispute around Diaoyu Island is in a more balanced status of control for both China and Japan. Practically, Japan controls the island but China also could announce its sovereignty of the disputed island by sending maritime supervision boats into the territorial sea around Diaoyu Island. However, the status of Japan in its territorial disputes created a special dilemma. On one hand, in its dispute with China, Japan occupied Diaoyu Island, recognised it as historical occupied territory, and denied its status in the Qing-Japan treaties in the late 19th century. On the other hand, Japan lost control of Dokdo Island to South Korea after the Second World War. Thus, Japan has a special dilemma in the two disputes: if Japan tries to legitimate its occupation of Diaoyu Island using the occupy-first strategy, it agrees, in practice,

with the control of South Korea over Dokdo Island. Meanwhile, if Japan continues the dispute with South Korea by denying the occupy-first policy, it would fail to legitimate its own claim over Diaoyu Island. Clearly, the occupy-first measure cannot be applied by Japan at the same time being denied by Japan in its dispute with South Korea. In contrast to Japan, South Korea and China are single occupier, and single occupied, actors in the dispute. They are not anxious to fall into the dilemma of logic created by Japan's dual roles. When one side insists on the occupy-first strategy, it may lead to rapid confrontation of the issue.

The second blockade (no step backward): the reduction of the Sino-ROK fishery buffer-zone after the rapid increase of Chinese economic activities in the North Korean marine territory

Besides the single statuses of disputes without the concerns of dilemmas in claiming own rights over the disputed area, the impact of Chinese economic activity in North Korea in the sector of fishery could not be ignored because this created Chinese monopolization of North Korean marine territory and intensified the Sino-ROK confrontation on fishery resources.

North Korea fishery resources are a natural 'buffer zone' between China and South Korea. Until the early 2000s, there were less than 70 Chinese and South Korean fishing boats in total in North Korean territorial waters without any competition (Li and Leng, 2008: 54-55). However, Chinese economic activities in North Korean marine territory were driven by the huge compromise that China made in the Sino-ROK fishery agreement in 2000. The major victims of this agreement in China were the fishermen from Shandong, Liaoning, and Zhejiang Provinces. Apart from a few big companies from these provinces, who chose to build distant fishing fleets to develop fishery business with Latin American countries, especially Chile, most of the fishermen chose North Korea as an alternative because of the low cost (short distance) and local non-polluted ocean environment with huge reserves of diversified stocks of fish and other sea

creatures (Xu and Qi, 2014: 14-16). Even though there were incidents of extortion by North Korean militants in the name of inspections for illegal cross-border fishing, the number of Chinese investors and fishing boats in North Korea still increased rapidly from a few dozen (mainly from Dandong and Dalian) to several hundred during the previous decade. Since 2007, fishing licenses for North Korea's marine territory can be bought directly from the local Fishery Bureaux. More than ten Chinese fishery enterprises arrived in North Korea to build aquafarms, and freezing and processing plants (Interviewee 3, 2014).

By contrast, South Korea marine economic activities in North Korea met with more difficulties. On the one hand, the tension with North Korea caused by hardliner president Lee Myung-Bak limited the promotion of civil co-operation on fishing between South Korea and North Korea. The number of South Korean boats in North Korea dropped to 100-120 from around 150 in 2005 (Piao, 2013). Although in the era of the Park government relations between Seoul and North Korea improved, the economic marine activities of South Korea in North Korea did not recover under the continuous US-ROK joint marine military exercise and the un-resolved dispute over the Northern Limit Line (Wei, 2008:50). On the other hand, their special identities as South Korean (politically sensitive) also weakened their fishing activities as they became overwhelmed by Chinese fishermen. For instance, Chinese fishermen could use bribery to extend their fishing area, whereas South Korean boats could not use the same strategy because North Korean local officials dare not to take the political risk of accepting bribes. Some Chinese fishing enterprises even benefited by accepting fishing duties from local North Korean firms. Thus, the South Korean fishermen in North Korea increasingly struggle under the actual monopolisation by China of fishery activities in North Korea (Interviewee 4, 2012).

Thus, Chinese fishing engagement in North Korea made up for the loss of numerous

fishermen in the Sino-ROK fishery agreement, but it created another front of fishery resource competition in the Yellow Sea with South Korea. The operation of Chinese fishing boats in North Korea also get rid of the further fishery potential of South Korea in the Yellow Sea. Under this condition, although the potential energy reserves of Ieodo Island could not be explored easily due to its special geographical condition, fishery resources became the new focus of competition between China and South Korea. China's single status of being occupied in the dispute, and South Korea's single status of occupier in the dispute, created a direct clash between the two countries, but avoided the dilemma of Japan in dealing with territorial disputes in Northeast Asia. As the only Sino-ROK disputed area with economic zones, neither China nor South Korea would make further compromise to weaken their potential fish supply in the Yellow Sea. In other words, Chinese economic activities in North Korea's fishery sector have a negative impact on China's relationship with South Korea, especially creating barriers to the resolution of disputes over economic zones around Ieodo Island. If the implications of driving North Korea's economic reform in the last section is positive to China's general strategy, the implications in this section indeed go against it.

3. Implications for the role of South Korea and US aid in de-nuclearising North Korea

After outlining the implications of Chinese economic activities for the promotion of North Korea's opening up and economic reform, as well as tightening China-South Korean disputes over Exclusive Economic Zones, including Ieodo Island, in the two sections above, this section discusses the implication of Chinese economic activities in weakening the tactical role of South Korea and US aid in de-nuclearising North Korea. It will firstly provide details of South Korean and US aid to North Korea. Then it will compare the funding brought by Chinese economic activities to North Korea with the two aid programmes mentioned above in order to examine

how Chinese economic activities in North Korea have weakened the effects of US-ROK aid to North Korea.

3.1 South Korean aid to North Korea

This section firstly outlines the aid South Korea provided to North Korea from 2003-2013 under the Roh Moo-hyun (2003-2007) and Lee Myung-bak (2008-2013) administrations. Then it discusses the changing character of South Korean aid to North Korea.

South Korea aid to North Korea 2003-2007

The table below shows the amount of South Korea aid to North Korea from 2003 to 2007 in billions of Won.

Table 7.1 South Korean aid to North Korea 2003-2007

	2003	2004	2005	2006	2007
Official aid State level	811	949	1221	2000	1432
Official aid Public level	81	102	120	134	216
Official aid International Level	205	262	19	139	225
Agricultural funds	1510	1359	1787	-	1505
Public aid	766	1558	779	709	909

Total	3372	4230	3926	2982	4397
-------	------	------	------	------	------

Table 7.2 South Korea Official Strategic Products aid 2003-2007

(Food amount: thousand ton) (Value Amount: billion won)

	2003	2004	2005	2006	2007
Rice	400	400	500	100	400
Value	151	135.9	178.7	39.4	160
Corn	100	100	0	0	12
Value	19.1	24	0	0	2
Fertilisers	300	300	350	350	300
Value	81.1	94	120.7	120	96.1
Others	0	0	0	0	Fuel 6.2 Agricultural products 20
Value	0	0	0	0	unknown

(Haggard, 2008: 23; Yan, 2008:20; Zhang, 2009: 70-72)

Under the continuation of Kim Dae-Jong's Sunshine Policy by Roh Moo-hyun, the aid from South Korea to North Korea from 2003 to 2007 was numerous and diverse. During that time, 1.89 trillion Won of aid from South Korea represented 30% to 50% of all the aid to North Korea.

Since then South Korea has remained the largest aid-supplier to North Korea.

Apart from the aid of strategic products, South Korea also provided humanitarian aid for the victims of natural disasters in North Korea, including 6 billion Won in medicines and materials for victims of North Korea's floods in 2004, 1.2 billion Won in medical materials to combat influenza in 2005, 80 billion Won in anti-disaster materials for floods in 2006, and 4.8 billion Won in medical products to combat a forest worm disaster and further disease control in North Korea (Reiss, 2007:25).

South Korea aid to North Korea 2008-2012

Following the outline of South Korea's aid to North Korea from 2003-2007 in the section above, this section outlines the amount of South Korean aid to North Korea from 2008 to 2012(billion won)

Table 7.3 South Korean aid to North Korea 2008-2012

	2008	2009	2010	2011	2012
Official aid -state-level	0	0	183	0	0
Official aid-public & international level	438	294	21	65	23
Public aid	725	377	200	131	118
Total	1163	671	404	196	141

(Alton and Chidley, 2013: 110-112)

South Korea changed its aid policy to North Korea with the coming to power of pro-US president Lee Myung-Bak. The decade of the Inter-Korea honeymoon had come to an end. In Lee's era, the total amount of aid from South Korea to North Korea was 239 billion Won (1.35 billion RMB). This amounted to 44% of aid under Kim Dae-Jong, and 20% under Roh Moo-Hyum. From 2008 to 2012, the amount of aid from South Korea to North Korea had a steady annual reduction: 116.3 billion Won in 2008; 671 million Won in 2009; 404 million Won in 2010; 196 million Won in 2011; and 141million Won in 2012.

The amount of official aid was reduced rapidly and was replaced with public aid, and as a result the content of aid also changed significantly. In the past, Seoul mainly sent food and fertilisers to Pyongyang. After 2008, the public mainly donated medicines and hospital facilities for children through international organisations. For example, in 2008, South Korea supplied North Korea with 13.8 billion Won of medicine and children's foods through WHO, and donated a further 166.5 billion Won to WHO for buying medicine and relevant facilities for North Korea. In 2008, 2009, and 2011, South Korea also provided 148 billion Won in children's products through UNICEF.

The changing tendency and characteristics of South Korea aid to North Korea from 2003 to 2012

Tables 7.1, 7.2, and 7.3 above show that there are two major characteristics of the change in South Korean aid from Roh's era to Lee's era: 'from strategic to tactic' and 'from effective to less effective for North Korea'.

The long-term strategic role played by South Korea in leading the provision of aid to North Korea changed to a relatively short-term tactic as the price for promoting dialogue in the

Six Party Talks. This transition was caused by the replacement of Roh's continuation of the Sunshine Policy by the pro-US hardliner Lee Myung-Bak. This changing tendency is seen in the reduction of official aid, in particular at the state level. On the one hand, Lee chose to implement a pro-US policy towards North Korea. He mainly used the big stick of economic sanctions and military exercises to increase the pressure on North Korea to de-nuclearise (Wei, 2008: 48-52). In contrast, the small carrot of aid did not require a huge amount to attract North Korea to return to the dialogue. Meanwhile, a hard-line South Korean government must lead to hostility from Pyongyang and a further disconnection in diplomatic relations at the state level which resulted in almost no official aid to North Korea at the state-level.

South Korean aid also became less attractive to North Korea as a result not only of its reduction in amount and value, but also in the change of content. In Roh's era, aid included vast amounts of strategic products such as rice, fertilisers and corn, which were quite effective in resolving the domestic food shortages and agriculture problems in North Korea. However, the public-dominated aid in Lee's era were mainly children's products and female-care materials, rather than strategic products which were more attractive to North Korea. In addition, the change in the major contributor of aid from the South Korean government to the public confirmed Pyongyang's view of a split in South Korean state-society relations because the South Korean public still chose to donate to North Korea when Seoul stopped its donations. This strengthened the recognition in North Korea that Seoul's pro-US policy went against public opinion and made it more confident to push through anti-South Korean and anti-US policies and activities.

3.2 US aid to North Korea

After analysing South Korean aid to North Korea, the table below shows the Chronological

aid from the US to North Korea from the first nuclear crisis in the Korean Peninsula to the second.

Table 7.4 US aid to North Korea 1996-2009

Date	Form	Target
1996.02	2 million USD food	Encourage North Korea to follow the 1994 Framework
1996.06	6.2 million USD food	Encourage North Korea to join the preparation conference for Four-Party Talks
1997.02	10 million USD food	Encourage the attendance of North Korea at the preparation conference of Four-Party Talks
1997.04	50 thousand ton food	Encourage the attendance of North Korea at the missile proliferation conference.
1997.07	100 thousand ton food	Encourage the attendance of North Korea at Four-Party Talks
1998.02	200 thousand ton food	Encourage the attendance of North Korea at the special committee of Four-Party Talks
1998.09	300 thousand ton food	Encourage the attendance of North Korea at the missile proliferation negotiations.
1999.04-05	600 thousand ton food, 1 thousand ton Potato	Allow the inspection of nuclear facilities
2002.06	155 thousand ton food	Improve the inspection strength of World Food Programme
2003.01	500 thousand ton food	Encourage de-nuclearisation
2005.12		Stop aid
2008.05-2009.05	500 thousand ton food	Encourage North Korea to return Six Party Talks

(Hanrahan, 2009; Kang, 2005:22; Li, 2014: 20-22)

From the table above, it can be seen that the aid offered by the US to North Korea has always been tactical aid for the achievement of short-term targets, such as the attendance of North Korea at the dialogues and negotiations for de-nuclearisation. During the one and a half decades from the late 1990s, the amount and frequency of aid also reduced significantly. This was a result of the mutual distrust which existed between the US and North Korea following the collapse of the Korean Peninsula Energy Development Organisation (KEDO) as a resolution to the first nuclear crisis in the Korean Peninsula (Xu and Yang, 2012: 31-38). This mutual distrust deepened with several nuclear tests made by North Korea and its frequent withdrawal from NPT and the Six Party Talks. It meant US aid was primarily used to attract North Korea to return to the dialogue, rather than to assist in the security guarantees which North Korea really expected in exchange for de-nuclearisation (Zhang, 2009:70). Furthermore, even though North Korea returned to the Six Party Talks and re-started the dialogue, the core deadlock of SPT was still not resolved because neither the US nor North Korea agreed to make any compromise first. The US insisted North Korea de-nuclearise itself completely before agreeing on a security guarantee. Meanwhile, North Korea insisted that the US should provide a guarantee first. In other words, the role of US aid could not be promoted to the same one in KEDO due to this deadlock. However, the continuation of the cycle of 'North Korean withdrawal from dialogue / US offer of aid / North Korea return to dialogue' was actually determined by the attractiveness of the US aid to North Korea. In the 1990s, US aid always appealed to Pyongyang because North Korea was in its most difficult economic stage at that time, whereas the condition began to change in the 2000s (Hanrahan, 2009; Yan, 2008:104-106). The following section introduces the implications of Chinese economic activities with North Korea to North Korea's withdrawal from the cycle described above.

3.3. The implications of Chinese economic activities on the de-nuclearisation of North Korea

It is clear from the tables above that aid from both the US and South Korea to North Korea had a tendency of reduction and inefficiency in the de-nuclearisation of North Korea, but at least these tactics succeeded in making North Korea return to the negotiating table. However, due to the rapid increase in Chinese economic activities in North Korea from 2002, in particular after 2008, the aid from South Korea and the US was no longer sufficient to call for the return of North Korea to the Six Party Talks. For instance, the total amount of Chinese economic activities in the physical infrastructure of Rason Harbor is more than 5 billion USD. This amount is larger than the sum of South Korean aid to North Korea in one decade. In contrast to the short-term tactic and less attractive unofficial aid from South Korea and the US, Chinese economic activities in North Korea can be seen as a source of funding characterised as continuous and therefore attractive. As one interviewee pointed out, 'the Six Party Talks in fact provided opportunities for South Korea and the US to pay for the dialogue with North Korea and for its further de-nuclearisation. Thus, the game came to an end when the carrots offered by Seoul and Washington were no longer attractive to North Korea who gained much more from others without any extra requirement. Pyongyang became comfortable enough with Chinese economic engagement in North Korea to ignore the limited exchange leverage from the US and South Korea in spite of their consistent support in de-nuclearising North Korea.' (Anonymous Interviewee 4, 11 Sep 2012)

This characteristic means Chinese economic activities in North Korea are developed on the basis of the objective condition of North Korea, such as its huge amount of mineral resource

reserves, its non-polluted natural environment, and its special domestic political condition. These conditions cannot be demolished in a short period unless North Korea subjectively chooses to pollute its natural environment and change its political system overnight. Meanwhile, both regional co-operation in the Tumen River and North Korea's economic opening up remain in the early stage. The development of the Russian Far East also will not be turned over in the future. Thus, Chinese economic activities in North Korea, which have developed for more than a decade from the beginning of the 2000s, will remain active for a long time. This general tendency will not change, although there may be change in specific activities according to the domestic requirements. Meanwhile, as the major investors in North Korea, Chinese economic actors do not meet strong competition in their occupation of the North Korean market, except that Pyongyang may restrain Chinese economic impact by forbidding Chinese investments in specific areas, such as telecommunications. The absence of competitors offers opportunities for Chinese economic actors to sign contracts for long periods, such as fifty years' mining rights or thirty years' fishing rights. The 'attractive' characteristic means North Korea can benefit from economic co-operation with China. As mentioned above, Chinese economic actors usually sign long-term contracts. These contracts for co-operation over several decades bring an attractive amount of funding to North Korea. Apart from the huge amounts of sustainable funding, Chinese economic actors make construction of the physical infrastructure as a part of their contracts. North Korea benefits by attracting a few foreign companies after removing their concerns about the shortage of physical infrastructure in North Korea, even though their amount and scale cannot match that of Chinese and South Korean companies. According to one interviewee, 'North Korea obtained much more than China. Today we build one road, which can be used by North Korea for one hundred years, as a part of one contract of twenty years' mining mineral

resources. After twenty years, we have to satisfy other conditions and leverages to continue the contract. At that time, from the international level, the value of North Korea mineral resources improved with the deepened global resource scarcity. North Korea can ask for a higher price for larger funding. Both of road and resource, they always win.' (Anonymous Interviewee 5, 9 Sep 2012)

Thus, as a long-term and efficient source of funding, in contrast to the aid from the US and South Korea which tends towards reduction and inefficiency, Chinese economic activities in North Korea create long-term uncertainty over the de-nuclearisation of North Korea because they shift North Korea away from the dialogue and negotiation in the short-term by raising the price of making North Korea return to the dialogue and negotiations at a level difficult to reach.

