

The Improbable Scenario of Korean Reunification

Impacts on Economy, Society & Geopolitics



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Management Summary

A reunification of the globally interconnected democracy of South Korea and the isolated authoritarian regime of North Korea is highly improbable but would have significant implications not only for the region but also for the global community at large.

Extremely unlikely events are often neglected, and their potential impacts disregarded. Such scenarios and their potential effects can be examined using the concept of improbable scenario analysis. Therefore, this paper aimed to apply the concept of improbable scenario analysis to the case of Korean reunification. The four most improbable reunification scenarios were determined and their implications on economy, society, and geopolitics were analyzed.

To approach the aims of the paper a set of indicators was assigned to a predefined list of scenarios. Subsequently, an indicator-based plausibility assessment was conducted. Drawing on historical precedence and expert opinions, the plausibility of each indicator was evaluated, leading to the identification of the four least probable scenarios. The implications of each scenario were assessed based on a range of expert interviews. Additionally, implications for Switzerland were considered.

This paper found that among the predefined list of scenarios, the three scenarios involving negotiations were determined to be the least probable. Following closely behind was the scenario of a North Korea-led unification. It was found that a North Korean invasion would leave lasting damages and significant economic disruptions to the world's economy. North Korea would not have the means to integrate the conquered South into its system. An economic union would be mutually beneficial for the economies of North and South Korea. However, it was discovered that an economic union could have a detrimental impact on North Korea's stability. China, Russia, and the United States were identified as potentially supportive of an economic union, albeit to varying degrees. Conversely, Japan would be opposed to such a development and rejected the idea of an economic union. A political union was found to be inherently flawed on a social and geopolitical level and is likely to face significant challenges. The opposing views and conflicting interests among involved parties would create substantial clashes, making it difficult to reach a consensus and creating instability in the system. A single state reunification, despite its benefits of cheap labor and natural resources, would bring

significant economic challenges and social implications, including discrimination, social confusion, and migration. China and Russia would oppose a South Korea-dominated reunification due to security concerns, while Japan has no interest in a stronger Korea, leaving the US as the main beneficiary. It was further found that Switzerland is not explicitly prepared for a Korean reunification but addresses potential thoughts and scenarios related to it. A peaceful reunification would bring cost savings and increased trade opportunities. However, a North Korean invasion would have negative impacts on Switzerland's exports and access to key goods.

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List of Abbreviations

DPRK: Democratic People’s Republic of Korea

ICBM: Intercontinental ballistic missile

ISA: Improbable Scenario Analysis

PRC: People’s Republic of China

ROK: Republic of Korea

THAAD: Terminal High Altitude Area Defense

USSR: Union of Soviet Socialist Republics

WTO: World Trade Organization

Note on the Romanization of Names

In this paper, the romanization of names will follow the respective method used in North or South Korea depending on the origin of the name. This means that for North Korean names, the given name will be written as two words, while for South Korean names, a hyphen will be placed between the two syllables of the given name. In both countries it is customary to put the last name before the given name. This approach ensures consistency and accuracy in representing the names in their respective cultural contexts. For example, South Korea’s president 윤석열 will be referred to as Yoon Suk-yeol and North Korea’s Supreme

Leader 김정은 will be referred to as Kim Jong Un.

1 Introduction

1.1 Background Information and Relevance

Human beings are creatures that tend to follow established habits and patterns, prioritizing actions based on what is perceived as feasible and practical. However, this inclination towards limited thinking leads to the neglect of events that may have exceptionally low probabilities of occurrence but possess significant impact. Events such as the collapse of the Soviet Union, the 9/11 terrorist attacks or the Arab Spring were not anticipated by most analysts and policymakers (Hassan et al., 2021). To acknowledge and effectively address the risks associated with such events, states, international organizations, and companies alike must take improbable scenarios into account. Therefore, it is important to step outside of the groupthink and start actively considering the unlikely. Scenario analysis can help examine the resilience of a strategy in the face of the improbable and therefore help decision-makers not only to protect themselves from surprise events but also profit from unexpected opportunities (Barma et al., 2015).

One such improbable event is the scenario of a reunification of the Korean peninsula. Following 40 years of Japanese colonial rule, Korea was liberated at the end of World War II. After Japanese defeat, the United States partitioned the peninsula, with the northern side under Soviet occupation and the southern side under U.S. control. Three years later the state of the Democratic People's Republic of Korea (DPRK), known as North Korea, and the Republic of Korea (ROK), commonly referred to as South Korea, were formally established. Only two years later, North Korea attempted to invade the South and forcefully reunify the country. This resulted in the three-year-long "Korean War", which claimed the lives of over three million civilians and soldiers (Cumings, 2005). 70 years have passed, and Korea has not been able to reunify. However, there have been periods of rapprochement and increased negotiations on reunification. The two countries have embraced distinctly divergent ideologies, leading to vastly different development. North Korea exists in a state of significant economic and political isolation on the international stage, in stark contrast to the globally interconnected nature of South Korea. Furthermore, South Koreans are on average almost 50 times wealthier than their northern counterparts (United Nations Statistics Division, 2023; World Bank, 2023). Therefore, a unification

would have far-reaching consequences, not only for the peninsula and regional dynamics but also for the broader global community.

1.2 Problem Statement and Research Question

This thesis aims to identify the concept of improbable scenario analysis and apply it to the case of possible Korean reunification. For this, a range of different reunification scenarios are analyzed and assessed based on the probability. The four most improbable scenarios are identified. In a further step, this study aims to evaluate the impact the selected scenarios might have on the Korean peninsula on three dimensions: economy, society, as well as geopolitics.