4. Conclusion

In conclusion, Chinese economic activities have three major impacts on the regional affairs of the Korean Peninsula. These impacts either followed, or ran against, the general strategy of Beijing. From the positive viewpoint, North Korea's economic reform and opening up were pushed forward by Chinese economic activities with the removal of domestic barriers. Chinese economic participation reduced the awareness of political instability and made North Korean top officials dare to reform, it created conditions for strong leadership in gaining public support for reform and concerns over political instability, and it directly improved the under-developed physical infrastructure and the attractiveness of North Korea to foreign investment. In general, it created a tendency for North Korea's willingness to integrate into the world by learning from China's experience of economic reform and opening up. Thus, Chinese economic participation impacted positively in terms of the general strategy of Beijing to maintain regional security and

stability. Apart from the positive impact above, Chinese economic participation in North Korea also runs against the general strategy of Beijing by bringing two negative impacts. The first is the intensification of Sino-ROK competition over fishery resources. The rapid increase of China's economic activities in North Korea's fishery sector, including buying fishing licenses and building fishery centres, almost monopolised the North Korean fishery resource and got rid of South Korea's potential. It worsened the bilateral relationship between China and South Korea by preventing the resolution of the Ieodo Island-centred dispute because South Korea strengthened its control of Ieodo Island in order to make up for the loss of fishery resources in North Korea. This effect goes against the generally positive picture of China and South Korea which steadily improved in the 2000s from single partnership to comprehensive strategic partnership. Meanwhile, Chinese economic participation also created a negative impact on de-nuclearising North Korea and indirectly caused the withdrawal of North Korea from the Six Party Talks. The big contracts brought by Chinese economic actors offered several billions USD to North Korea. To North Korea, its national security is definitely more significant and expensive than natural resources and labour. If the latter have already been exchanged by a large amount, nuclear weapons and the national security of North Korea should be exchanged at a higher price. In other words, Chinese economic activities play the role of devaluing the aid from the US and South Korea and reducing their effects of calling North Korea back to negotiations where it runs against the will of Beijing on de-nuclearising North Korea.

Conclusion

Historically, China and North Korea's relationship has been seen as lips and teeth because of their mutual battle against UN troops from 1950 to 1953. The Sino-DPRK honeymoon lasted for four decades until its collapse due to the formal foundation of diplomatic relationships between China and South Korea in 1992. From 1992 to the early 2000s, North Korea and China had no official top-level interaction. From 2002, with the consideration of potential economic reform and opening up in North Korea, Chinese investors entered North Korea and rapidly expanded their activity in the sectors of mineral resources, fishery, light industry, tourism, and labour co-operation. This economic participation commercialised the Sino-DPRK relationship and shifted it from a previously ideological relationship to a military one.

This thesis attempts to answer four major research questions:

1. What drives actors below the state to engage in economic activities in North Korea and how do those motivations differ from the national interests?
2. What is the relationship between Beijing and actors below the state in their economic activities in North Korea after 2002?
3. What is the impact of Chinese economic activity in North Korea on regional security and China's grand strategy in Northeast Asia?
4. What does this mean for the making of China's foreign policy?

To address these questions, the thesis aims to examine the commercialisation of the Sino-DPRK relationship as it is driven by a multiplicity of actors below the state, which include governments at the provincial and city levels, local state-owned companies, private enterprises, and social associations. Examples are, the Jilin Provincial government, Dandong City government, Jilin Tonghua Steel Company, Zhoushan First Ocean Fishery Company, and China's Overseas Fishery Association, who are all economically engaged in North Korea. Their activities both contribute to, and occasionally run counter to, Beijing's overall objectives of maintaining regional peace and stability in Northeast Asia, and sustaining positive relationships with neighbouring countries. In contrast, the central government in Beijing mainly plays the role of distant management and the provision of necessary institutional support. It rarely directly participates in the economic activities in North Korea, except in affairs relevant to the central state-owned companies. From the point of view of governmental interaction at different levels, the decision-making and implementation of China's foreign economic policy is pluralistic. This can be seen in the de-centralisation of Beijing's decision-making authority and the active engagement of actors below the state.

Chinese economic activities in North Korea present the pluralism of implementing China's foreign policy in the economic field. It includes the pluralism of both designers and drivers at different levels. Although central government is still important in the primary decision-making regarding China's foreign economic policy, the diversified actors at different levels in the implementation period of that policy could lead to different consequences. Overseas Chinese economic activities may, on the one hand, follow the national strategy, while on the other hand, they may create divergence. During the commercialisation of the Sino-DPRK relationship, central government in Beijing remains important in the general foreign policy-making stage. However, in the implementation stage the general policy is influenced by the majority of economic actors at the provincial, city and individual levels. These sub-state level actors are driven by different reasons which depend on their own conditions. Although these activities, such as the investment in North Korean rare-earth minerals, also meet the national interest, most cases are driven by reasons which meet the requirements of actors below the state and which diverge from those national interests. Therefore, the economic activities participated in by the sub-state actors may have unexpected consequences. For instance, the huge funding provided by Chinese economic activities allowed Pyongyang to avoid collapse under the economic sanctions imposed by the United States. However, the economic leverage used in the dialogues for de-nuclearising North Korea in the Six Party Talks is also inefficient. North Korea's nuclear weapons remain and this runs against the national strategy of the de-nuclearisation of the Korean Peninsula.

Although Chinese economic participation in North Korea takes place across several economic sectors, there are three main drivers that motivate Chinese activity in these sectors. They are: access to resources, human or material, not available in China or available in limited

quantities only; favourable natural conditions; and government regulations, which are less demanding than in China.

Access to the resources not available in China, or available in limited quantities, is the first driver. In the sector of cross-border third industry labour co-operation between North Korea and Jilin and Liaoning Provinces, North Korean labour is not available in Northeast China, in particular in Jilin Province. Northeast China has lost its attraction for the local population which has resulted in a net population outflow since the economic reforms and the rapid development of Southeast coastal areas. To Jilin Province and its ethnic Korean Prefecture, most cheap labour is attracted to work in South Korea. Thus, North Korean workers, who have relatively higher educational background but lower salaries than their counterparts, are a very limited resource in Northeast China. Meanwhile, further cross-border co-operation in the construction of physical infrastructure as a form of Chinese economic participation in the development of North Korea's Rajin harbour, was implemented due to Rajin's special geographical location. It borders Jilin Province's closest area to the Sea of Japan so that through such co-operation, Jilin Province gains access to the sea via Rajin harbor, the shortest distance in contrast to Russian harbours or other Chinese domestic harbours dozens of kilometres away. In the sector of the fishery industry, North Korean fishery resources are also available in limited quantities in China. China's fishery resources in the coastal area are very limited due to over-fishing and the reduction of fishing areas following the signing of the Sino-ROK fishery agreement. In contrast, North Korean fishery resources are under-developed because North Korea's general domestic economic difficulties restrain the daily consumption of fishery products. This is why Chinese governments at city and provincial levels are sending local fishing boats to North Korea. At the same time, in

the sector of mineral resources, rare-earth, one significant but limited mineral resource in the world, is also under the mutual development of Chinese enterprises and North Korea.

In addition to access to limited resources in China, favorable natural conditions also play an important role in driving Chinese economic actors to engage in North Korea. In the sector of mineral resources, the natural condition of North Korea's coal mines is an ideal one for surface mining compared to the high risk deep mining in China. Thus, this suitable natural condition attracts numerous Chinese enterprises to invest in North Korean coal mines. In the sector of the fishery industry, China's offshore area is very polluted. The Northwest Pacific Ocean near Japan, a previous ocean fishing area for China, is also polluted as a result of the Japanese nuclear accident in Fukushima. In contrast, North Korea's coastal area maintains very clean ocean conditions. Thus, Chinese private enterprises from Shandong Province, and local state-owned companies from Dandong, have chosen to establish branches in North Korea's coastal areas in order to benefit from local clean natural conditions and to advance their fishery products in terms of weights and sizes.

The third driver of Chinese economic activities in North Korea is the fewer requirements of government regulation than in China. North Korea is short of many significant issues: foreign funding from economic activities; agricultural technology; and inspection strength in the border area near China. Therefore, Chinese economic activities in North Korea, particularly in its border areas with China, enjoy a relatively relaxed condition of regulation and policy priorities. In the sector of cross-border third industry, different co-operation projects expanded in North Korea very quickly. The number of Chinese cities near the Sino-DPRK border who have developed travel and traffic co-operation with North Korea has increased from two to ten in recent years. Chinese agricultural companies also entered North Korea by building greenhouses for crops, and

local farms for animals. Chinese official teams are also allowed to join mutual management with North Korea for its border management. Meanwhile, as another important source of foreign currency, North Korea did not have a lot of additional requirement to restrain the investment in the sector of mineral resource such as the scale of companies and the environment protection. Therefore, this leaves room for Chinese SMEs from Shandong, which are unable to compete with local state-owned companies, or even with central state-owned companies in China, to invest in North Korean coal mines to extend their survival. It also reduces the costs of environmental protection to the Liaoning company which invests in rare-earth minerals in North Korea because this is a product which involves the heavily polluted processing of raw-materials.

In the Chinese economic participation in North Korea, the relationship between Beijing and actors below the state is that the actors below the state make up the majority of those who directly participate in North Korea through economic activities. Their activities include direct investments, the construction of physical infrastructure, and technology transfer. At the same time, the central government in Beijing provides both direct and indirect support. Firstly, through institutional support, it signed the general agreement with North Korea on the promotion and protection of trade and investment, and the mutual management of the Rason Special Economic Zone. This is determined by North Korea's political condition as a highly centralised country, which means that Pyongyang is the only actor on the North Korean side with the power to sign agreements with external actors. Actors below the state in North Korea are very few and cannot directly sign agreements with provincial governments in China. Meanwhile, Beijing also provides support to Chinese economic actors as part of its regional development strategy. For example, the Chang-Ji-Tu Plan for Jilin Province included co-operation with North Korea on the physical infrastructure involved in the Rajin harbour project. Beijing upgraded its status from

provincial initiative to national strategy in order to strengthen the reputation and attractiveness of this plan, but in fact Beijing did not provide any practical support, such as funding. Secondly, Beijing also offered direct support to China's economic actors in North Korea in a limited number of cases. For instance, it aided North Korea to resolve a deadlock in negotiations between a Liaoning company and its North Korean partner on the investment in a rare-earth mine. It also intervened in the cross-border fishery incidents between China and North Korea to protect the safety of the Chinese fishery industry.

Chinese economic activities in North Korea influence the regional order of security in Northeast Asia in three ways. First of all, they advance the economic reform and opening up of North Korea. In fact, in the past, North Korea had several short-term and temporary economic 'openings-up'. However, the single aim of such initiatives was to attract foreign investment for the purpose of acquiring foreign currency and without a solid commitment to reform at the top level due to concerns for regime survival. The rapid increase in Chinese economic activities meant North Korea attracted more foreign investment from third countries, such as Egypt, in order to balance the impact of Chinese investment. Meanwhile, in contrast to Western investors who stay out of North Korea because of the under-developed physical infrastructure, such as poor electricity and water supplies, some Chinese economic actors actually improved the local physical infrastructure and thereby created better conditions for North Korea to attract external funding. At the same time, Chinese economic actors, from state owned companies to private operators, rarely added extra political conditions to the economic participation and considered, instead, the requirements and special conditions of North Korea. This weakened the concerns of North Korea to China's potential control of its domestic affairs and strengthened its confidence to enlarge the opening up policy.

Another regional impact concerns China's relations with South Korea. Chinese economic activities, particularly in the North Korean fishery sector, have increased the anxiety of South Korea towards China and even complicated the resolution of disputes over territorial waters and exclusive economic zones. Although South Korea benefited from the fishery agreement signed with China under China's huge compromise on fishing areas, its fishery co-operation with North Korea was no longer competitive due to the rapid increase in Chinese fishery participation in North Korea. It stimulated South Korean nationalism towards the protection of its own territory, even the disputed economic zones around Jeodo Island. China and South Korea have held several rounds of negotiations for resolving this dispute, however, all these dialogues failed with the result of a deepened tendency of Chinese monopolisation of North Korea's fishery resources and increasing marginalisation of South Korea's fishery actors in North Korea. Furthermore, by recalling their memory of historical rule by a central empire, the rapid increase of Chinese economic activities in most fields in North Korea led to mounting apprehension in South Korea about DPRK's economic dependence on China, even the possibility of DPRK becoming China's fourth northeastern province.

Thirdly, Chinese economic activities reduced the effects of US economic measures to de-nuclearise North Korea through the Six Party Talks. The United States mainly used either economic sanctions to impose pressure on North Korea, or economic leverage in exchange for the de-nuclearisation of North Korea. However, these two measures achieved little progress due to the Chinese economic participation in North Korea. On the one hand, Chinese economic actors would pay large amounts of funding to North Korea; even the civil fishery co-operation between Dandong and North Korea's coastal area at the city level achieved 24 million RMB. In fact, the total amount of Chinese economic activities in North Korea is more than the value of aid

offered by the White House, which amounted to several million tons of food. On the other hand, the economic sanctions imposed by the United Nations, although mainly by the United States, on North Korea were also ineffective because the rapid increase in Chinese economic participation compensated the loss of opportunities for North Korea to trade with other countries resulting from the economic sanctions. Consequently, neither economic sanctions, nor economic aid from the United States, is sufficient to force North Korea to de-nuclearise, because of the comparatively huge amount of funding resulting from Chinese economic participation in North Korea.

By focusing on the inter-state co-operation, economic affairs, and the role of non-state actors, this thesis mainly follows neo-liberal approaches. It does not choose realist theories for several reasons. On the one hand, the realist approach pays most attention to military power and considers economic affairs from the view of strengthening military capabilities and ensuring national security. However, this thesis aims to explain the drivers of economic participation from the view of non-military security and social-economic ideas. On the other hand, realist approaches see the state as the only significant and single actor in international relations. In contrast, in this thesis the role of non-state actors in the implementation of foreign economic policy is also reinforced, although the significance of central government is acknowledged and confirmed. The de-centralisation of China runs against the basic assumption of realist approaches concerning the unified and single status of the state. At the same time, at the theoretical level, the constructivist approach is also irrelevant to this thesis as it emphasises the role of cultural and historical factors in the identity construction of a state in its international relations. On the contrary, this thesis is not about to compare and contrast the change of Sino-DPRK relationship before and after the end of the Cold War. The transformed identity of China in the Sino-DPRK

relationship is only the historical background. Rather the main research core of this thesis is to allow discussion of the domestic drivers behind economic participation and domestic relations of different Chinese economic actors in North Korea.