2 Theoretical Framework

2.1 Literary Review

2.1.1 Scenario Analysis

The future is incredibly hard to predict and more often than not, predictions have a limited degree of accuracy when it comes to human behavior. This unpredictability increases the higher the number of different variables is given (Hassani, 2016). Therefore, our perceived notion of the future is limited. The Covid-19 pandemic has shown how easily an event, which was not seriously considered by most organizations, can put the world in a state of crisis. We rely on quantifiable variables or look at the past for future orientation and therefore neglect the unlikely and unprecedented. Scenario analysis is a technique used to widen the horizon of what we think the future could hold and therefore help decision makers to develop the best fitting strategy accordingly (Charles Roxburgh, 2009).

Scenario analysis is based on the practice of asking “what if” questions. Barma et al. (2015) state that Royal Dutch Shell, the pioneers in the use of scenarios, developed this concept in 1965 as a response to the inability of their forecasting models to capture the fast-changing environment at the time. Shell uses this technique to help their leaders stretch their minds on possible future states of the world (Barma et al., 2015). Barma et al. (2015) explain that scenarios differ from forecasting in that they do not attempt to accurately predict a future event but rather show how different events could take place.

The more complex and multifaceted a possible event gets, the harder it becomes to analyze it. Brown and Cox (2011) describe how accurate predictions are nearly impossible due to the unpredictability of the actors involved and the ever-changing variables of the environment. Predicting such events is additionally challenging because of their uniqueness (Kornwitz, 2017). Often there is very limited data, which for the most part is neither particularly accurate nor relevant. In these cases, experts often work with approximations.

2.1.2 Approximations

An approximation is a tool for whenever a variable, model or event is too complex to assess precisely or is even unknown (Mehreen Saeed, 2021). In scenario analysis, approximations can take different forms such as using simplified models, referring to historical precedents, or relying on expert opinions (Griffin, 2008).

Models which aim to predict future events can be simplified by reducing the complexity of variables and making assumptions on the relationship, impact, and behavior of indicators. Hassani (2016) exemplifies this with the event of a nuclear reactor meltdown. Assumptions can be made that key indicators like the amount of coolant, the stability of temperature, or the frequency of maintenance have direct correlations to the likelihood of a meltdown. This clearly does not grasp the full complexity of such an event, but it helps to understand how different factors can potentially affect this scenario.

Another approach is analyzing the historical precedents. For this, identical or similar events which happened in the past are identified. On this basis, the likelihood and the impact can be determined. In this particular case, the analysis focuses on the frequency of nuclear power plant accidents and the specific impact of incidents like the Fukushima disaster. Furthermore, gathering information on relevant indicators from previous events and comparing it with the scenario is a key part of utilizing historical precedents as an approximation for scenario analysis.

The assessment of experts relevant to the field of the scenario can be an extremely useful tool. Not only is it much more cost and time efficient to utilize expert opinions rather than attempting to use complex models or statistical approaches, but it also allows for a more holistic view of the scenario (Wiebe et al., 2018). Experts offer their

assessments and can further justify their judgment. In order to avoid bias, expert opinions can be aggregated and formulated to a common consensus (Martin-Vegue, 2023).

2.1.3 Signposting

In scenario analysis, signposts are indicators that help identify if current events are on the trajectory toward a chosen scenario. Signposts are a key element of scenario analysis and help identify and bridge the gap between the present and the future scenario.

Figure 1 shows a signpost scheme. To exemplify, three scenarios regarding the future of the Korean peninsula are created. North Korea invades South Korea (1), the North Korean regime collapses (2) and South Korea invades North Korea (3). Given these scenarios, signposts 1 – 6 are created, which are listed in Table 1. The signposts are indicated with colored dots on the path towards the scenario in order of increased proximity to the realization of the scenario. Signposts are guidelines to estimate a trajectory but are neither comprehensive nor necessarily required for the fulfillment of a scenario. For example, it may be possible for a collapse of the North Korean regime to occur without China ceasing its trade activities.

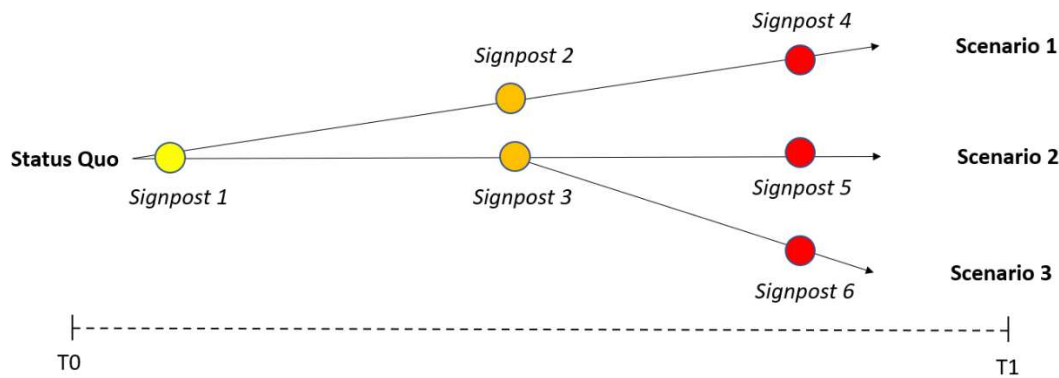


Figure 1: Signpost-based Scenario Analysis: Possible Scenarios on the Korean Peninsula

Signpost 1	Increased missile testing by the DPRK
Signpost 2	South Korea's military size reduces due to the shrinking population
Signpost 3	China no longer engages in trade with North Korea
Signpost 4	The US no longer supports South Korea militarily
Signpost 5	North Korea plunges into a severe financial crisis
Signpost 6	South Korea develops nuclear weapons

Table 1: Example of Signposts

2.1.4 Plausibility

Plausibility is a key component in scenario analysis. Selin and Guimaraes Pereira (2013) claim that in almost all literature on scenario analysis, plausibility is remarked as an indicator for good scenarios. Furthermore, in 2001 the Intergovernmental Panel on Climate Change (IPCC) demonstrated that plausibility is not only a measuring point on how well scenarios are constructed but that it is their essential part. Plausibility combines sole likelihood with supporting knowledge in order to form a measure of uncertainty (Glette-Iversen et al., 2022). This measure of uncertainty has more significance than probability when working with human unpredictability, in particular when it comes to political events or armed conflicts (Federal Office for Civil Protection FOCP, 2020).