Following neo-liberal approaches, this thesis uses the concept of complex interdependence and the theory of multi-level governance to apply the cases in the research. The concept of complex interdependence draws a more complicated world formed by numerous sub-state and non-state actors than does the simple state-formed world of the realist picture. In general, my thesis follows the four characteristics of complex interdependence: multiple channels of interaction between state and society; direct involvement of non-state actors in international politics; no hierarchy of different military and non-military problems; and less efficiency of military resolutions in inter-state disputes. In the current interaction and communication between China and North Korea, central government is not the only channel, especially when Sino-DPRK inter-state dialogue mainly falls into deadlock because of the struggle over North Korea's nuclear issues. On the China side, in the economic field, the governments at provincial and city level, as well as private SMEs, are significant actors building connections with North Korea. Although on the North Korean side there are no private SMEs due to its highly centralised socialist economic system, the provincial and city level governments are also authorized by Pyongyang to achieve co-operation with Chinese actors at the same level. These ideas fit the first characteristic of complex interdependence concerning the multiple channels of interaction between the states.

By participating in North Korea, the non-state actors, especially the private SMEs and public associations, actually influence China's foreign economic policy on North Korea during its implementation stage. As a part of China's economic actors in the commercialised Sino-DPRK relationship, they have several indirect effects on the order of regional security. They

promote the economic reform and opening up of North Korea, increase the anxiety of South Korea towards China's economic impact on North Korea, and delay the peaceful de-nuclearisation of North Korea through dialogue by weakening the effects of external economic sanctions. In other words, just as the second characteristic of complex interdependence describes, these non-state actors play an important role in international politics.

Chinese economic participation rapidly increased in North Korea after 2002 following the policy-implementation of Pyongyang on economic reform and opening up. Indeed, North Korea's nuclear weapons also developed rapidly in the 2000s, with several underground tests of nuclear bombs and missile launches. In spite of Beijing's continued criticism of Pyongyang's nuclear weapons in the name of stopping the violation of China's national interest, the increase in economic activities in North Korea does not stop, or even slow down, this process. This is because these economic activities help to resolve a great number of problems at the sub-state level, such as resource scarcity, population outflow, environmental protection, and border control. Thus, there is no hierarchy between the national interest of de-nuclearising North Korea or specific problems which one province, one city, or any individuals meet. This matches the third characteristic of complex interdependence concerning the disappearance of a hierarchy between different problems in international relations.

The nuclear development of North Korea is always a challenge to Beijing's overall strategy of sustaining regional peace and stability. However, because of the increase in Chinese economic participation in North Korea (although central-state owned companies rarely engage), it is relatively difficult for Beijing to use and support a military resolution to the nuclear issue, because it may eliminate the condition for implementing economic activities in North Korea which aim to resolve China's own problems. However, Chinese economic activities in North

Korea deepen the economic dependence of North Korea on China and provide opportunities for Beijing to impose pressure on Pyongyang through economic means. Beijing has achieved some short-term targets, such as pushing North Korea back to the dialogue of the Six Party Talks, and canceling missile tests by cutting off aid supply to North Korea. In short, the military way is not effective for China to de-nuclearise North Korea.

Apart from the concept of complex interdependence, the theory of multi-level governance is also used to apply the interaction between state, sub-state actors, and non-state actors in the making, and particularly in the implementing, of China's foreign economic policy. Multi-level governance theory is firstly used to explain the integration of the European Union, especially the interaction and communication between individuals, governments, and super-national actors. Then it is also developed to draw a picture of non-hierarchical and negotiable political structure which may include state, sub-state, and supra-state actors. The state remains an important, but not the only, actor in policy-making. In contrast to the confirmation of complex interdependence, this thesis co-ordinates two modes of multi-level governance. The first mode of multi-level governance is more likely federalism. It is a more state-centered mode with limited hierarchical levels of jurisdiction, comprehensive jurisdiction targets, non-overlapping jurisdiction, and stable ways of jurisdiction. The second mode of multi-level governance is less state-centred than the first mode. It happens in the cross-border areas with unlimited but less hierarchical levels of jurisdiction, specific targets of jurisdiction, overlapped jurisdiction, and flexible ways of jurisdiction.

In this thesis, the implementation of China's foreign economic policy in North Korea has both characteristics from two modes. On one hand, in China, the level of jurisdiction is limited to central government and its central-state owned companies, regional governments at the

provincial and city level and their local state-owned companies, and private enterprises. Meanwhile, central government mainly provides institutional support to the sub-state and non-state actors. At the same time, the sub-state and non-state actors focus on the specific implementation of economic participation. Even though, at times, the central government also directly involves itself in economic activities through the central-state owned companies, this amount is very limited. Thus, China's governance has two characteristics of limited jurisdiction level and non-overlapped jurisdiction in the first mode of multi-level governance. On the other hand, China's economic participation in North Korea aims to resolve different specific problems rather than to provide comprehensive public services. This is because the actors are not governments only, but are also non-state actors such as public associations and private SMEs. At the same time, diversified economic participation means flexible ways of jurisdiction. Governments at different levels sign co-operation agreements to provide aid to advance negotiations and to send state-owned companies to implement different types of economic activities. The non-state actors also participate in North Korea through investment, technology transfer, and other ways. In other words, this matches the characteristics of specific jurisdiction targets and flexible jurisdiction ways. Thus, China's governance mode in its economic participation in North Korea is a new one with characteristics from both modes of multi-level governance.

This thesis contributes to the current academic research at three different levels. First of all, on the topic of Sino-DPRK relations, the thesis explores the domestic drivers behind the commercialisation of Sino-DPRK relations, thereby illustrating the diversified actors in the pluralism of implementing China's foreign economic policy in North Korea. It draws a comprehensive picture of coherence and divergence between the national interest of Beijing and

the specific targets of sub-state actors. Moreover, to the study of Northeast Asia, my thesis shows that NTS issues play an increasingly significant role in building interdependence between states through economic co-operation. At the same time, NTS problems, especially the competition of gaining resources beyond energy, may also lead to conflicts between countries. Finally, to the discipline of international relations, my thesis confirms the concept of complex interdependence and brings new modes of governance to the multi-level governance theory by applying the characteristics of different modes of multi-level governance in the one case of Chinese economic participation in North Korea.

The argument advanced in this thesis has important implications for our understanding of China's economic policy towards the outside world. Firstly, it means that China's bilateral economic relations with countries around the world have become commercialised. North Korea is the country which has the most special political relationship with China. The commercialisation of the Sino-DPRK relationship is China's final step towards commercialising its economic relationship with the rest of the world. Meanwhile, China's Going-out Strategy has shifted. China's national economic champions, i.e., central state-owned companies such as SINOPEC and CNPC, which serve the national interest, especially in the control of resources and energy, are not the major players, even if their funding for purchase is still huge. On the contrary, a number of local state-owned companies and private enterprises have followed and replaced the central state-owned companies, the pioneers of China's Going-out Strategy, as the major strength of China's overseas direct investment. Their drivers mainly refer to local requirements of social-economic development and their own specific problems, such as the survival of small and medium enterprises, rather than the national interests. These economic activities could also be motivated by reasons which actually run against the national interests

under some special conditions. It is increasingly difficult to politicise the activities of these commercial operators and argue that they are agents of the Chinese state.

Secondly, at the regional level, new forms of bilateral and multilateral co-operation between China and its neighboring countries have taken place at the provincial and city levels. In the past, this type of case has been rare in co-operation between sub-state actors in China and abroad. The sub-state Sino-Foreign co-operation mainly developed in the form of the 'Friendship-city' concept by sharing cultural and educational resources. Even in the economic sector, previous Sino-Foreign co-operation at the sub-state level has been in the form of domestic special economic zones and industrial parks in China designed by Beijing to attract foreign funding. Different to the previous form of co-operation, in the new form, while called Sino-Foreign, there is little happening at the state level because central governments only take responsibility for signing final agreements in order to provide institutional support. Domestically, central government also advances the status of regional projects to the national strategy in order to improve the attractiveness of this co-operation, even though the provincial government gets no funding from Beijing. In contrast, regional governments at provincial and city levels practically designed and operated the co-operation, not only in China, but also in the other countries . This new form of co-operation occurs in the current Sino-DPRK economic co-operation. Besides setting up traditional industrial zones for labour co-operation, Jilin Provincial government sent its official team to join the mutual administration of the Rason Economic Zone in North Korea and the Sino-Russia-DPRK triangle cross-border tourist zone. These two cases are a completely new form of Sino-Foreign co-operation at the sub-state level in the history of the PRC.

Thirdly, the major role of actors below the state in the implementation of China's foreign economic policy in North Korea means that the effort of the White House to apply pressure on

Beijing over the North Korea nuclear problems will not produce the desired result. The United States uses this strategy because it considers China as a single unit in the Sino-DPRK relationship and that Beijing controls all activity between China and North Korea. As this thesis demonstrates, this is not the case. During the second nuclear crisis in North Korea, from the early 2000s, in order to express to the world its will to be a responsible country, Beijing actively engaged in organising the negotiations among the relevant parties from the China-North Korea-US Third Party Talks to the Six Party Talks to resolve the nuclear issue of North Korea. Recently Beijing also supported the economic sanctions made by the United Nations over North Korea. However, in Sino-DPRK trade and economic co-operation, Beijing and its central-state owned companies are not the majority actors. At the same time, the economic de-centralisation in China makes sub-state actors independent from Beijing on decision making and the implementation of overseas activities so that they concentrate on their own conditions. Thus, the pressure from the US on Beijing does not influence a change in the condition of the Sino-DPRK economic relationship. In fact, Beijing frequently projects a strong will to de-nuclearise North Korea, but at the same time continues to fund it through the rapid increase in economic activities.

Furthermore, North Korea will survive longer than the time predicted by many scholars. Scholars from South Korea and the United States mainly forecast that the new regime under Kim Jong-un will collapse within a decade due to food shortage, economic collapse, and the large numbers of escapees which result from information leakage and poor border control. However, these three problems may not occur. In the agricultural field, the involvement of Chinese officials in the mutual management of the Rason Economic Zone improves North Korea's agricultural condition in terms of technology. North Korea gains advanced agricultural experience from Northeast China which has previously been the major supplier of agricultural

products to the rest of China. Indeed, under the strictest economic sanctions, in the short-term Pyongyang meets the problem of external funding through mineral exports for the import of food for the country. In fact, North Korea has also begun its long-term strategy of shifting from an agriculturally self-supporting country as a result of Chinese technology and experience. Meanwhile, the economic collapse of North Korea may not happen in the short term. On the one hand, Chinese economic participation in North Korea is still rapidly increasing. Although the import of several types of minerals are forbidden, there are many other choices in the diversified North Korean mineral reserve. Meanwhile, apart from the mineral resources, other fields of business, such as tourism and labour co-operation are also encouraged by Pyongyang as alternative funding for mineral export. On the other hand, Chinese economic participation, especially that implemented by the provincial and city governments, at times includes the construction of physical infrastructure. The construction of roads and railway, and the supply of electricity and water, change the previously negative image of North Korea's investment condition. This is because its shortage of physical infrastructure could attract external funding from third countries, such as occurred in the telecommunications industry when an Egyptian company entered the market. Moreover, the improved control of the Sino-DPRK border has directly reduced the number of escapees significantly. North Korea's mature nuclear technology requires less funding for further development than at the beginning of its era of nuclearisation. This leaves room for transferring funding to improve economic conditions. These issues strengthen the national confidence of North Korea in its ideological battle with South Korea. In general, North Korea could avoid a short-term collapse caused by food shortages, economic collapse, or refugee waves.

The final implication is an increasingly independent North Korea under the commercialisation of the Sino-DPRK relationship, especially the reduction of aid from China. In the past, China used large amounts of aid in exchange for strong support from North Korea in international affairs, such as that in which North Korea supported China in its ideological debate with the Soviet Union in the late 1950s. On the contrary, the re-commencement of nuclear development in North Korea, which actually keeps in step with the commercialised Sino-DPRK relationship, means that Pyongyang absolutely confirms China's de-ideologised foreign policy after learning the first lesson in 1992 from the foundation of the China-South Korea formal diplomatic relationship. North Korea realises that it has become an ordinary neighbour to Beijing, even though the Sino-DPRK Friendship Treaty, signed after the Korean War, remains effective. Therefore, North Korea has responded with its solid independence and self-interest centred foreign policy. It does not care about the concerns of Beijing on its nuclearisation, even under the strictest economic sanctions joined by Beijing. This is because North Korea knows that Beijing cannot completely abandon it when it bonds itself closely with increasingly larger numbers of sub-state actors from China, meets their requirements, and gains funding in return for the continuing development of its nuclear weapons.

Due to the sensitivity of affairs relevant to North Korea in China, this thesis met problems in the data collection which included interviews. Chinese officials and scholars in official departments, universities, and think-tanks in Beijing rarely agree to be interviewed. At the same time, because in China archived documents cannot be made public within fifteen years, most of the documents relevant to North Korea written after the 2000s are still not available to the public. The media coverage on economic information is also very limited. Therefore, the economic

activities in this thesis do not include those such as copper, which is an important product in Sino-DPRK trade but which has not been reported by the media.

Meanwhile, this thesis mainly discusses the domestic drivers of Chinese economic activities and also notes the influence of this participation on the order of regional security. However, it does not discuss the impact of other countries in the region on China's economic engagement in North Korea. From the 2000s to the 2010s in Northeast Asia, South Korea, Russia, and even Japan, have shifted their previous policies on North Korea to some extent. From the Six Party Talks, the previous pro-South Korea policy of Russia was moved to a relatively balanced policy towards both North Korea and South Korea. Russia aimed to recover its political impact on the Korean Peninsula during the Cold War era through its strength in the energy industry. Moscow actively pushed for the construction of a cross-Korean Peninsula gas pipeline and also became a temporary alternative energy supplier to North Korea when Beijing cut off the oil supply to Pyongyang as punishment over its nuclear tests. Similar to Russia, in the first decade of the 21st Century, the inter-Korean relationship also changed rapidly with the change of presidents in South Korea. Both Kim Dae-Jong and Roh Moo-Hyun kept their distance from the United States and remained friendly with North Korea through the implementation of the Sunshine policy. In contrast, Lee Myung-bak returned to the US-South Korea alliance and took a tough stance towards North Korean nuclearisation. His pro-US stand intensified the military conflict between North Korea and South Korea. Compared to Russia and South Korea, Japan sustained its hostile foreign policy towards North Korea during the first decade after 2000 until DPRK-Japanese relations experienced a short-term thaw in 2014. North Korea promised to investigate the Japanese kidnapping issue in exchange for Japan's relaxation of economic sanctions. In short, these changes in the foreign policies of countries neighbouring North Korea, which may

influence Chinese economic participation in North Korea and the domestic environment of North Korea to Chinese economic activities, could also have been discussed in this thesis. However, including these affairs, which are not directly relevant to my topic, would make the thesis too broad.

While this thesis has focused on the first decade of the 21st Century, the study of Chinese activity in North Korea is an ongoing task due to the complicated and uncertain domestic conditions of each country. China is experiencing the re-centralisation of power under Xi Jinping's government. However, this does not mean that the condition of Chinese economic activities in North Korea will change in the future because this re-centralisation is only in the political field. Xi mainly focuses on the centralisation of personnel assignment at provincial levels, anti-corruption, and control of ideology. In contrast, in the economic field, the previous tendency of the de-centralisation continues, in particular the provincial and city governments are given almost comprehensive power to approve overseas investments of companies registered in their regions. Three years after Kim Jong-un came to power, in 2016 Pyongyang is beginning to melt the frozen bilateral interaction with Beijing at the top level. The relationship between China and North Korea is a rapidly changing one and constantly throws up new material for investigation.