2.1.5 Indicator-Based Plausibility Assessment

When creating a national risk profile, the Federal Office for Civil Protection FOCP (2020) uses an indicator-based plausibility model to assess the plausibility of intentionally induced events. This model has been in use by other countries like Great Britain or Singapore for their own national risk analysis (FOCP, 2020).

Figure 2 shows the plausibility model used by the FOCP. The model is based upon two lead indicators, which the FOCP chooses as “Intent & Capabilities” and “Feasibility of the Scenario”. Each lead indicator is further broken down into two sub-indicators. These sub-indicators have clearly defined rating criteria and categorizations. Each indicator is categorized and given a value on a plausibility index from one to five. The average of the values from each index is put to an average, which results in the final categorization on the plausibility index from P1 “Low Plausibility” to P5 “High Plausibility”. Finally, this resulting value is reviewed and validated by a group of experts, in order to get the most accurate results.

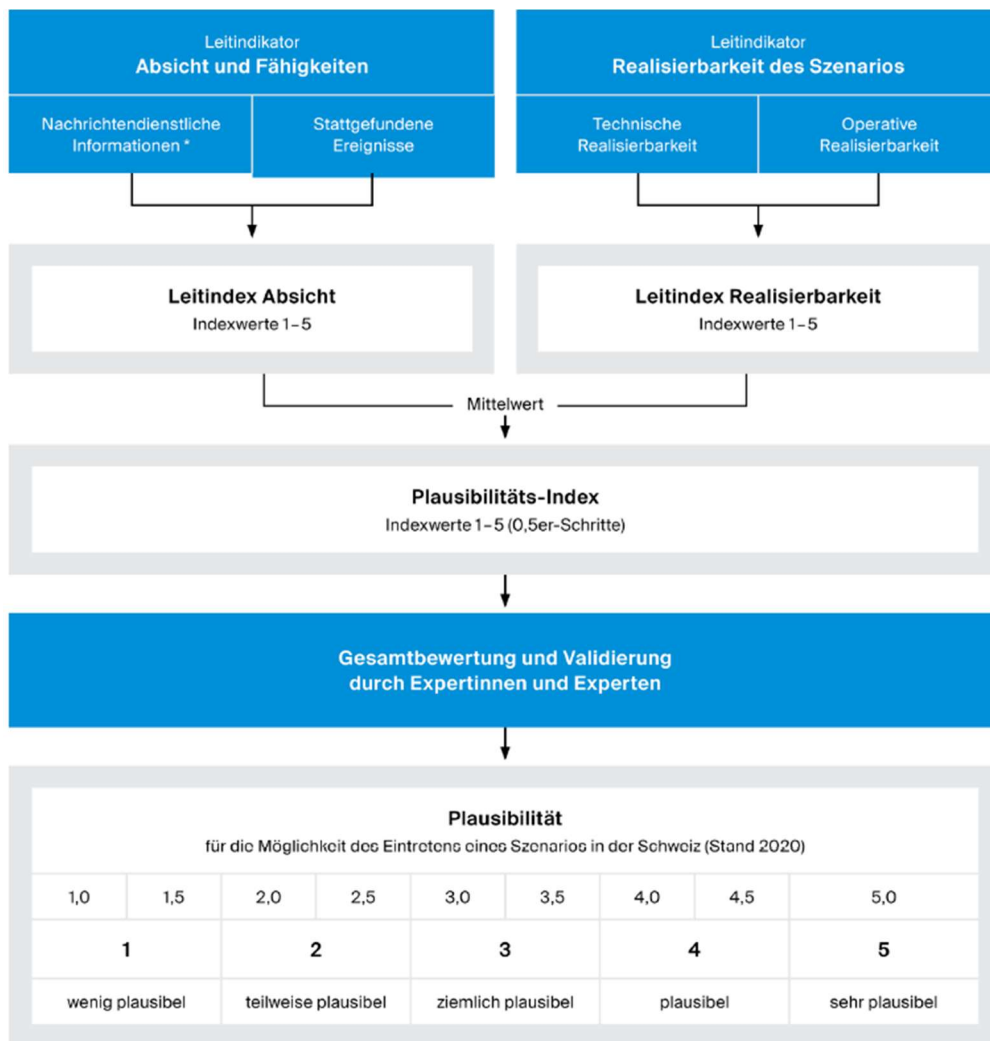


Figure 2: FOCP Indicator-Based Plausibility Model

3 Methodology

This section seeks to explain in detail the empirical methods applied in this paper in order to address the research question. A combination of qualitative and quantitative methods was applied based on primary and secondary research. The secondary research is comprised of an extensive literature review, whereas the primary research is based on semi-structured interviews as well as a survey. The paper is structured into two parts: firstly, the probability-based selection of the scenario and secondly, the assessment of the chosen scenarios.

3.1 Scenario selection

The first part of the paper focuses on the scenario selection. In order to formulate reunification scenarios, publications of research institutions and scholarly articles were extensively searched in order to find a diverse range of reunification scenarios. The scenarios do not necessarily reflect the same form of reunification. This ranges from "Negotiations Resulting in a Single State", which exemplifies the conventional and comprehensive form of reunification, to "Negotiations Resulting in an Economic Union", which signifies a significantly lesser degree of unification. In the next step, the gathered scenarios were aggregated into nine scenarios and grouped into three categories: "War on the Peninsula", "Collapse", as well as "Negotiations".

As it is this paper's aim to analyze improbable scenarios, the probability of each scenario was determined as follows. For each scenario, an indicator-based plausibility assessment method was applied. This method was based on a literature review and a semi-structured interview relevant to the field. A total of 38 indicators, so called "signposts", were created, which imply the assumed trajectory toward a scenario. In order to assess the plausibility of each signpost a combination of expert assessment and historical precedents was used. A survey was conducted to evaluate the plausibility of the signposts. Appendix B shows a list of 15 experts specializing in the field of the Korean peninsula, which participated in the survey. The experts were requested to assess each signpost and assign a rating using a five-point scale consisting of the options "Impossible," "Extremely Unlikely," "Rather Unlikely," "Possible," and "Likely." It should be noted that the answer options were intentionally skewed towards the "improbable" side. This deliberate approach aimed to accurately determine the signposts with the lowest probability in a comprehensive and detailed manner, aligning with the primary objective of the survey. The survey results can be seen in Appendix H. Similarly, each signpost's historical precedent was assessed based on a literature review. A five-point scale was used to rate each signpost among the options "No Historical Precedent", "Limited Historical Precedent", "Moderate Historical Precedent", "Strong Historical Precedent" as well as "Extensive Historical Precedent". The literature-based assessment of the historical precedent can be found in Appendix C.

In a next step, the rating from the expert assessment was combined with the rating of the historical precedent, so that each signpost has a plausibility score reflecting the judgment of experts as well as previous occurrences of the signpost, as can be seen in Appendix D. Each scenario was allocated seven signposts: Two low-weighted signposts, three normal-weighted signpost and two heavy-weighted signposts. The different weight reflects how close each signpost is to the scenario. Appendix E shows the signpost assignment for each scenario. For example, increased inter-Korean communication reflects a low-weighted signpost whereas a denuclearization of North Korea is regarded as a heavy-weighted signpost, as the latter one is much more impactful than the prior. The signposts were not mutually exclusive to the scenario and did not necessarily reflect the same level of weight for each scenario. For example, the US withdrawal of its troops from the Korean peninsula is a low-weighted signpost for “Negotiations Resulting in an Economic union”, whereas it is a normal-weighted signpost for “Negotiations Resulting in a Political Union”, as this is a point of debate, which is much more relevant in the latter scenario. Low-weight signposts were given a weighting of 0.75, normal-weight signposts a weighting of 1 and heavy-weight signposts a weighting of 1.25 in order to reflect their increasing significance.

For each scenario its respective plausibility score was consequentially calculated, as can be seen in Appendix F. For this, the mean of the scenarios assigned signposts’ plausibility score was taken. From the now plausibility-assessed scenarios, the four reflecting the lowest probability were selected. These were, in order of descending probability, “Military Conflict Resulting in DPRK Ruled Peninsula”, “Negotiations Resulting in an Economic Union”, “Negotiations Resulting in a Single State” and “Negotiations Resulting in a Political Union”.

3.2 Impact Analysis

The second part of the paper focuses on the assessment of the previously selected scenarios. The assessment was based on three selected dimensions of impact: economy, society, and geopolitics. These dimensions were selected to represent a comprehensive range of impacts within the peninsula as well as outside. A holistic and interdisciplinary approach is needed to better understand the consequences of reunification.

Firstly, economic factors play a crucial role in reunification, in particular, due to the extreme differences in economic power between North and South Korea and the high cost of integration. In a 2015 comparative study Cheong finds that estimates from previous studies do not reflect the complexity of possible reunification and are hardly comparable as they vary in assumption, target income and other variables. For this reason, this part will focus on a qualitative approach in assessing economic impacts.

Secondly, the societal implications are an even greater obstacle to reunification, as 70 years of indoctrination of opposing ideologies have split the Korean peninsula even further on a societal dimension. This includes aspects such as ideology, demographics, education, and social integration.

Lastly, the geopolitical consequences lie of the heart of the reunification question, as it was the geopolitical circumstances that led to the division of the Korean peninsula. In this part, four major powers with stakes in the Korean peninsula will be considered: China, the United States, Russia, and Japan. These countries were selected due to their influential role and historical connection to Korea. As pointed out by Swiss Federal Councilor Ignazio Cassis, reunification is impossible without the support of China and the United States (personal communication, April 25, 2023). Russia, as part of the Soviet Union, was the main supporter of North Korea in the Korean War and throughout the Cold War period. Japan's legacy on the Korea peninsula is long lasting, as the 40 years of colonial rule shaped Korea drastically and lies at the root of the division. Moreover, all four of these countries were members of the six-party talks, which were negotiations concerned with a peaceful resolution for the denuclearization of North Korea.

This paper furthermore opened the discussion on the possible effects Korean reunification would have on Switzerland. It touched upon economic implications as well as the geopolitical consequences of such developments.

The impact assessment was primarily conducted based on the information retrieved from interviews and when needed, supplemented with a literature review. 13 semi-structured interviews with experts relevant to the field were conducted. This includes researchers, diplomats, NGO associates as well as academic scholars located in South Korea, Japan, China, Russia, the United States, and Switzerland. The interviews were conducted virtually, through Zoom, or in person. Additionally, one interview was

conducted through email communication. This paper references the information retrieved from the interviews in the following way. Each interview partner was assigned an abbreviation to refer to them (e.g., PW refers to Peter Ward). Furthermore, each answer given is numbered. Therefore, “(PW-2)” refers to Peter Ward’s answer number 2. The full list of interview partners and their respective abbreviation can be found in Appendix G.