It may be interesting to consider the non-economic interaction between China and North Korea; e.g., at a cultural level, whether Beijing and Pyongyang will continue to officially exchange good will with each other. Currently they do this by, for example, the issue by North Korea of special postage stamps recognising China's cultural signals, such as pandas and previous Chinese leaders. How effective would be the cultural communication between China and North Korea in improving bilateral relationship at the top-level and changing the previous

negative reputation of North Korea in Chinese society? Meanwhile, the impact of North Korea's increased opening up on its special economic zones, and on capital for its tourist industry could be the focus of future research, in particular in the way its opening up may reduce its attractiveness to Maoist tourists from China, who actually make up the majority of tourists to North Korea.

The same applies to the political strand of Sino-DPRK relationships, especially the response of North Korea to Chinese economic activities. Beijing refused Pyongyang's application to become a founding member of the Asian Infrastructure Investment Bank (AIIB) with criticism of North Korea's lack of a transparent national financial condition. It will be helpful to see whether Pyongyang compromise and follow China's rules in order to meet its domestic requirements of physical infrastructure construction, and whether Beijing's refusal aims to sustain its political impact on North Korea through economic participation by isolating North Korea from international institutions.

Furthermore, an analysis of military co-operation between Beijing and Pyongyang is also worthy of research, particularly in light of the incident in the early 2010s when two Chinese companies were added to the US sanction list for providing conventional weapons to North Korea. Such bilateral co-operation between China and North Korea in non-economic areas may help paint a comprehensive picture of the bilateral interaction between China and North Korea beyond the economic activities at both top and bottom levels. This thesis aims to serve as a starting point for a more full investigation into China's economic relations with North Korea that could be extended, not only to other states in the neighboring countries of China, but to other geographical and political regions as well.

Bibliography

Introduction

Choo Jae-woo (2008) 'Mirroring North Korea's Growing Economic Dependence on China: Political Ramifications', *Asian Survey*, 48 (2): 343-372

Dai Xiao-song (2007), 'Developing Sea Circular Economy, Improving the Sustainable Development of Liaoning Sea Economy', *Territory and Natural Resource*, 2: 255-260. 发展海洋循环经济, 促进辽宁海洋经济可持续发展, *国土和自然资源*, 2007年02期, 255-260

Feng Chong-yi and Goodman David.S.G (ed.) (2000) *North China at war: the social ecology of revolution, 1937-1945*. Lanham, MD: Rowman & Littlefield Publishers.

Haggard, S and Noland, M (2009) 'The Political Economy of North Korea: Implications for Denuclearization and Proliferation', *East-West Center Economy Series. June 2009, No.104*.

Hu Weixing, (1995) 'China's security agenda after the Cold War', *The Pacific Review. 8(1):117-135*.

Hundt, D (2010) 'China's Two Koreas Policy: Achievements and Contradictions', *Political Science, 62: 132-42*

Kim Jae-Cheol (2006) 'The Political Economy of Chinese investment in North Korea: A Preliminary Assessment', *Asian Survey, 46(6): 898-916*

Kim Jin Moo (2011) 'North Korea's Reliance on China and China's Influence on North Korea', *The Korean Journal of Defense Analysis, 23(2):257-271*

Lee Chang Jae (2003) 'Trade and Investment in North Korea', *Korea Institute for International Economic Policy. 1:1-8*

Li Bao-jun and Xu Zheng-yuan (2006), 'China's Self-Identity Construction as a Responsible Power in the Post-Cold War Era', *Teach and Research, 1:49-55*. 冷战后中国负责任大国身份的建构, *教学与研究*, 2006年01期, 49-55

Li Xiang-lan (2002), 'The new sight of the environment around China: untraditional safe problem', *Territory and Natural Resource Study, 2: 1-3*. 周边环境新视角:非传统安全问题, *国土与自然资源研究*, 2002年02期, 1-3

Liu Jin-zhi, Pan Jing-chu, Pan Rong-ying and Li Xi-yu (2006) *The Relationship between China and Korean Peninsula Countries: The Collection of Documents, 1991-2006*. Beijing:

World Knowledge Publish, Inc. *中国同朝鲜半岛国家关系文件资料汇编 1991—2006*. 北京:世界知识出版社

Liu Ting and Wang Haijun, (2010) 'Drug issue from the Perspective of Non-Traditional Security', *Journal of Yunnan Police Officer Academy*. 2010, vol.2, 45-50. '非传统安全视野下的毒品问题研究', *云南警官学院学报*,编辑部邮箱 2010 年 02 期, 45-50

Lou Wei and Teng Song-yan (2007), 'Non-traditional security threats of Northeast China and regional Cooperation', *Journal of Tonghua Teachers College*, 28(5): 15-19. 东北亚地区非传统安全威胁与地区合作, *通化师范学院学报*, 2007 年 05 期, 15-19

Man Haifeng (2011), 'Open Regionalism and Development Trend of Boundary Economic and Trade Cooperation between China and North Korea: A Case Study of Economic and Trade Cooperation between Dandong and Sinuiju ', *Journal of Eastern Liaoning University (Social Science)*, 13(2):131-6. '开放的地区主义与中朝边境经贸合作发展方向——以丹东—新义州两市开展经贸合作为研究视角', *辽东学院学报(社会科学版)*, 2011 年 02 期, 131-6.

Moore, G (2014) *North Korean nuclear operationality: regional security & nonproliferation* Baltimore : John Hopkins University.

Seth, M. J (2010) *A Concise History of Modern Korea: From the Nineteenth Century to the Present*. Plymouth: The Rowman & Littlefield Publisher Inc.

Sun Yong (2004), 'The Economic Cooperation between Northeast China and North Korea and its outlook', *The Border Economy and Culture*, 4:67-71. '东北地区和朝鲜经济合作及其展望. *边境经济和文化*', 2004 年 04 期, 67-71

Tsuneo Akaha, Non-traditional Security Issues in Northeast Asia and Prospects for International Cooperation. *Prepared for UN University seminar 'Thinking Outside the Security Box: Non-traditional Security in Asia: Governance, Globalization and the Environment'*. March 15, 2002, 1-2

Wang Qi and Liu Lian (2011), 'Chinese Non-traditional Security Problem and Countermeasure', *Journal of Shandong Academy of Governance*, 2:30-33. '我国目前面临的非传统安全问题及对策', *山东行政学院学报*, 2011年02期, 30-33.

Wang Xiaoning (2004), 'Comparative research on the policy of Koguryo and Silla towards Song Dynasty'. *Dong Yue Tribune*. Nov, 2004. 25(6):170-174. '高丽、交趾对宋朝政策比较研究', *东岳论丛*, 2004年11月第25卷第6期. 170-174

Yin Jian-ping and Ding Qi (2006), 'Adhering to the Principia of Steady Progress for Developing Coal Liquefaction Industry', *Journal of China University of Petroleum*, 22 (5): 1-6. '发展煤炭液化产业必须坚持稳步推进的原则', *中国石油大学学报(社会科学版)*, 2006年05期, 1-6

Literature Review

Akaha, Tsuneo (ed.) (2002) *A Future of North Korea*. London and New York: Routledge.

Beal, Tim (2005) *North Korea: The Struggle Against American Power*. London and Ann Arbor, MI: Pluto Press

Bai, Jie (2013) *North Korea Observation Notes (朝鲜半岛观察笔记 Chaoxian Bandao GuanCha biji)*, Beijing: World Knowledge Publishing House.

Cornell, Erik (2002) *North Korea under Communism: Report of An Envoy to Paradise*. London and New York: RoutledgeCurzon, Taylor and Francis Group.

Choi E Kwan, Kim E. Han and Merrill Yesook ed. (2003), *North Korea in World Economy*. London and New York: RoutledgeCurzon, Taylor and Francis Group.

Choo, Jaewoo. (2008) 'Mirroring North Korea's Growing Economic Dependence on China: Political Ramifications', *Asian Survey*, Vol. 48, No. 2, pp. 343-372.

Du, Bai-yu (2014), *My Story in Pyongyang: A Journalist of Xinhua News in North Korea* (*我的平壤故事：一个新华社记者@朝鲜*, *Wo de Ping Rang Gushi: Yige Xinhuashe Jizhe zai Chaoxian*), Beijing: Huaxia Publishing House.

Ford, Glyn and Kwan Soyoung (2008) *North Korea on the Brink: Struggle for Survival*. London: Pluto Press.

French, Paul (2007) *North Korea, The Paranoid Peninsular: A Modern History*. London and New York: Zed Books.

Fuqua, Jacques (2007) *Nuclear Endgame: The Need for Engagement with North Korea*. Westport and London, Praeger Security International

Ge, Zheng-ying, China's Dilemma in the Ocean Access of Tumen River and its Countermeasure, *Journal of Leshan Normal University*, *乐山师范学院学报* (*Leshan Shi Fan Xue Yuan Xue Bao*), 2015(05), pp.111-115.

Goldstein, Avery, "China's Interests and the Korean Peninsula," in *Alastair Iain Johnston and Robert S. Ross, eds., New Directions in the Study of China's Foreign Policy* (Stanford, CA: Stanford University Press, 2006), p. 145.

Hagstrom, Linus and Marie Soderbeg, (eds.) (2006) *North Korea Policy: Japan and the Great Powers*. London and New York: Routledge, Taylor and Francis Group.

Han, Jing-yu, (2011) 'Discussing Sino-DPRK economic & trade cooperation', *Science & Technology Information, 科技信息(Keji Xin-xi)*, Vol.30, pp.12-23

Harrold, Michael (2004) *Comrades and Strangers: Behind the Closed Doors of North Korea*. West Sussex: John Wiley & Sons Ltd.

Huang, Chiung-Chiu and Shih Chih-yu. *Harmonious Intervention: China's Quest for Relational Security*. Farnham, Surrey, England; Burlington, Vermont: Ashgate Publishing Limited. Hardcover. 2014.

Huang, Zhi-xiong and Hu Jian-sheng, (2014) 'The International Legal Status of North Korean Escapees and China's Relevant Policies', *Present day Law Science(时代法学 Shi Dai Fa Xue)*, Oct. 2014, Vol.12 No.5 pp.3-10

Joo, Seung-Ho and Kwak Tae-Hwan (ed.) (2007) *North Korea's Second Nuclear Crisis and Northeast Asian Security*. Aldershot: Ashgate.

Kim, Jae-Cheol. (2006) 'The Political Economy of Chinese Investment in North Korea: A Preliminary Assessment', *Asian Survey*, Vol. 46, No. 6, pp. 898-916.

Kim, Sung-Chull (2006) *North Korea under Kim Jong-Il: From Consolidation to Systemic Dissonance* [book title has to be in italics]. Albany: State University of New York Press.

Lee, Joo-A, 'To Fuel or Not to Fuel: China's Energy Assistance to North Korea', *Asian Security*, 5:1, 45-72

Li, Chun-hua, (2012) 'The Research on the Problem of the Trade between China and North Korea and Cross-border RMB Settlement', *Journal of Jilin Financial Research*, 吉林金融研究 (*Jilin Jin-Rong Yan Jiu*), Dec 2012, pp.35-39

Li, Qi, (2011) 'On the "3 -illegal "Phenomena in the Area Bordering North Korea in Jilin Province', *Journal of Henan Police College* (河南警察学院学报, *Henan Jing Cha Xue Yuan Xue Bao*). Apr.2011, Vol.20 No.2, pp58-61

Lim, Jae-cheon (2009) *Kim Jong-Il's Leadership to North Korea*. New York: Routledge

Lin, Jin-shu, Jin Mei-hua (2009) 'Present Situation and Countermeasures of Jilin-North Korean Trade', *Journal of Yanbian University(Social Sciences)* (延边大学学报(社会科学版) *Yanbian Da Xue Xue Bao, She Hui Ke Xue Ban*), 2009(03), pp.43-48

Lin, Jin-shu and Hao Fang-long (2011), 'Economic Cooperation between Changchun-Jil in-Tumen Pilot Zone and Rajin-Sonbong', *Journal of Yanbian University(Social Sciences)* (延边大学学报社会科学版, *Yanbian Da Xue Xue Bao, She Hui Ke Xue Ban*), 2011(02), pp.12-18

Liu, Ming (2008), 'North Korean Economic Reform: Exploring a Third Way and its Uncertain Future', *World Economy Research* (世界经济研究 *Shijie Jingji Yanjiu*) 2008 (07), pp.83-89

Moore, Gregory J. (2008) "How North Korea Threatens China's Interests: Understanding Chinese 'Duplicity' on the North Korean Nuclear Issue," *International Relations of the Asia-Pacific*, 8: 1-29.

Nanto, Dick K and Emma Chanlett-Avery, North Korea: Economic Leverage and Policy Analysis. 2010. *Congress Report Service*.

Pinilla, Gomà Daniel (2004), 'Border Disputes between China and North Korea', *China perspectives, 2004 (march-april)*, pp.52-60

Park, Kyung-Ae and Snyder Scott, ed. (2013) *North Korea in transition: Politics, Economy and Society*. New York, Roman and Littlefield Publisher, INC.

Oh, Kongdan and Hassig Ralph C (2000) *North Korea Through the Looking Glass*. Washington D.C. Brookings Institution Press.

O'Hanlon, Michael and Mochizuki Mike (2003) *Crisis on the Korean Peninsular: How to deal with a Nuclear North Korea*. McGraw-Hill: The Brookings Institution.

Piao, Guang-ji (2012), 'The Transformation Dilemma of Sino — DPRK Economic and Trade Relations and Its Countermeasures', *Northeast Asia Forum (东北亚论坛 Dong Bei Ya Lun Tan)*, 2012(03),pp.44-53

Piao, Jian-yi and Li Zhi-fei (2012), 'The internationalization of North Korea escapees and its impacts to China', *Modern International Relations (现代国际关系, Xian Dai Guo Ji Guan Xi)*, 2012(07), pp.3-10

Rozman, Gilbert (2007) *Strategic Thinking about the Korean Nuclear Crisis: Four Parties Caught Between North Korea and the United States*. New York: Palgrave Macmillian

Shambaugh David (2003), 'China and the Korean peninsula: Playing for the long term', *The Washington Quarterly*, 2003, 26:2, 43-56.

Sigal, Leon (1998) *Disarming Strangers: Nuclear Diplomacy with North Korea*. Princeton: Princeton University Press.

Son, Key-young (2006) *South Korea Engagement and Policies and North Korea: Identities, Norms and Sunshine Policy*. London and New York: Routledge, Taylor and Francis Group.

Stares, Paul B and Wit Joel S. Preparing for Sudden Change in North Korea. Council Special Report No.24, January 2009, Council of Foreign Relations.

Suh, Dae-Sook (1988), *Kim Il Sung: The North Korean Leader*. New York: Columbia University Press.

Sun Lin (2015), 'Public Security Management and Legal Measures of Illegal Immigration Problem-- Based on the case study of North Korean citizen criminal in Jilin province', *Journal of Changsha University (长沙大学学报, Changsha Da Xue Xue Bao)*, Nov. 2015, Vol.29, No.6, pp.64-68

Wang, Chun-sheng (2013), 'The status-quo of Sino-Russia and Sino-North Korea border trade development and its countermeasures', *China Forex (中国外汇, Zhong Guo Wai Hui)*, 2013(23), pp. 62-63

Wang, Yuan, Zhang Yu-shan (2014), 'Analyzing status-quo of Jilin province's economic and trade cooperation with North Korea and its Countermeasures', *North Korea and South Korea History Research(朝鲜·韩国历史研究, Chao Xian he Han Guo Li Shi Yan Jiu)*, 2014 (00) pp.451-470

Xu, Hongshui (2011), 'Discussing about the problems in the cross-border use of RMB in the Sino-DPRK border areas', *China Money Market, 中国货币市场 (Zhong-guo Huo Bi Shi Chang)*, 2011(11) pp.51-54

Yu, Guang-yi (2008), 'The status-quo, problems of Sino-DPRK economic condition and strategy, Journal for Party and Administrative Cadres', *党政干部学刊 (Dang Zheng Gan-bu Xue Kan)* May 2008, pp.32-34

Yu, Zai-Xia (2010), 'Discussing North Korean Economy'. *CangSang (沧桑) 2010(01)*, pp.121-123

Yoon, Seung-hyun and Lee Seung-ook (2013), 'From old comrades to new partnerships: dynamic development of economic relations between China and North Korea', *The Geographical Journal, Vol. 179, No. 1, March 2013, pp. 19–31*

Zhang, Dong-ming (2011), 'A Study on Industrial Development and Cooperation between China and DPRK'. *Northeast Asia Forum (东北亚论坛 Dong Bei Ya Lun Tan)*, 2011(5), pp. 30-42

Zhang, Hui-zhi (2007), 'Opening Practice during the Process of Revitalization in Northeast China: The cooperation between China and North Korea', *Northeast Asia Forum (东北亚论坛 Dong Bei Ya Lun Tan)*, 2007(05), pp.38-41

Zhang, Jia-xin, Miao Ru (2012), 'The Analysis of the Logistics Economic Benefits of the Transport Construction of Changchun — Jilin — Tumen Pilot Zone: A Case Study of Sino — DPRK Channel'. *Northeast Asia Forum (东北亚论坛 Dong Bei Ya Lun Tan)*, 2012 (05), pp.96-106

Zhang, Ying, Lu Yu-duo, Sun Xiu-ying (2009), 'Exploring Sino-DPRK economic cooperation under the nuclear crisis of North Korea', *Liaoning Economy, 辽宁经济 (Liaoning Jing-ji)*, 2009, Vol.11, pp.36-37

Theory Chapter

Cao Guiquan (2013), 'The distribution mode of multi-government and the systemic reform of China's administrative and management', *Theory and Modernization*, vol.103, no.3, May, pp 121-127.