Finally, the impacts across the three dimensions and four scenarios were brought together and interpreted with regard to the research question.

3.3 Limitations

Given the highly complex and multi-faceted nature of Korean reunification, it is not feasible to provide a comprehensive description of the scenarios. Similarly, the list of signposts is not extensive and may not necessarily be required for the set scenarios. There is an uncountable number of factors that play into the realization of a scenario, but this paper focuses on the 37 signposts that it deems to be the most relevant to the respective scenarios. Other factors such as religion, legal aspects, security concerns, historical legacy, nuclear weapons, and environmental considerations were either not taken into account or only given limited consideration in the analysis.

Moreover, the survey experts highlighted that their responses could vary significantly depending on the political leadership in South Korea, which is likely to undergo frequent changes over the course of the next few decades. It is worth noting that the experts' perspectives and answers may differ if different political leadership were in place, indicating the influence of specific leadership contexts on their assessments.

Furthermore, it must be noted that the assignment of signposts to the scenarios as well as the assigned weighting is not necessarily representing a universal or absolute truth. Therefore, the plausibility assessment of each scenario cannot be considered more than an approximation of its likelihood.

Due to the speculative nature of the topic many experts were not willing to fully engage in discussions on possible effects of reunification scenarios, as they feared reputational and political risks. Furthermore, it is important to acknowledge that certain interview participants responded to the questions based on their political agenda.

While there is literature on niche possibilities of reunification scenarios, there is a limited amount of existing research on the implications of these scenarios, particularly beyond the impacts of a comprehensive ‘single state’ reunification. Therefore, the impact analysis is largely based on interviews. Consequentially it cannot go into extreme details in many areas, as the interviewees were not able or willing to make exact predictions.

4 Findings on the State of the Korean Peninsula

4.1 State of Economy

4.1.1 Economic Overview

South Korea is one of the world's leading economies. According to the World Bank (2023), South Korea is the 10th biggest economy in the world and has a PPP adjusted GDP per capita of 46'888\$ as of 2021. South Korea rose from being one of the poorest countries in the world to being one of Asia's economic powerhouses (CFI, 2022). According to South Korea's ministry of economy and finance (2023), the rate of unemployment has been consistently between 3% and 5% over the last 10 years and has leveled to 3.1% as of February 2023. South Korea experienced a surge of inflation because of the global covid-19 pandemic and had its pre-pandemic average of roughly 1.5% increase to 4.8% as of February 2023 (Ministry of Economy and Finance, 2023).

South Korea's economy is characterized by its 'Chaebols'. Verdict (2022) describes Chaebols as a business conglomerates which operate in a variety of industries and are typically family-run. The five largest Chaebols (Samsung, Hyundai, LG, SK, and Lotte) were responsible for 44% of South Korea's nominal GDP in 2019 (Verdict, 2022). Furthermore, Verdict (2022) explains that they have the power to heavily influence politics in their favor.

In comparison to South Korea's strong capitalist economy, North Korea builds a stark contrast with its perceived centralized command economy. The Heritage Foundation (2023) labels the North Korean economy as "repressed" with an economic freedom score of just 2.9 out of 100, which is last out of 176 ranked countries. The North Korean economy operates under the complete determination and control of its Communist Party, with every aspect being tightly regulated. The combination of self-isolation and international sanctions has had a detrimental impact on the economy, leading to years of struggle and hardship. (The Heritage Foundation, 2023). However, the North Korean economy has been undergoing fundamental changes over the last decade with the increasing rise of a niche private market. Cha and Collins (2018) found there is a growing space for market activities within the DPRK. These market activities serve as a bridge between the country's official command economy and the emerging private sector. There

are two types of markets in the North Korean economy. Firstly, markets which are legally permitted by the state and therefore have to pay a tax in order to operate. Cha and Collins (2018) estimate that the taxes and fees collected from these markets accumulate to \$56.8 million dollars from 436 markets every year. Secondly, the *Jangmadang* (장마당) markets can best be described as a type of black market, which made illicit trade activities possible at both a state level with state-owned enterprises and trade companies, as well as the private sector with smuggled goods (V. Cha & Collins, 2018). These markets rose as a result of the collapse of the North Korean public distribution system in 1995, which supplied people with all sorts of basic necessities and used to be the backbone of its economy (V. Cha & Collins, 2018).

The United Nations Statistical Division (2023) estimates that the GDP per capita of North Korea in 2019 was only \$643. This figure is nearly 50 times smaller than that of its southern counterpart. A modeled estimate by the International Labor Organization (2023) placed North Korea's unemployment rate at 2.1% in 2020. However, the World Bank (2022) emphasizes that a low unemployment rate does not necessarily entail a developed economy. In countries with little to no social welfare programs, people cannot afford to wait for a desirable or fitting job and therefore must take on jobs that leaves them in a vulnerable position (World Bank, 2023).

4.1.2 Trade Profile

The Republic of Korea is not only part of the WTO since its inception but is also strongly integrated into global trade (2022b). The World Bank (2021) shows that international trade is crucial for South Korea, as it makes up 80% of its GDP. In 2021 South Korea was the worldwide 7th largest exporter of goods and the 9th largest importer (WTO, 2022f). China is South Korea's most important trading partner with just under a quarter of its exports going to China (WTO, 2022a). Other important trading partner for South Korea include firstly the United States with a total trade volume just over 160 billion USD, followed by Japan with 81 billion USD and Vietnam with 78 million USD (OEC, 2022). The OEC (2022) reports that ROKs main exporting sectors in 2021 are integrated circuits at \$116B in exports, followed by cars and motor vehicle parts at roughly \$64B. In its display of latest tariffs, the WTO (2022b, 2022e, 2022c, 2022d) shows that South Korea has total trade weighted MFN average tariff of 8.9%, which is

rather high compared to other countries such as Germany (3.2%), Japan (2.4%) or Taiwan (2.1%). The WTO (2023) states that South Korea is part of several regional trade agreements (RTA). This includes the ASEAN-ROK agreement, the Asia Pacific Trade Agreement, as well as trade agreements with the European Union, EFTA, and the United States (WTO, 2023).

North Korea’s relation to international trade is antithetical to South Korea. Choe et al. (2006) describe how before the collapse of the Soviet Union the majority of North Korea’s trade was conducted with other communist states, in particular China and the Soviet Union. They found that the Soviet Union was a crucial trade partner as well as source of economic aid until the late 1980s (Choe et al., 2006). The economic crisis caused by the collapse of the Soviet Union forced North Korea to liberalize its trade policy. Choe et al. (2006) showed that by the turn of the millennium, Japan, South Korea and Thailand accounted for more than half of North Korea’s international trade with 20%, 10% and 22% respectively while trade with Russia shrank to a mere 2%.

This shift helped only minimally in improving North Korea’s consistent trade deficit. In 1990, North Korea’s imports were almost twice as big as its exports with a trade deficit of over \$1 billion (Choe et al., 2006). Figure 1 shows the DPRK’s trade balance through the years 2000 to 2021. North Korea averaged a trade deficit of \$1.08 billion USD. In 2019 North Korea’s imports were more than seven times greater than its exports with a peak trade deficit of \$2.3 billion USD.

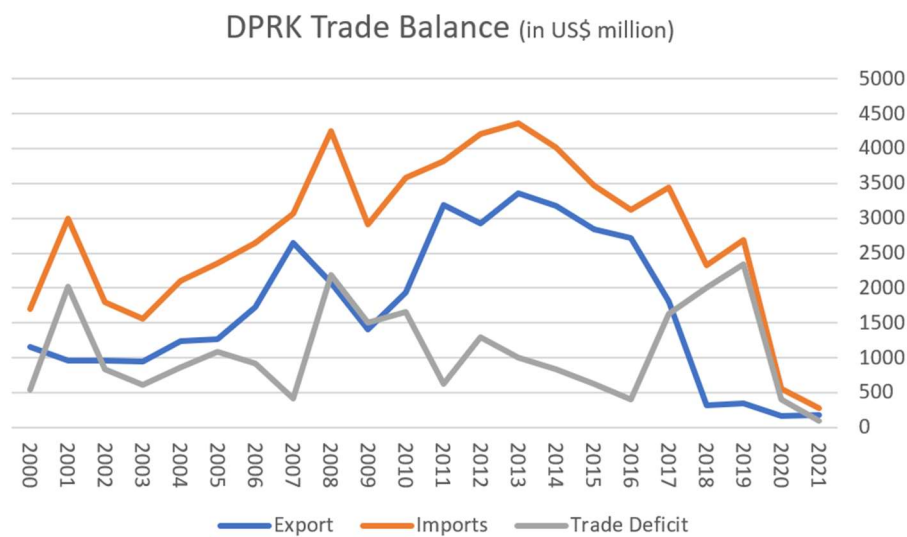


Figure 3: DPRK Trade Balance, based on the CEPII's BACI Database (Gaulier and Zignago, 2023)

North Korea's trade policy is highly influenced by sanctions. Kim states (2017) that as a result of the United Nations sanctions, the number of North Korea's trading partner became increasingly limited. Throughout the sanctions, China has remained by far North Korea's biggest and most important trading partner. In 2017, almost 60% of North Korea's exports went to China and more than 95% of its imports came from the People's Republic of China (PRC) (OEC, 2023). The main field of exports are natural resources such as mineral oils or ores as well as textiles (OEC, 2023). Due to the Covid-19 pandemic and the DPRKs consequentially shut-off from the outside world, trade drop severely starting from 2020.

4.2 State of Society

4.2.1 Demographics

Ever since its foundation, the North Korean population has been roughly half as big as the population of South Korea with about 9 million Koreans living in the DPRK and 20 million in the ROK in 1949 (Trewartha & Zelinsky, 1955). According to the UN Population Division (2022), this trend continued with the ROKs current population of 51.8 million being almost exactly twice as big as the DPRKs 25.9 million as of 2021. Furthermore, they show that in both countries, the age distribution has shifted towards a bigger share of the elderly population. In 1950 only about 2.6% of both countries' population were above the age of 65, whereas by 2021 this shifted to roughly 11.1% and 15.8% of the DPRKs and ROKs population respectively (UN Department of Economic and Social Affairs, Population Division, 2022). South Korea is facing a major birth rate crisis. According to the Korean Statistical Information Service (2023), the fertility rate of South Korean women fell to 0.78, which is the lowest worldwide. Since a fertility rate of at least 2.1 is required for a population to sustain, South Korea's population is projected to decline to 27.66 million by 2070 (Statistics Korea, 2023). Even though North Korea's fertility rate is not as critical as South Korea's, it is still below the required 2.1 with 1.79 births per woman as of 2021 (UN Population Division, 2023).

4.2.2 Societal Concepts

In order to understand North Korean society, it is essential to understand two key concepts: the *Songbun* (성분) system as well as the *Juche* (주체) ideology.