Keohane, R and Nye, J eds. *Transnational Relations and World Politics*. Cambridge: Harvard University Press, 1970.

Keohane, R and Nyes, J eds. *Power and Interdependence*. Cambridge: Harvard University Press, 1979; Chinese edition, 4th edition translated by Men Honghua, Beijing: Beijing University Press.

Keohane, R. *After Hegemony: Cooperation and Discord in the World Political Economy*. Cambridge: Harvard University Press, 1984

Keohane, R, *International Institutions and State Power*, Boulder: Westview Press, 1989.

Kohler-Kock, B. 'The Evolution and Transformation of European Governance,' in Kohler-Kock, B and Eising, R (eds), *The Transformation of Governance in the European Union*, London: Routledge, 1999, p.15.

Marks, G and Hooghe, L, "Contrasting Visions of Multi-level Governance" in Bache, I and Flinders, M (eds) *Multi-level Governance*, Oxford: Oxford University, 2004, p.17

Marks, G, Hooghe, L and Blank, K (1996), 'European Integration from the 1980s, State-Centric v. Multi-level Governance,' *Jounral of Common Market Studies*, vol.34, no.3, September, pp.342-343

Morgenthau, *Politics among Nations: The Struggle for Power and Peace*, 4th edition. New York: Knopf, 1967.

Shen Rong-hua and Song Yu-ping (2009), '*Rethinking China's local government systemic reform*', *Theoretical Investigation (理论探索)*, vol. 149, no.4, Nov, pp. 15-19.

Jiang Guobing (2008), 'The Strategic Choice of China's devolution of government power', *Journal of Changsha University, (长沙大学学报 Changsha daxue xuebao)* vol.22, no.1, Jan, pp.57-59.

Walliman, N (2011), *Research Methods: The Basics*. London and New York: Routledge.
p73

Chapter 4

Primary Resource

Interviews

Anonymous Interviewee 1: Secondary Interview with local official, Jinan, Shandong province, 3-5 July 2011.

Anonymous Interviewee 2: Secondary Interview with local businessmen, Jinan, Shandong province, 3-5 July 2011.

Anonymous Interviewee 3: Interview with local scholar, Dalian, Liaoning province, 12 Sep 2012.

Anonymous Interviewee 4: Interview with local officials, Changchun, Jilin province, Aug 11 2014

Government and Corporation Website

Central Government of PRC (2012) '*The amount of coal mine death falls below 2000 for the first time in 2011*', 27 Mar 2012 [Online]

Available at http://www.gov.cn/zxft/ft222/content_2100749.htm

(Accessed: 10 Dec 2012)

ChangBai Ethnic Korean Autonomous Town Environment Protection Bureau (2007) '*ChangBai Ethnic Korean Autonomous Town Environment Protection Bureau's Annual Review of 2007 and Working Plan of 2008*'. n.d. [Online] Available at

<http://bs.jl.gov.cn/BsWebCms/site/cbcms/news/n3928303277.html>

(Accessed: 24 Nov 2012)

Cheminfo (n.d.), '*North Korea used 20 million ton rare-earth mine to exchange 300 thousand ton fertilizer and 500 thousand ton corn*' n.d. [Online] Available at

http://www.cheminfo.gov.cn/ZXZX/page_info.aspx?id=350039&Tname=hgyw&c=10

(Accessed: 24 Nov 2012)

China Minmental Corp. (2005) '*Boss Zhou went to visit North Korea with Vice Prime Minister Wu Yi and signed coal mine joint-fund agreement with North Korean side.*' 14 Dec 2005

[Online] Available at

http://www.minmetals.com.cn/search_detail.jsp?article_millseconds=200512140218&column_no=01 (Accessed: 19 Nov 2012)

China Minmental Corp. (2006) '*Boss Zhou met the visit of Vice Minister of North Korean Commere Department*', [Online] Available at http://www.minmetals.com.cn/search_detail.jsp?article_millseconds=200603310001&column_no=05 (Accessed: 19 Nov 2012)

China Minmental Corp. (2005) '*Boss Zhou met Head of North Korean Joint-fund and Investment Committee Lee Jeu-jong*'. [online] Available at http://www.minmetals.com.cn/wkxw/200510/t20051018_25818.html (Accessed: 22 May 2014)

China's Ministry of Commerce (2008) '*The reply from the Ministry of Commerce about the permission of setting Liaofeng Colorful Mental Joint Corp*', [Online] Available at <http://policy.mofcom.gov.cn/blank/claw!fetch.action?id=g000059546> (Accessed: 24 Nov 2012)

China's Ministry of Commerce (2014) '*Coal Import reached new record in 2013*' [Online] Available at <http://acs.mofcom.gov.cn/sites/aqzn/nyaqnr.jsp?contentId=2783962029605> (Accessed: 28 Nov 2014)

Document of Jilin City National Development and Reform Committee (2014), '*The No.11 Five Years' Plan for the National Economic and Social Development of Jilin City*'. [Online] Available at <http://www.jlsdrc.gov.cn/Item/Show.asp?m=1&d=2528> (Accessed: 22 May 2014)

Information Office of the State Council (2012) '*The White Paper of China's Rare-earth Condition and Policy.*' [Online]

Available at <http://www.miit.gov.cn/n11293472/n11293832/n13095885/14674599.html>

(Accessed: 31 Oct 2012)

LIMAC Corp. (2008) '*Official Business Group of North Korean Lianfeng Community came to have a business meeting.*' [Online]

Available at http://www.limac.cn/limac_news_show.asp?id=131&s=1 (Accessed: 12 Nov 2012)

SASAC (n.d) '*Name List of Central State-owned Companies*', [Online]

Available at <http://www.sasac.gov.cn/n1180/n1226/n2425/index.html> (Accessed: 24 Nov 2012)

Shen Hua Group (2012) '*The Research and Innovation of New Coal Chemical industry under the direction of Coal Liquefaction--Coal Liquefaction Oil Chemical Company*' [Online]

Available at <http://www.shenhuagroup.com.cn/cs/sh/PAGE1382682123647/ED.html>

(Accessed: 24 Nov 2012)

Xinhuanet (2008) '*Huangyi: the death rate of coal mine accidents drops rapidly; a fundamental resolution needs a long-term measure*', [Online]

Available at http://news.xinhuanet.com/video/2008-01/18/content_7444509.htm

(Accessed: 10 Dec 2012)

YIMA Corp. (2008) 'Corporation has signed intensive investing agreement with North Korean An-Zhou Coal Institution', [Online]

Available at <http://www.ymgfgs.cn/userlist/admin/newshow-8584.html>

(Accessed: 10 Dec 2012)

Secondary Resource

Books and Articles

Cai, Wanru and Xu, Hai. (2010) 'The effect and implementation of media's involvement to crisis resolution—Take WangJialing coal mine accident rescue report as an example', *TV research*, Vol. 12, pp. 47-50.

Chen, Wei. (2006) 'The analysis of ethic weakness to China's mining accidents', *Journal of Taiyuan Normal University (Social Science Edition) (太原师范大学学报社科版 Taiyuan shifan daxue xuebao, shehuikexue ban)*, Vol.5, No.3, pp. 61-62.

Chen, Xumin. (2009) 'General discussion to the reasons and administration of China's mining accidents' *Journal of Shanxi Coal-Mining Administrators College (山西煤矿行政学院学报 Shanxi Meikuang Xingzheng Xueyuan Xuebao)*, Vol. 2, pp.10-11.

Choo, Jaewoo. (2008) 'Mirroring North Korea's Growing Economic Dependence on China: Political Ramifications', *Asian Survey*, Vol. 48, No. 2, pp. 343-372.

Ding, Ling. (2011) 'The sensitive problem in the Shandong Coal Companies' Transformation', *China's Economy and Informationisation (EI survey)* (*中国经济和信息化 zhongguo Jingji he Xinxihua*) Vol. 22-23, pp. 30-36.

Fan, Zhengjia. (2012) 'The General Research of Fundamental Infrastructure Construction and Regional Development', *Economic Forum (经济论坛 Jingji Luntan)*, Vol. 6, pp. 26-28.

Hao, Shengyun. (2007) 'The reasons for the frequent happen of mining accidents in China and strategy'. *Frontline (前线 Qianxian)*, Vol. 4, pp. 155-158.

Kim, Jae-Cheol. (2006) 'The Political Economy of Chinese Investment in North Korea: A Preliminary Assessment', *Asian Survey*, Vol. 46, No. 6, pp. 898-916.

Lan, Qing-xin. (2011) 'Study on Resources Enterprises' Overseas Mergers and Acquisitions of China in Recent Years', *International Trade Problems (国际贸易问题 Guoji Maoyi Wenti)*, Vol. 8, pp. 152-163.

Li, Yungang, Cheng, Wenhao and Wang, Guoliang. (2007) 'China's oil security problem and response research.' *Sci- Tech information development and economy (科技信息发展和经济 Keji Xinxifazhan he Jingji)*. Vol.7, No.17, pp. 91-92

Montinola Gabriella, Qian Yingyi and Weingast Barry R (1996), 'Federalism, Chinese Style: The Political Basis for Economic Success.' *World Politics*, Vol. 48, No. 1, pp. 50-81.

Ren, Min. (2006) 'The exploration of Maoshan Iron mine in North Korea and the Construction of China's Northeast Eastern Border Railway', *Railway Transport and Economy. (铁路交通和经济 Tielu Jiaotong he Jingji)* Vol. 1, pp. 11-12.

Song, Joo-young. (2011) 'Understanding China's Response to North Korea's Provocations', *Asian Survey*, Vol. 51, No. 6, pp. 1134-1155.

Shu, Yuan. (2008) 'China's oil security: Challenge and Response'. *The Journal of Yunnan Provincial Committee School of the CPC* (云南省委党校学报 *Yunnan Shengwei Dangxiao Xuebao*), Vol. 9, No.5, pp.106-109.

Wang, Haiyan. (2012) '*New Geo-economics: China and Central Asia*', Beijing: *World Knowledge Publish*, pp. 212-213.

Wang Ya-nan, Feng Kui and Zheng, Ming-mei, (2012) The Development Trend of China Urbanization - China International Forum on Urbanization in 2012. *Urban Studies* (都市研究 *Dushi Yanjiu*), Vol. 06, pp. 1-3.

Wang, Yonglun. (2007) 'Discuss the diversification of our country's oil energy security strategy', *Sichuan Reform* (四川改革 *Sichuan Gaige*), Vol. 4, pp. 44-49.

World Online. (2010) 'The West competitively store China's rare-earth and increase pressure to China together'. *Focus News*. Vol. 9, pp. 28-29.

Wu, Hongwei (ed.) (2011) *Regional Development and International Cooperation Mechanism in Central Asia*, Beijing: Social Science Academic Press, pp. 330-331.

Wu, Zhengxiao. (2011) 'A simple discussion of China's rare-earth export quota system'. *Energy Technology and Management* (能源技术和管理 *Nengyuan jishu he Guanli*), Vol. 3, pp. 121-122.

Xie, Qingyu and Liang, Guangyuan. (2011) 'Reduction of Rare-earth pollution forced the industrial upgrade', *Southern Daily*, Mar 1st, 2011, p. 16.

Yin, Jian-ping and Ding, Qi. (2006) 'Developing Coal Liquefaction Industry must insist the principle of stable expansion', *Journal of China University of Petroleum (Edition of Social Sciences)* (中国石油大学学报社科版 *Zhongguo shiyou daxue xuebao*), Vol. 22, No. 5, pp. 1-5.

Yoon, Seung-Hyun and Lee, Seung-Ook. (2013) 'From old comrades to new partnerships: dynamic development of economic relations between China and North Korea', *The Geographical Journal*, Vol. 179, No. 1, pp. 19-31.

Zhang, Feng. (2006) 'Win-Win in the cooperation and complementation: Analyze the exploring condition of China-North Korean mineral resource. *Korean Studies*, Vol.3, pp. 188-192.

Zhao, Zheng and Ni, Pengfei. (2012) 'The characteristics, problems and policy-advice of current China's urbanization'. *China National Conditions and Strength*, Vol.2, pp. 10-13.

Online Resources

Cai, Peng. (2012) '*The Study on Competitiveness Evaluation and Promotion Measures of Changchun Automobile Industrial Cluster*', Master Paper in China's National Knowledge Infrastructure, pp20-31. [Online] Available at

<http://www.cnki.net/KCMS/download.aspx?filename=2VDU6J0aNp3Np1EeURDWYRne0IVUaNmTpF0QOIVQ1cnaWl2arYmUK9iR3dzVmNnY4tEN24UdzRITDhTYxdVc3BFUxNFR=&QcsFETIpkR6h3YURTYBVWQIVkNJZVR1kjM0YGSnRnT59GWqdzdLZWe31EWi9UR39kRQdkUulVZpZjNOVkyCp0Kq9Ub&dflag=readonline&tablename=CMFDLAST2012>

(Accessed: 10 Dec 2013)

SINA (2005) '*TongGang Group used 7 billion RMB to get the MaoShan Iron mine in North Korea.*' [Online]

Available at <http://finance.sina.com.cn/chanjing/b/20051101/16322085037.shtml>

(Accessed: 24 Nov 2012)

Sohu (2012) '*China has 233 million vehicles and 247 million vehicle-drivers*', [Online]
Available at <http://news.sohu.com/20120717/n348375776.shtml>

Accessed: 24 Nov 2012)

Wang, Gang and Cheng, Gang (2011) '*South Korean Media claims that North Korean rare-earth mine opens to China*', [Online]

Available at <http://news.cntv.cn/20110817/107530.shtml> (Accessed: 12 Nov 2012)

Wang, Hongtao. (2012) '*Changchun Automobile Industry Cluster Development Study*',
Master Paper in China's National Knowledge Infrastructure' [Online]

Available at

<http://www.cnki.net/KCMS/download.aspx?filename=XhmTBxGZEd3LOBDRyATZtdzbaFHayZGeq1kQ2ZmZ0cWSMNkZW12UHx2dq9iSLtiU1JndWtSVGBITqd2LCZGV4NUQSI0Q==OOjdWOyN1bZRjTYInd3kVYzgDZkpHdEhXYLZHS1AjazVmWk9ENHpXQLR1aXdUaJl2UyJWNPI1M2JzT4lWMvEjeyRXY&dflag=readonline&tablename=CMFDLAST2012>

(Accessed: 10 Dec 2013)

Chapter 5

Primary Resource

Anonymous Interviewee 1: Interview with local businessmen, 9 Sep 2011. Zhoushan, Zhejiang province.

Anonymous Interviewee 2: Interview with local businessmen, 9 Sep 2011. Zhoushan, Zhejiang province.

Anonymous Interviewee 3: Interview with local businessmen, 9 Sep 2011. Zhoushan, Zhejiang province.

Anonymous Interviewee 4: Telephone Interview with local businessmen, 10 Aug 2012. Penglai, Shandong province

Anonymous Interviewee 6: Interview with local businessmen, 12 Sep 2012. Changhai, Liaoning province.

Anonymous Interviewee 7: Interview with local businessmen, 13 Sep 2012. Changhai, Liaoning province.

Anonymous Interviewee 8: Interview with local scholars, 14 Sep 2012. Dandong, Liaoning province.

Government and Corporation Website

China Distant Fishing Association (2012) 'CDFA signed the agreement of cooperative program on the sector of fishery resource in North Korea Eastern Marine Territory with North Korea' [online]

<http://www.cndwf.com/>

[Accessed 24/2/2013]

De Zhou Daily, 'Seafood can be eaten without nuclear pollution' [online]

<http://www.dezhoudaily.com/news/dezhou/folder135/2011/03/2011-03-23224441.html>

[Accessed on 24/02/2013]

Food and Agricultural Organization of the United Nations (2013) 'The Statistic Division of

FAO'. [online]

<http://faostat.fao.org/>

[Accessed on 24/02/2013]

Liaoning Golden Agriculture (official agriculture website of Liaoning province) (2012)

‘The Ocean and Fishery work of Dongdang City has a good result'. [online]

<http://www.lnjin.gov.cn/government/areanews/2012/11/445906.shtml>

[Accessed 24/2/2013]

Liaoning Ocean and Fishery Bureau (2010) ‘The condition of Dandong-DPRK civil fishery cooperative program's stage operation is fine'. [online]

http://www.lnhyw.gov.cn/kjhz/dwhzjl/201007/t20100719_553049.html

[Accessed 24/2/2013]

Liaoning Ocean and Fishery Bureau (2010) ‘The fishing boats of Changhai town came back fully loaded after fishing in the marine territory of DPRK'. [online]

http://www.lnhyw.gov.cn/yyfz/hypl/201010/t20101009_578744.html [Accessed 24/2/2013]

Ministry of Commerce of People's Republic of China (2009) ‘The nearby fishery resource of Korea Peninsula and the status-quo of economic cooperation.' [online]

<http://ccn.mofcom.gov.cn/spbg/show.php?id=8638> [Accessed on 24/2/2013]

Qingdao News, ‘Seafood can be eaten without nuclear pollution'. [online]

<http://epaper.qingdaonews.com/html/qdzb/20110324/qdzb228232.html>

[Accessed on 24/02/2013]

Shui Mu Website (portal site of Yantai city), 'From a female worker to boss, Penglai Xingdong Fishery Manager: Sun Piqing' [online]

http://www.shm.com.cn/special/2010-03/24/content_2876974.htm

[Accessed 24/2/2013]

Siyang Mofcom (2005) "Zhoushan Fishing program in North Korea started comprehensively" [online]

<http://siyang.mofcom.gov.cn/aarticle/zhongyaozt/200512/20051201154064.html> [Accessed 24/2/2013]

The Central Government of People's Republic of China (2000) 'PRC's Statistical bulletin of national economic and social development 1999' [online]

http://www.gov.cn/gongbao/content/2000/content_60106.htm

[Accessed on 24/02/2013]

The Central Government of People's Republic of China (2010) 'PRC's Statistical bulletin of national economic and social development 2009'[online]

http://www.gov.cn/gzdt/2010-02/25/content_1541240.htm

[Accessed on 24/02/2013]

Weihai News (2011) 'Rongcheng Ocean Fishery Company: collaboration for sailing in the international fishing area' [online]

http://www.whnews.cn/2011-08/19/content_1698592.htm

[Accessed 24/2/2013]

Weihai News (2012) '362 Weihai Fishing boats gained the license of fishing in the east marine territory of DPRK'. [online]

http://www.whnews.cn/news/node/2012-07/13/content_5375205.htm

[Accessed 24/2/2013]

Weihai Fishmarket.com (2005) 'The fishing boats won the first battle of fishing in North Korea, 1500 tons of squid have been sent to Shi island ' [online]

<http://www.wh-fishmarket.com/NewsInfo.aspx?ID=70638>

[Accessed on 24/2/2013]

Xinhua Net, 'Japanese nuclear accident may become the largest ocean nuclear polluted incident.' [online]

http://news.xinhuanet.com/world/2011-10/29/c_122211566.htm

[Accessed on 24/02/2013]

Secondary Resource

Books and Articles

Gu Ting and Li Ling-zhi (2013), 'Sino-ROK Yellow Sea Ocean Distant Fishing Cooperation:

Status-quo and Measure', *International Economic Cooperation (国际经济合作 Guoji Jingji Hezuo)* 11:74-77.

Jin Zhen-hong (2010), 'Analysing the Practice of Sino-ROK Fishery Agreement', *Law and Society (法制与社会 Fazhi yu Shehui)*, 35:30-31.

Li Linghua (2004), 'Simple discussion to the new PRC-Japanese and PRC-ROK Fishery Agreement and the delimitation of ocean border', *Modern Fisheries Information (现代渔业信息 Dangdai Yuye Xixi)*, Vol 19, No.5, pp 15-16.

Lin Yuejiao and Liu Haiying (2006), 'The influence of the implementation of PRC-ROK fishery agreement to Liaoning's fishery industry and strategy.' *Chinese Fisheries Economics (中国渔业经济 Zhongguo Yuye Jingji)*, 04, pp71-74

Lin Jinshu (2009), 'The Status-quo of Sino-North Korean trade and countermeasure', *Journal of Yanbian University (Social Science) (延边大学学报社科版 Yanbian daxue xuebao)*, Feb 2009, Vol. 42, No.1, 37-43

Lv Chao and Zhang Wan-li (2009), 'The Current Situation and Prospect of the Economic Relations between China and North Korea'. *Northeast Asia Forum (东北亚论坛 Dongbeiyu Luntan)*, Vol.8, No.4:84-92

Russell Ong (2000), 'North Korea's enduring importance to China's security interests in the post-Cold War era', *Asian Journal of Political Science*, 8:1, 47-64

Rozman, Gilbert (2007) *Strategic Thinking about the Korean Nuclear Crisis: Four Parties Caught between North Korea and the United States*. Palgrave Macmillan. Pp 125-135

Seth, Michael (2010) *A Concise History of Modern Korea: From the Late Nineteenth*

Century to the Present. Rowman & Littlefield Publisher, Inc. Pp 213-220.

Shen Simon (2012), 'The Hidden Face of Comradeship: popular Chinese consensus on the DPRK and its implications for Beijing's policy', *Journal of Contemporary China*, 21:75, 427-443

Xu Bolong, 'Respond calmly to PRC-ROK Fishery Agreement'. *Ocean Development and Management (海洋发展与管理 Haiyang Fazhan yu Guanli)*, 2002 (02), pp50-51.

Wang Run-bo, 'The existed problems and advices of China-North Korea trade settlement'. *Jilin Finance Research. (吉林金融研究 Jilin Jinrong Yanjiu)* 2008, Vol.6:48-50

Yantai Daily, 'Seed Cultivation in China and Grow up abroad for one year's reduction of growth period: North Korean produced shrimp landed Penglai'. March, 14th, 2010. Page 1.

Zhang Jizhe, Li Xun and Tang Yan-li, 'Analysing Chinese and South Korean Fishing Boats Fishing in Each Other Marine Territory under Sino-ROK Fishery Agreement', *Fishery Industry Modernisation (渔业现代化 Yuye Xiandaihua)*, 2015, 42(1):65-71.

Zhan Debin 'Analysing Sino-ROK fishery disputes under the view of Ocean Rights Competition', *Northeast Asia Forum. (东北亚论坛 Dongbeiya Luntan)* 2013 6:61-70.

Zhang Dongming, (2011), 'A Study on Industrial Development and Cooperation between China and DPRK', *Northeast Asia Forum. (东北亚论坛 Dongbeiya Luntan)* 2011, No.5, 13-21

Zhang Yu-shan (2006), 'Analysis on the Status and Further Trend of the development between Sino-Korean Economic and Trade Relationship'. *Northeast Asia Forum (东北亚论坛 Dongbeiya Luntan)*. 2006 Vol.15, No.1: 3-8

Other websites

China Water Transportation (2005) "Zhoushan Fishing boats went to North Kore for fishing"
[online]

<http://www.zgsyb.com/GB/Article/ShowArticle.asp?ArticleID=37494>[Accessed 24/2/2013]

Ifeng, 'The previous top officials of the United States: the rocket-launching of North Korea reflects the domestic struggle between Kim Jong-en and militants.' [online]

http://news.ifeng.com/world/special/chaoxianfasheweixing/content-4/detail_2012_04/10/13755567_0.shtml[Accessed on 24/02/2013]

SINA '11 thousand tons of nuclear polluted water was pumped into ocean' [online]

<http://finance.sina.com.cn/roll/20110405/03159639351.shtml>

[Accessed on 24/02/2013]

SINA, 'Five official departments of Shanghai claimed that the seafood in Shanghai are safe', [online]

<http://news.sina.com.cn/c/2011-03-19/094522144268.shtml>

[Accessed on 24/02/2013]

SOHU ' French Institution announced that the Japanese nuclear accident as the largest ocean nuclear polluted incident.' [online]

<http://news.sohu.com/20111029/n323809455.shtml> [Accessed on 24/02/2013]

Xin Wen Hua, 'Changchun's seafood production dropped rapidly' [online]

<http://news.xwh.cn/news/system/2011/04/14/010175874.shtml>

[Accessed on 24/02/2013]

Yonhap News Agency, 'Chinese fishing fleets fished in North Korea and influenced our fishery gains.' [online]

<http://chinese.yonhapnews.co.kr/allheadlines/2010/07/15/0200000000ACK20100715003500881.HTML>[Accessed on 24/2/2013]

Yonhap News Agency, 'North Korea opened the front sea of Wonsan to Chinese fishing boats.' [online]

http://app.yonhapnews.co.kr/yna/basic/articlechina/new_search/YIBW_showSearchArticle.aspx?contents_id=ACK20040907003500999[Accessed on 24/2/2013]

Chapter 6

Primary Resource

Anonymous Interviewee 1: Interview with local official, 10 Aug 2014. Hunchun, Jilin province.

Anonymous Interviewee 2: Interview with local businessmen, 12 Aug 2014. Hunchun, Jilin province.

Anonymous Interviewee 3: Interview with local businessmen, 11 Aug 2014. Yanji, Jilin province.

Anonymous Interviewee 4: Interview with local official, 15Aug 2014. Changchun, Jilin province

Anonymous Interviewee 5: Interview with local scholar, 15 Aug 2014. Changchun, Jilin province.

Anonymous Interviewee 6: Interview with local scholar, 13 Sep 2012. Dalian, Liaoning province.

Anonymous Interviewee 7: Interview with scholar in academic conference, 12 Sep 2014. Shenzhen, Guangzhou province.

Anonymous Interviewee 8: Interview with local official, 10 Aug 2014. Tumen, Jilin province.

Anonymous Interviewee 9: Interview with scholar in academic conference, 14 Sep 2014. Shenzhen, Guangzhou province.

Anonymous Interviewee 10: Interview with local scholar, 23 Nov 2014, Seoul, South Korea

Anonymous Interviewee 11: Interview with local scholar, 26 Nov 2014, Seoul, South Korea

Anonymous Interviewee 12: Interview with local official, 15Aug 2014. Changchun, Jilin province

Book

Law of PRC on punishments in public order and security administration (2012), People's Representative Congress. Chapter 1, Chapter 3.

Government and Corporation Website

China National Tourism Administration (2011) 'Sino-DPRK self-driving tourism formally operates' [online]

<http://www.cnta.gov.cn/html/2011-6/2011-6-14-15-26-97981.html> Retrieved on Nov 12th

2013

China National Tourism Administration (2014) 'The Tourist train from Tumen to Qibao Mountain ran again' [online]

<http://www.cnta.gov.cn/html/2014-4/2014-4-21-10-23-22271.html> Retrieved on Aug 30,

2014

China news (2007), 'Overseas Chinese Businessmen signed agreement and invested 3 billion RMB to start the "Road Harbor District" Project' [online]

<http://www.chinanews.com/cj/cyzh/news/2007/09-05/1018625.shtml> Retrieved on Nov 12th

2013

China news (2012), 'The State Council Approved Tumen River Zone Cooperation Developing Plan.' [online]

<http://www.chinanews.com/cj/news/2009/11-17/1968343.shtml>

Retrieved on Nov 12th 2013

China news (2012) 'Jilin's Yanji started to launch the direct tourist flight to Pyongyang.' [online]

<http://www.chinanews.com/df/2012/07-06/4014989.shtml> Retrieved on Nov 12th 2013

China news (2012) 'Several North Korea tourist companies held exhibition for customers in Dandong'. [online]

<http://finance.chinanews.com/cj/2012/10-13/4245453.shtml> Retrieved on Nov 12th 2013

China news (2014) 'Ji-an of Jilin province successfully sent tourist groups to North Korea'[online]

<http://www.jl.chinanews.com/news1-90379.html> Retrieved on Aug 30, 2014

Hunchun.gov.cn (2009) 'Hunchun and Rason increase practical cooperation' [online]

http://www.hunchun.gov.cn/user/index.xhtml?menu_id=182&mode=view_content&page=1&news_content_id=989 Retrieved on Nov 12th 2013

Hunchun.gov.cn (2010) 'Lee Longxi and Jin Xiuyue signed cooperation framework agreement'[online]

http://www.hunchun.gov.cn/user/index.xhtml?menu_id=442&num=280&gallery_mode=content Retrieved on Nov 12th 2013

Hunchun. Gov.cn (2010) 'The first batch of goods in the experiment point of domestic-trade with cross-border transport in Jilin province applies to get across the border. [online]

http://www.hunchun.gov.cn/user/index.xhtml?menu_id=442&num=307&gallery_mode=content Retrieved on Nov 12th 2013

Hunchun. Gov.cn (2011) 'Hunchun actively plans the Sino-DPRK self-driving tourism' [online]

http://www.hunchun.gov.cn/user/index.xhtml?menu_id=532&mode=view_content&page=1&news_content_id=3824 Retrieved on Nov 12th 2013

Hunchun.gov.cn (2012) 'The first patch of Chinese going abroad processing gets permitted' [online]

http://www.hunchun.gov.cn/user/index.xhtml?menu_id=182&mode=view_content&news_content_id=8805 Retrieved on Nov 12th 2013

Hunchun.gov.cn (2012) 'Rason Mutual Committee formally operates' [online]

http://www.hunchun.gov.cn/user/index.xhtml?menu_id=179&num=514&gallery_mode=content Retrieved on Nov 12th 2013

Hunchun. Gov.cn (2013) 'Hunchun is constructing the cross-border tourism base which faces to northeast Asia' [online]

http://www.hunchun.gov.cn/user/index.xhtml?menu_id=182&mode=view_content&page=1&news_content_id=9125 Retrieved on Nov 12th 2013

Hunchun. Gov.cn (2013) 'Hunchun developed Agricultural Cooperation Project to North Korea'. [online]

http://www.hunchun.gov.cn/user/index.xhtml?menu_id=272&mode=view_content&page=1&news_content_id=9045 Retrieved on Nov 12th 2013

Jilin Gov.cn (2008) 'The Proposal of pushing the operation of "Road Harbor District" Project' [online]

http://www.jl.gov.cn/zt/lhzt2008/wyta/200801/t20080102_350477.html Retrieved on Nov 12th 2013

Mofcom.gov.cn (2006), 'The Pre-project of Sino-DPRK Road-Harbor Integration has finished'. [online]

<http://www.mofcom.gov.cn/aarticle/difang/jilin/200603/20060301712354.html> Retrieved on Nov 12th 2013

Mofcom.gov.cn (2012), 'Hunchun-Rason International Passenger Traffic line formally operates'. [online]

<http://www.mofcom.gov.cn/aarticle/difang/jilin/201211/20121108426853.html> Retrieved on

Nov 12th 2013

Mofcom.gov.cn (2006), 'China and North Korea provided a green channel for the "Road Harbor District" Project'[online]

<http://www.mofcom.gov.cn/aarticle/difang/jilin/200603/20060301773313.html> Retrieved on

Nov 12th 2013

People.com.cn (2012) 'BeiDahuang of Yatai Branch will enter Rason' [online]