Collins (2012) describes Songbun as a caste system under which every North Korean citizen is socio-politically classified into one of roughly 50 Songbun ranks based on their heritage and loyalty to the regime. He explains that this rank determines every aspect of a person's life including one's opportunities for housing, marriage, education, healthcare, food, and employment. Collins (2012) elaborates that each Songbun is part of one of three categories: Firstly, the 'core' class (28% of the population), includes people favorable and loyal to the regime. The core class consists of party cadre as well as people from families which were peasants, revolutionaries or in any other form part of the Korean War. Secondly, the 'Wavering' class (45%) makes up the largest part of the population and are comprised of families which had previously lived in the ROK or China, families of low-level merchants or other economic offenders. Lastly, the 'Hostile' class (27%) includes those who supported the ROK forces in the Korean War, landlords, capitalists, or people who are not in line with party ideology.

Juche is the state ideology applied by North Korea and described by Kurbanov (2019) as a concept which is often regarded as the North Korean interpretation of communism. This dates back to article 4 of the North Korean 1972 constitution which states that: "The DPRK is guided in its activity by the ideas of the Juche of the Workers' Party of Korea, in which Marxism-Leninism finds its creative application to the reality of our country." (Kurbanov, 2019). However, throughout the years, the ideology shifted away from communism and towards an expression of self-determination, self-reliance, and sovereignty on a political and economic level. North Korea emphasizes its pursuit of independence through a focus on national defense, which is reflected in the *Songun* (선군) concept that puts the "military first". As part of this concept, every Korean male must serve in the military for ten years (Kurbanov, 2019). The principles of Juche and Songun can be exemplified by North Korea's nuclear weapons program. A substantial portion of the state's financial resources is allocated to this program, highlighting the "military first" approach. The underlying objective of the nuclear weapons is to secure independence from other states by establishing a nuclear deterrent capability (Kurbanov, 2019).

There are two ideologies that have shaped South Korean society to a great extent. Kurbanov (2019) describes anti-communism as one of the most significant and fundamental ideologies in shaping the South Korean identity. Shin (2017) states that the

fear of communism lies deep within South Korea's social institutions and formed as a result of the Korean War and the United States' anti-communism doctrine throughout the Cold War. Shin (2017) elaborates that the National Security Law of 1948 is a key instrument in upholding anti-communistic sentiments. It outlaws any sympathizing with North Korea or communist thought. Furthermore, it prohibits South Korea's from consuming any type of material that supports communist ideology, thus effectively banning the consumption of North Korean media. According to Shin (2017), there have still been numerous prosecution under the national security law in the last two decades, with 90 cases in 2011 alone.

Korea had taken on the Confucian doctrine as early as the Three Kingdoms period (220-280) and by the time of the Joseon dynasty (1392-1897) it had become the official state ideology (Śleziak, 2013). In recent history Confucianism has become less prevalent but still plays a significant role on both the DPRKs as well as the ROKs society. Kurbanov (2019) shows that the DPRKs Juche ideology is heavily based on Confucian values and morals. He elaborates that Juche preaching such as man being the owner and deterrent of everything or concept of relations between father and son, rules and subject, and husband and wife can be traced back to Confucius' "Book on Filial Piety".

According to Śleziak (2013), Confucianism still influences many aspects of modern life in the ROK such as education, work culture or their strong, hierarchical and respect-driven relationships. He elaborates that achieving academic success is emphasized in Confucian teachings and is extremely important in Korean culture. The school system is notoriously competitive with students having to undergo extreme amounts of hard work in order to prevail. Similarly, he describes how respect for authority defines Korean work life with a strong connection to the Confucian Father/Son and Elder Brother/Younger Brother relationships (Śleziak, 2013).

4.2.3 Political Structure

According to Albert (2020), North Korea is a totalitarian dictatorship with a comprehensive cult of personality around the Kim family. Kim Jong Un and his predecessors Kim Jong Il and Kim Il Sung have controlled the DPRK since 1948 and as supreme leaders possess absolute power (Albert, 2020). The Kim family rules the Workers' Party of Korea, which is the main political power in North Korea (Albert, 2020).

In contrast, South Korea is a democratic country with a multi-party political system, in which a democratically elected president serves a five-year term (European Union, 2022). In practice, the South Korean government is predominantly characterized by a bipartisan system with only two major political parties holding significant size and influence. The People's Power Party, a conservative right-wing political party, currently holds the majority and is led by President Yoon Suk-yeol (European Union, 2022). According to David Tizzard, Lecturer at Hanyang University, the People's Power Party is known for its firm stance on North Korea, often denouncing human rights abuses committed by the country (DT-1). Additionally, the party maintains a strong relationship with the United States and seeks closer ties with Japan, while remaining cautious of China (DT-1). The Democratic Party of Korea is the main opposition party and has a centrist-liberal position (DT-1). It is known for seeking closer relations to North Korea (DT-1). In particular through the Sunshine policy under Kim Dae-jung (later called Moonshine under Moon Jae-in), which emphasizes peaceful cooperation and reconciliation with North Korea (Malevich, 2018). The Democratic Party holds a negative sentiment towards Japan, displaying animosity and hostility in its relation (DT-1). The party advocates relatively close relationship with China and exhibits some wariness towards the United States (DT-1).