<http://finance.people.com.cn/stock/n/2012/0910/c67815-18962437.html>Reference Retrieved

on Nov 12th 2013

People.com.cn (2012) 'Ningbo has made a video-invigilation web for security control'. [online]

<http://nb.people.com.cn/n/2012/1021/c200892-17609817.html> Retrieved on Nov 12th 2013

State Ethnic Affairs Committee (SEAC) (2012) 'Hunchun-POSOC Linguistic Region constructs well.' [online]

http://www.seac.gov.cn/art/2012/9/11/art_36_165674.html Retrieved on Nov 12th 2013

Shanghai.gov.cn (2011) 'Shanghai Custom Hall tries it best to ensure the successful experiment point of domestic-trade with cross-border transport in Jilin province' [online]

<http://www.shanghai.gov.cn/shanghai/node2314/node2315/node18454/u21ai479346.html>

Retrieved on Nov 12th 2013

Small-Mid Enterprises of Jilin (SMEJL).gov.cn (2007) 'Hunchun Donglin Economic and Trade Company and American Corporation signed the agreement of operating Sino-DPRK Road-Harbor Integration Project' [online]

<http://www.smejl.gov.cn/assembly/action/browsePage.do?channelID=1127270051672&contentID=1188952587098> Retrieved on Nov 12th 2013

UNHRC (2013) China Main Page [online]

<http://www.ohchr.org/EN/countries/AsiaRegion/Pages/CNIndex.aspx>

Retrieved on Nov 12th 2013

Xinhua net (2010) 'Yanbian and Rason signed bilateral cooperation framework agreement'[online]

http://www.jl.xinhuanet.com/newscenter/2010-09/07/content_20836105.htm Retrieved on Nov 12th 2013

Xinhua net (2010) 'Cameron's first visit to China came to an end.' [online]

http://news.xinhuanet.com/world/2010-11/11/c_12760575.htm

Retrieved on Nov 12th 2013

Xinhua net (2012) 'Yanji firstly launched the international tourist direct coach to North Korea Rason'[online]

http://www.jl.xinhuanet.com/2012jlpd/2014-08/04/c_1111914954.htm

Retrieved on Nov 12th 2013

Xinhua net (2012) 'The re-construction of road from Rajin Harbor to Yuantingli was finished'[online]

http://news.xinhuanet.com/world/2012-09/04/c_112956185.htm

Retrieved on Nov 12th 2013

Xinhua net (2013) 'Cameron's first day in China: calculation of achievement.' [online]

http://news.xinhuanet.com/politics/2013-12/02/c_125796123.htm

Retrieved on Nov 12th 2013

Yanbian news (2008). 'The agreement of Walking Tourism from Tumen to Namyang was signed' [online]

<http://www.ybnews.cn/news/ybnewsbdnews/200805/49833.html>

Retrieved on Nov 12th 2013

Yanbian News (2011) 'Yanbian opened a new tourist line. Let's get across the sea and watch Kungang Mountain'[online]

http://www.ybnews.cn/news/local/201109/126602_2.html

Retrieved on Nov 12th 2013

Yanbian news (2014). 'Tourists can go to North Korea by bicycle from May 2rd'. [online]

<http://www.ybnews.cn/news/local/201404/212220.html>

Retrieved on Aug 30, 2014

Yanbian Dong-Bei-ya (2012), 'Yanji-Rason transport line opens' [online]

<http://www.ybdongbeiya.com/2NewsyInfo.asp?id=380&intID=2&ClassID=10> Retrieved on

Nov 12th 2013

Secondary Resource

Books and Articles

Chestnut, S. Illicit Activity and Proliferation: North Korean Smuggling Networks. *International Security* , Vol. 32, No. 1 (Summer, 2007) , pp. 80-111

Clarke, R, Narcotics Trafficking in China: Size, Scale, Dynamic and Future Consequences. *Pacific Affairs*, Vol. 81, No. 1 (Spring, 2008) , pp. 73-93

Cui Junyong, Research about strategy to the drug trafficking in Yanbian area related to South Korea. *Academic Communication (学术交流 Xue Shu Jiao Liu)*Feb 2010, Vol 191, No.2, pp55-58

Cui Qingzhi (2004) China's national policy, the history, current condition and future of Chinese Korean under the background of Globalization. *Collective Papers of Ph.D student in Chinese national knowledge infrastructure.*

Dittmer, L Chinese Human Rights and American Foreign Policy: A Realist Approach. *The Review of Politics*, Vol. 63, No. 3 (Summer, 2001), pp. 421-459

Du Baiyu (2014) *My Pyongyang Story: A Xinhuanews Journalists in Pyongyang*. Shanghai: Hua Xia Publisher.

Gao Jijun (2011) *Research on Agricultural Labor Transfer of Yanbian Autonomous Prefecture of Jilin province*. Collective Papers of Ph.D student in Chinese national knowledge infrastructure.

Guan Yanjiang (2010), *A research on the labor export of Yanbian area to South Korea*. Collective Papers of Ph.D student in Chinese national knowledge infrastructure.

Hwang Jang-Yap (2008) *Hwang Jang-Yap Memoirs*. Shanghai: Hua Xia Publisher.

Jin Qiangyi, The Crisis of Chinese Korean Social Shirking and its choice of developing pathway. *Journal of Yanbian University (Social Science)* (《延边大学学报社科版 Yanbian Daxue Xuebao》). Dec.2011 Vol. 44, No.6. pp25-30

Kipnis, B Constructing Commonality: Standardization and Modernization in Chinese Nation-Building. *The Journal of Asian Studies*, Vol. 71, No. 3 (AUGUST 2012) , pp. 731-755

Li Jing (2013) *The Research about Comprehensive Management of China's Drug Crime*. Collective Papers of Ph.D student in Chinese national knowledge infrastructure.

Li Meishan (2007) 'Northeast Asia regional cooperation and Chinese ethnic Korean social economic development' Collective Papers of Master student in Chinese national knowledge infrastructure.

Liu Xinrong, Analysis of the human capital loss in Northeast China. *New Long March* (《新长征 Xin Chang Zheng》), 2012 (2), pp46-47

McFarland, S and Mathews, M, Who Cares about Human Rights? *Political Psychology* , Vol. 26, No. 3 (Jun., 2005) , pp. 365-385

Meng Lijun, Research of the factors which influences border security of Jilin and strategy. *The Border Economy and Culture* (《边疆经济和文化 Bian jiang jing ji yu wen hua》) 2013 (7), pp39-42.

Nan Kang 'South Korea has a serious problem of North Escapee' *Prosecutorial View* 2009(20) 50

Nathan, A ,Human Rights in Chinese Foreign Policy. *The China Quarterly* , No. 139 (Sep., 1994) , pp. 622-643

Piao Jianyi and Li Zhifei 'The Internationalization and Influences of North Escapees'
Modern International Relations (现代国际关系 Xiandai Guoji Guanxi) 2011(7) 3-9

Pitman B. Potter (2007) 'China and the International Legal System: Challenges of Participation', *The China Quarterly*, No. 191, *China's Legal System: New Developments, New Challenges (Sep., 2007)*, pp. 699-715

Xu Qingxing (2013) *The influence of South Korea Culture to Chinese Korean*. Collective Papers of Master student in Chinese national knowledge infrastructure.

Xuan Songhe The origins and strategy of cross-border crimes in Yanbian. *Journal of Yanbian Party School (延边党校学报 Yanbian Dangxiao xuebao)*. 2009 Vol. 24, No.6, pp. 66-68

Yan Tang, 'Governing Tri-Illegal Foreigners to Represent China's Law Institution'
Northeast Window (东北之窗 Dongbeizhichuang) 2012, 12:37.

Zhao Wei (2009) *The Research about the status-quo of drug crime in China's border and strategy*. Collective Papers of Master student in Chinese national knowledge infrastructure.

Zheng Baoqin 'The North Korea problem in Sino-ROK cooperation and communication'
Collective Papers of Korea Studies. 2012(00) 106-115

Other websites

EEO (E-Economy Observation) 'Using Harbor of North Korea, Jilin found the channel to the Sea of Japan.' [online]

<http://www.eeo.com.cn/eeo/jjgcb/2006/07/15/40480.shtml> Retrieved on Nov 12th 2013

Globaltimes (2012) 'North Korea sent 40 thousand labor into China'[online]

<http://world.huanqiu.com/roll/2012-07/2876201.html> Retrieved on Nov 12th 2013

Reuters (2013) 'The number of North escapees has a significant reduction'. [online]

<http://cn.reuters.com/article/CNTopGenNews/idCNCNE99T09I20131030> Retrieved on Nov 12th 2013

SINA (2007) 'Chinese tourists can go to North Korrea with visa free'[online]

<http://news.sina.com.cn/c/2007-04-03/011611551396s.shtml> Retrieved on Nov 12th 2013

Sohu (2012) 'China and North Korea started the mutual management of Rason, Golden Floor and Granville Island'[online]

<http://roll.sohu.com/20120816/n350763675.shtml> Retrieved on Nov 12th 2013

South Weekly (2013) 'The Visitors from North Korea'. [online]

<http://www.nbweekly.com/news/special/201312/35397.aspx>

Retrieved on Dec 26th 2013

Yonhapnews Agency (2010) 'Cross-border bridge between Hunchun to Rajin will be used by the end of this month' [online]

<http://chinese.yonhapnews.co.kr/allheadlines/2010/05/18/0200000000ACK20100518004300881.HTML> Retrieved on Nov 12th 2013

Yonhapnews Agency (2012) 'Kim Jong-en reduces the collective punishment in order to get the support from civilians.' [online]

<http://chinese.yonhapnews.co.kr/newpgm/9908000000.html?cid=ACK20130212001600881>

Retrieved on Nov 12th 2013

Yonhapnews Agency (2012) 'The amount of North Escapees reduced rapidly after Kim Jong-un coming into power.' [online]

<http://chinese.yonhapnews.co.kr/newpgm/9908000000.html?cid=ACK20120701001100881>

Retrieved on Nov 12th 2013

Chapter 7

Primary Resource

Anonymous Interviewee 1, Interview with local official, 28 Nov 2014, Seoul, South Korea

Anonymous Interviewee 2, Interview with local scholar, 14 Sep 2012 Changchun, Jilin province

Anonymous Interviewee 3, Interview with scholar, 11 Aug 2015, Beijing.

Anonymous Interviewee 4, Interview with local scholar, 11 Sep 2012 Changchun, Jilin province

Anonymous Interviewee 5, Interview with local scholar, 9 Sep 2012 Dandong, Liaoning province

Secondary Resource

Alton, D and Chidley R, (2013) *Building Bridges: Is there Hope for North Korea?* Oxford: Lion Books.

Beck, P M. North Korea in 2011: The Next Kim Takes the Helm, *Asian Survey, Vol. 52, No. 1 (January/February 2012), pp. 65-71*

Cha, Victor D (2013) *The impossible state: North Korea, past and future*. New York: Ecco.

Chung Jae-Ho, China's "Soft" Clash with South Korea: The History War and Beyond. *Asian Survey, Vol. 49, No. 3 (May/June 2009), pp. 468-483*

Christopher D. H, Real Reform in North Korea? The Aftermath of the July 2002 Economic Measures, *Asian Survey, Vol. 45, No. 6 (November/December 2005), pp. 823-842*

Cumings. B (2005) *Korea's Place in the Sun: A Modern History*. London: W.W. Norton & Co. Ltd.

French, P (2014) *North Korea: state of paranoia*. London: Zed Books.

Harrold, M (2004) *Comrades and Strangers: Behind the Closed Doors of North Korea*. West Sussex: John Wiley & Sons Ltd.

Haggard, S Marcus Noland. (2007) *Famine in North Korea: markets, aid and reform*. New York: Columbia University Press.

Haggard S, Noland M and Weeks E, 'Markets and Famine in North Korea,' *Global Asia, Vol.3, No.2, August 2008, P.23*

Hanrahan E. C, 'International Food Aid Programmes: Background and Issues,' *CRS Report R41072, Dec. 2009*

Hecker. S, 'Lessons learned from the North Korean nuclear Crises' *Daedalus, 139 (Winter*

2010):47-50

Jang, Jin-sung (2014) *Dear leader (translated by Shirley Lee)*. London: Rider Books.

Jin Jing, 'Discussion on Kim Jong-Il era of 'reform and opening'. Master Dissertation collection in China National Knowledge Infrastructure, 2013, PP14-16, 20-21

Jin Qiang-yi (eds) (2014) *Northeast Asia International Cooperation: Dilemma and Resolution' Paper Collection of Tumen River Forum 2013*. Beijing: Social Science Academic Press Edition.

Kang J 'Policy Dilemma: Food Aid to all Enemy State,' *International Studies Review Vol.345, No.4 Oct., 2005, P22*.

Lankov, A (2013) *The Real North Korea: life and politics in the failed Stalinist Utopia*. Oxford: Oxford University Press.

Lerner M, *Kim Il Sung, the Juche Ideology, and the Second Korean War* (Washington, D.C.: Woodrow Wilson International Center for Scholars, 2011)

Li Dun-qiu (2006), 'DPRK reform: low voice with focus on efficiency' *World Knowledge (世界知识 Shijie Zhishi), 10: 38-41*

Li Fang-Fang and Leng Chuan-hui (2008), 'North Korea nearby fishery resource and status-quo of economic cooperation,' *World Agriculture (世界农业 Shijie Nongye), 10: 52-60*

Li Mu (2014), 'The transition and measure of US Food aid policy to North Korea', *American Research (美国研究 Meiguo Yanjiu), 1:10-39*

Li Tie (2015), *Blue Book of Tumen River Regional Cooperation. Annual Report of Tumen River Regional Cooperation 2015 (图们江区域合作 2015 年报 Tumenjiang diqu hezuo nianbao 2015)*. Beijing: Social Science Academic Press Edition.

Lim Won-Hyuk, 'Kim Jong-il Southern Tour Beijing's Consensus with a North Korean Twist', *a presentation at Korea-China forum on China's economic reform, a model for DPRK, Feb 13, 2006 Washington DC.*

Liu Ming (2008), 'North Korea economic reform: the exploring of a third way and uncertain future' *World Economy Research (世界经济研究 Shijie Jingji Yanjiu)*, 7:75-81

Manyin E.M and Nikitin, B. M 'Foreign Assistance to North Korea 2012,' *Congressional Research Service, March 10, 2012, p.13*

Piao Yinzhen, 'The analysis of the Yellow Sea maritime disputes and its impact on security cooperation between neighboring countries in Northeast Asia', *Master dissertation Collection in China National Knowledge Infrastructure, 2013*

Reiss Mitchell B., 'Hope over Experience,' *National Interest, Issue 89, May/ Jun. 2007, p.25*

Shi Jing-can, 'Sino-ROK fishery agreement's extension and elimination', *Journal of Gansu Radio & TV University (甘肃广播电视大学学报 Gansu Guangbo Dianshi Daxue xuebao)*, Vol.24, No.6, Dec 2014, pp50-58

Snyder S, 'North Korea's Challenge of Regime Survival: Internal Problems and Implications for the Future', *Pacific Affairs, Vol. 73, No. 4, Special Issue: Korea in Flux (Winter, 2000-2001), pp. 517-533*

Sweeney, J (2013) *North Korea Undercover: Inside the World's Most Secret State*. London: Bantam Press.

Szalontai B and Choi C.Y (2013), 'China's Controversial Role in North Korea's Economic Transformation: The Dilemmas of Dependency', *Asian Survey, Vol. 53, No. 2, pp. 269-291*

Tow T. W. (2014), *The United States and Asia in 2013: From Primacy to Marginalization?*

Asian Survey, Vol. 54, No. 1, *A Survey of Asia in 2013*, pp. 12-21

Tudor, D (2015) *North Korea confidential: private markets, fashion trends, prison camps, dissenters and defectors*. Tokyo; Rutland, Vermont; Singapore: Tuttle Publishing.

Wei Houqing (2005), 'Kaesong Industrial Zone and its impacts to North Korea economic reform'. *The Border Economy and Culture (边疆经济与文化 Bianjiang Jingji he Wenhua)*, No.10, pp21-27

Wei Zhi-jiang (2008), 'The transition of Lee Myung-Bak government 's policy to North Korea and its implication', *Modern International Relation (现代国际关系 Xiandan Guoji Guanxi)*, 8: 48-52

Xu De-rong and Qi Wei (2013), 'The problems and strategy of Sino-ROK strategic cooperative partnership', *Journal of China Executive Leadership Academy Pudong (浦东干部学院学报)* Vol.7, No.2, pp26-36

Xin yuan and Huang Shuo-lin, 'Sino-ROK Marine Interest Problems Research', *Journal of Shanghai Ocean University (上海海洋大学学报 Shanghai Haiyang Daxue Xuebao)*, May, 2013, Vol.22, No.3, pp419-425

Xu Zhengwei and Yang Xiaolong (2012), 'U.S Policy on Foreign Economic Aid from the Perspective of Neo-classical Realism—Demonstrated by the Economic Aid to Korea in the Post-Cold War Years', *Pacific Journal*, Vol.20, No.8, pp 31-38

Vogel, E.F.(2011) *Deng Xiaoping and the transformation of China*. Cambridge, Mass; London: Belknap.

Yan Yi (2012), 'Kim Jong-un: North Korea speeding up?' *Times Figure (时代指数 Shidai Zhishu)*, Aug 2012, 68-72

Yan Yu-ye (2008), 'Post-Cold War US Food Aid to North Korea', *International Information* (国际信息 *Guoji Xinxi*), 4:20.

Yan Yu-ye, 'Buy Peace: US economic assistance to North Korea after Cold War', *Ph.D Thesis Collection in China National Knowledge Infrastructure*, 2008. Pp104-106, 113-116

Zhang Qing-lei (2012), 'Ocean dispute and China's peaceful rising—Take example of Sino-ROK Ieodo Island Dispute', *Journal of Changchun University of Science and Technology (Social Science Edition)*(长春科技大学学报社科版, *Changchun Keji Daxue Xuebao, sheke ban*) Vol.25, No.10, pp9-13

Zhang Huizhi (2009), 'An Analysis on International Development Aid to North Korea', *Northeast Asia Forum* (东北亚论坛, *Dongbeiya Luntan*), Vol.18, No.4, 67-75

Zou Lulu, 'Exploring North Korea economic reform in the Kim Jong-Il era'. *Master Dissertation collection in China National Knowledge Infrastructure*, 2013, pp12-16, 30-31

Zhu Liaoye and Xu Yong-gen (2011), 'Exploring the future of North Korea economic reform'. *Journal of Eastern Liaoning University (SocialScience)*, Vol.13, No.5, pp130-140

Zhang Qing-lei, 'Sino-ROK Ieodo Island dispute Research', *Master dissertation Collection in China National Knowledge Infrastructure*, 2013

Appendix

Literature Review

There are six general questions asked to the interviewees during the interview:

1. How do you think about the current relationship between China and North Korea? Is there any changes in contrast to the past (according to your individual experience and media report)?
2. What role does your organization play in the economic cooperation between China and North Korea?
3. What type of official support do you know / you have already received from the government to the Chinese companies in North Korea? Which level of government?
4. Is there any difficulties that you have met / as you know Chinese companies have met in implementing economic activities in North Korea? Is the official support helpful to resolve these problems?
5. What factors have motivated your company /Chinese enterprises to develop their business in North Korea? Is there any directly connection between these factors and official support? In other words, apart from the increase of tax to country, is there any other contribution that your company or Chinese enterprises in North Korea have made so that your or these economic activities are encouraged with official support?
6. At the macro level, such as Sino-DPRK general relationship, North Korea nuclear problems, what types of potential and indirectly impacts that Chinese economic activities in North Korea could or have already created?

Chapter 4

1. This cross-Yalu River oil pipeline started from Jin-Shan bay Oil Store and arrived North Korea Sinuiju Oil Store. Its length is 30.3 kilometres.

2. In 2006, Shandong province planned to integrate seven big local state-owned coal companies into one Shandong Energy Corporation. These seven companies are: Yunzhou Mineral Corp, Zibo Mineral Corp, Zaozhuang Mineral Corp, Xinwen Mineral Corp, Feicheng Mineral Corp, Longkou Mineral Corp and Linyi Mineral Corp. The Shandong Energy Corp is planned to found on Dec 18 2010 as the third largest coal company in China with the expected output of coal over 100 million ton. However, this integration plan was never agreed by all the seven companies. Although two smaller companies, Feicheng Mineral Corp and Longkou Mineral Corp agreed the integration plan. Xinwen Mineral Corp, Zao Zhuang Mineral Corp and Linyi Mineral Corp kept neutrality. However, the most powerful one, Yunzhou Mineral Corp refused as a listed company in the stock with complicated stock right. Another powerful company, Zibo Mineral Corp also rejected the plan of integration because it did not want to lose financial control and be balanced in the new Corp. Even finally the foundation of Shandong Energy Corp achieved in March 23rd 2011 with the absence of Yunzhou Mineral Corp, it still required times to neaten domestic orders. (Ding, 2011)

3. China's rare-earth export quota had a significant reduction in 2010. The export quota of rare-earth in 2009 is 50145.1tons. In 2010, the quota reduced almost 40% and dropped to 30259 ton. Since then, China's rare-earth export quota always stayed around 30 thousand tons until formal cancellation in 2015.

4. China meets serious challenge of rare-earth loss through smuggling. Smuggling rare-earth from China to the foreign countries started from 2006 and rapid increased every year. From 2008 to 2011, the captured amount of smuggled rare-earth reached 16 thousand tons. In 2009, the smuggled rare-earth reached 20 thousand tons, as many as 40% of the 50 thousand normal export rare-earth, had a 10% increase of smuggling amount in 2008. In 2012, the amount of smuggled rare-earth in the historical largest case reached 12 thousand tons. (China Rare-Earth Association, 2013:5-6). Although China reduced the rare-earth quota from 50 thousand tons in 2009 to 30 thousand tons in 2010, the smuggled amount of rare-earth still supplied the gap of quota. (China Rare-Earth, 2012)

5. Australia and Brazil are the two major suppliers of iron ore to China by offering over 80 percent of China's import iron ore. From 2003 to 2015, China's import iron ore increased from 148 million tons to 952 million tons. The corresponding import amount from Australia increased from 21 million tons to 560 million tons (China Custom House, 2015:25-30).

6 China has been the country with largest vehicle production in the world since 2009 by producing 13.79 million in 2009, 18.26 million in 2010, 18.41 million in 2011, 19.27 million in 2012, 22.11 million in 2013, 23.72 million in 2014 and 24.59 million in 2015 (China Vehicle Association, 2015)

7. These 25 programs are Jilin parts of Haerbin-Dalian High-speed railway, Jilin-Tumen-Hunchun Custom Railway, Changchun-Tonghua Railway, Helong-Nanping Railway, Tonghua-

Guanshui Railway, Songyuan- Taolaizhao Railway, Baicheng-Wulanhaote Railway, Changchun-Baicheng High-speed Railway, Hunchun-Dongning Railway, Changchun-Changling-Baiyinhushuo Energy transport line, Baihe-Dunhua-Dongjingcheng Railway, Songjianghe-Changbai Railway, Baishan town-Quanyang Railway, Helong-Nanping Railway, Jingyu-Songjianghe Railway, Liaoyuan-Changchun Railway, Zhengjiatun-Manhanying Railway, Changshuangyan Railway, Baicheng-Jieji second railway, Baihe-Helong railway, Baicheng-Zhenxi Railway, Tongliao-Siping Railway, Changchun-Xibayanhua Railway and Jilin Railway West Round Line.

Chapter 5

1. North Korea coastal commercial firms are mainly controlled by the North Korean army. Thus, their fishing boats are usually adapted simply from small naval boats. The single-ship trawling skill is a historical, undeveloped fishing method where the fishing boats work alone with nets on one side of the boat. In contrast, the double-ship trawling technology is more advanced with higher requirement for facilities and human control of the fishing boats. It needs two fishing boats to co-operate together by using stronger facilities to attract fish (such as high-powered lights for attracting squid at night), keeping the same (or higher) speed to follow and catch up with fish groups, and finally holding larger nets to catch fish. The fishing catch from double-ship trawling could reach four to five times that of single-ship trawling.

2. The technology transfer, as well as the assistance of helping North Korean local partners to fish, is usually an extra and temporary option in the previous investment in fishing in North Korea in exchange for larger fishing areas. The similar option could also be catching some of the

fish for North Korean fishing companies to fulfil their production quotas set by the central government in Pyongyang.

3. The ocean border between China and North Korea near the access to Yalu River is not always very clear. From the late 2000s, in the name of anti-illegal cross-border fishing activities, North Korean local military units were reported to attack and rob Chinese fishing boats who had already bought fishing licenses from the central government, or who, according to GPS facilities, have not actually crossed the ocean border.

4. Recorded by the Ministry of Commerce of People's Republic of China (2009), the Inter-Korea co-operation on fishery started very early. As early as the 1970s there was inter-government discussion between Pyongyang and Seoul about fishery cooperation. In 1998, in order to resolve the problem of coastal seafood resource decline, the South Korean government planned to develop the marine territory of North Korea as an alternative fishing area, the South Korea Ocean Seafood Department and Research Institution co-operated with North Korea on seafood aquaculture, and research into Yellow Sea seafood resources and environmental research of the East Sea began. South Korea used technology transfer in exchange for the rights of shellfish aquaculture in Hwanghae and Pyongan, and salmon aquaculture in Namdaecheon. Following the summit of Joint Declaration on the North and South, the discussion and negotiation of Inter-Korea economic co-operation began. In 2000, except for the opening of the Kaesong Industrial Zone, North Korea decided to allow South Korean fishermen to enter a 2 km square of its East marine territory. South Korea also agreed to negotiate with North Korea on the issue of allowing North Korean fishing boats to enter the disputed sea area between North and South Korea. In 2005, the Inter-Korea mutual fishing area in the west sea of the Korean Peninsula was decided in the first meeting of the Inter-Korea Fishery Co-operation Working Conference and agreement reached on the further discussion

as to specific details, such as the fishing period and number of fishing boats and equipment allowed. In 2007, an Inter-Korea agreement was signed allowing South Korean boats to enter North Korean designated marine territory, payment in kind, and the potential construction of mutual fishing areas in the East Sea of the Korean Peninsula.

5. Red tide is a natural disaster occurring with a rapid increase of algae in the river and ocean. It is usually caused by water eutrophication as a direct result of the increase in human pollution. Red tide could cause the mass mortality of fish and other small living creatures in the water.

6. The eleven major types of seafood production in Bohai Sea are: prawns; small yellow fish; big yellow fish; jellyfish; crab; shrimp; megrim; mackerel; squid; codfish; and ribbon fish. Five types which have maintained original output are: prawns; megrims; crabs; jellyfish; and squid.

7. North Korea is an under-developed country in terms of fishery technology. According to Li (2004: 23-35), due to the lack of advanced fishing technology, in the early 2000s, North Korea only effectively developed half of its ocean territory, which included almost 10 per cent sea area under the DPRK-Japanese agreement for Japanese fishing and Inter-Korea agreement for South Korean fishing in North Korea. Jin (2009: 9-10) states that compared to the Bohai Sea and parts of the Yellow Sea near China, the ocean near North Korea is very clean, compared to the general level of 3.5 (heavily polluted) of the Bohai Sea environment, and level 3 (medium polluted) of the Yellow Sea environment near China, most of the North Korean sea environment achieves level 1 of the international standard for a clean natural environment.

Chapter 6

1. This agreement is the predecessor to the mutual management agreement. The framework formally constructs bilateral cooperation and establishes communication: bilateral meetings are to be held every half year for the exchange of ideas in solving problems; the two sides will create interaction between offices and departments, form corresponding working groups of co-operative areas, and hold relevant meetings of working groups to conduct research on effective strategies for pushing forward bilateral co-operation in order to promote mutual development (Hunchu.gov.cn, 2010; Xinhuanet, 2010).

2. The major Chinese representatives were: Chen Weigen, vice-head of Jilin province and member of the standing committee of the Jilin Chinese Communist Party; Zhang An-shun, secretary of the Yanbian Chinese Communist Party and member of the standing committee of the Jilin Chinese Communist Party; Zhao Zhenghao, chairman of the North Korea Rason People's Committee; Choi Kuang-nam, vice-chairman of the North Korea Rason People's Committee, and a few other important local officials from Yanbian.

3. “Road-Harbor-District Integration Project” has three major parts: road, harbor and district.

The “Road” includes the two parts: railway and highway. The highway means the 48.75 kilometers' road from North Korea Yuanting to Rajin port. The railways are the perspective 218.80 kilometers' railway lay in the eastern part of Northeast China from Dongning of Heilongjiang province to Hunchun in Jilin, and the 50 kilometers' special railway from Rajin harbor to Hunchun Quanhe port which targets to unblock the Rajin harbor by fast removal of products.

The “Harbor” means three parts: firstly, the existed No.1-No.3 port in the Rajin harbor will be re-constructed; secondly, several new ports will be constructed under the current foundation;

thirdly, the custom & products transportation line will be opened from Rajin port to southeast China, Japan, South Korea and Southeast Asia.

The “District” means the construction of two big economic zones in Rason area. The first one is Rajin China investment and Cooperation District. This district, which locates at Kuan-Gudong between Rajin and Xianfeng, with 1.3 kilometers square, will develop the export processing and business service in the future. The other one is the investment, construction and management of Harbor neighboring bonded logistic area. This district locates close to Rajin Harbor with 3.7 kilometers square. As early as March 2006, the local national development and reform commission of Jilin province has formally permitted the project of enlarging the highway between Rajin to Yuanting under the standard of China secondary road.

The project started after the licenses of opening and operation of a few projects, which include “the construction and operation of Rajin Harbor”, “the construction and operation of the railway from Rajin Harbor to Hunchun” and “Developing mineral mountains” have been formally permitted and added into Sino-North Korea ‘Road-Harbor-District Integration project’ by the top decision-maker of North Korea. The Rason China Investment and Cooperation District has been put into the plan of Overseas China economic & trade cooperation region by the Department of Commerce.

4. In stage I China invested 3 billion RMB in order to form the transport channel of the Tumen River for a big improvement in the bilateral trade between China and North Korea. The major cost of China's investment will be used in three parts: 0.3 billion RMB for the enlargement of road from Rajin Harbor to Yuanting port; 1.2 billion RMB for the construction of a railway

from Dongning, in Heilongjiang, to Hunchun, in Jilin; 1.13 billion RMB for reconstruction of a third port and construction of a new fourth port in the Rajin Harbor.

5. It is expected 51 sunshine greenhouses will be built in Rason. In the first three months, 7 greenhouses have been built with an investment of 650 thousand RMB.

6. One modern chicken farm with 20,000 layers was firstly built in 2011, this is now increased to a total of 80000 chickens (30,000 layers and 50,000 broilers).

7. The pig farm was constructed but failed to continue due to environmental problem and difficulties in the selection of a new location

8. The change of relationship between Cameron's UK government and Beijing can be seen as a suitable case. Cameron's government had a very beneficial beginning to Sino-British relationships in trade and business: in 2010, Cameron visited China and returned with a 3 billion GBP co-operation programme and 12 signed agreements (Xinhuanet, 2010). However, the relationship between China and UK declined heavily because of Cameron's meeting with the Dalai Lama in May, 2012. China punished the UK by stopping the dialogue at minister level with the UK for almost one year. However, after the announcement by Cameron recognising Tibet as a part of China, the relationship between China and UK in late 2013 normalised with the second official visit of Cameron, which gained 4.5 billion GBP in co-operation programmes and ten signed agreements (Xinhuanet, 2013).

9. The case is the foundation of a new UNHRC (United Nation Human Rights Council) in 2006 to replace the previous UNHRC (United Nation Human Rights Committee). Since 2006, China has successfully been elected three times as a member country of UNHRC: the first term of office is 2007-2009, the second one is 2010-2012, the third one is 2014 to 2016 (UNHRC, 2013). The only reason for China's absence in 2013 is that UNHRC rules state that countries can only have one re-appointment to UNHRC membership and the new term of office as member must start one year after the end of two previous terms of office. Thus, on the international level, in contrast to the huge leverage of economic power, the human rights issue is no longer an effective tool for increasing pressure on Beijing.