4.3 Geopolitical State

4.3.1 United States

Cumings (2005, p. 187) states that after the defeat of the Japanese at the end of World War II in August 1945, two US colonels drew up the line along the 38th parallel that would consequently divide the Korean Peninsula into two zones. He states that the northern part was to become the DPRK and the southern part the ROK, which were occupied by the Soviet Union and the United States respectively (Cumings, 2005, p. 187). Five years later the United States were the main ally and decisive driving force in the Korean War (Cumings, 2005). This builds the founding of modern United States relations with both North and South Korea. Manyin et al. (2022) state that after the end of the Korean War in 1953, the United States and South Korea signed a Mutual Defense Treaty, which ensures that if one party is under the attack of a third party, military assistance must be provided. The United States currently stations roughly 28'500 military personnel in the

ROK and has its largest overseas military base in Pyeongtaek, South Korea (Manyin et al., 2023). During the Cold War era South Korea emerged as one of the US' most important trading partners and in particular after its democratization, the ROK is a key ally in establishing US policy in Northeast Asia (Manyin et al., 2022). According to Smith (2007), the United States withdrew their nuclear weapons from the ROK in 1991, which paved the way for the US-DPRK "Framework Agreement" three years later, consequentially putting the North Korean development of nuclear weapons on hold for eight years. Manyin et al. (2022) state that US-ROK ties became increasingly close in the 2000s and 2010s until they started to cool down under the new Trump and Moon administrations in 2017. They state that this stems from the differences in their approach towards the DPRK as well as issues related to China and trade. Yet, under the Biden and Yoon administration South Korea and the United States are ever closer partners in economics and security as well as the implementation of the United States' Indo-Pacific strategy (Manyin et al., 2023).

Hilpert (2018) claims that North Korea sees itself threatened by the US presence on the Korean peninsula, particular in the Cold War period, during which the United States had nuclear weapons stationed in the ROK. As stated by Ploetzing (2015), the two countries do not hold official diplomatic ties and stated hostile positions since the DPRKs inception. After the discovery of the North Korean nuclear program by the US, the DPRK joined the Non-Proliferation Treaty (NPT) in 1985 amid pressure from the Soviet Union. This prohibited them from further developing its nuclear arsenal. North Korea threatened to withdraw from the NPT in 1993, which they had joined eight years prior (Olsen, 2005). Olsen (2005) states that after negotiations with the United States, the DPRK suspended their intend to withdraw from the NPT and in 1994 signed the "Agreed Framework" with the US. However, Wertz and Gannon (2015) find that despite a more hostile approach by the Bush Administration, which labeled North Korea as part of an "axis of evil", the US quickly engaged in the "Six Party talks" with the DPRK, China, Russia, Japan and the ROK, amid a new nuclear crisis. The achievements resulting from these negotiations were short lived and under the Obama administration sanctions tightened again (Wertz & Gannon, 2015). The Trump administration engaged in two US-DPRK summits in Singapore and Hanoi in 2018 and 2019 respectively, which however were not able to wield the results hoped for and compromises like the halting of ROK-US military exercises were later continued under president Biden (Korea Peace Now, 2023).

4.3.2 Japan

According to Satoh (2020), the relations of both North and South Korea with Japan is heavily defined by the 35-year period of colonial rule of Japan of the Korean peninsula. He states that despite ROK-Japan relations being normalized in 1965 and the corresponding “Agreement on the Settlement of Problems concerning Property and Claims and on the Economic Cooperation between Japan and the Republic of Korea” was introduced to settle the post-war dispute “completely and finally”, historical disagreements remain a key issue in their relations. Sakaki (2019) states that after the normalization of relations, ROK-Japan ties increased significantly, especially in the 1970s, as Japan emerged as one of South Korea’s major trading partners as well as through Tokyo’s participation in the Six-Party Talk later on. However, the issues of “comfort women”, forced labor during the colonial period, as well as the territorial dispute of Dokdo/Takeshima island caused a strong anti-Japan sentiment in South Korea and froze Tokyo-Seoul relations especially under the Moon administration (Satoh, 2020). Yeo (2023) finds that with the 2022 election of ROKs president Yoon Suk-yeol Seoul’s foreign policy seems to be changing. He states that Yoon’s visit to Japan in March 2023 for the Yoon-Kishida summit was the first official presidential visit in 12 years and subsequently resulted in an agreement of the forced labor dispute, which had reignited in 2018. He claims this to be a significant step in restoring bilateral relations between South Korea and Japan.

According to Ploetzing (2015), Pyongyang views Tokyo with an even stronger resentment of the oppressive colonial period. She states that besides the United States, Japan is the prime target of DPRK’s propaganda and declared as one of North Korea’s biggest enemies. According to Blomquist and Wertz (2022), in light of the international competition for legitimacy during the Cold War period, North Korea and Japan developed informal relations and trade ties. However, they state that Tokyo and Pyongyang never established official diplomatic relations, despite efforts in 1990 to normalize relations. A key issue in this process was the North Korean nuclear crisis as well as the issue of abductions of Japanese citizens by the DPRK (Blomquist & Wertz, 2022). Ploetzing (2015) elaborates that in the 1970s and 1980s the DPRK carried out a series of kidnappings, some

of which on Japanese soil, for motives, which are disputed. She states that it is estimated that up to 100 Japanese citizens have fallen victim to the abductions, though the Japanese authorities officially only claim 17 cases and Pyongyang only admitted to 13 kidnappings (Ploetzing, 2015). Blomquist and Wertz (2022) find that another key point in Japan-DPRK relations is the roughly 600 thousand ethnic Koreans that remained in Japan after World War II. They find that those who supported the DPRK regime created Chongryon, also known as Chosen Soren, which acts as a link between North Korea and Japan and served as a trade portal and de facto embassy. Negotiations between the two countries peaked in 2002 with the Kim-Koizumi summit, which resulted in the “Japan-DPRK Pyongyang Declaration” (Blomquist & Wertz, 2022). As noted by Berkofsky (2011), in this agreement North Korea pledged to extend its suspension of missile tests as well as complying on the agreement on North Korea’s nuclear crisis. He further finds that Kim Il Sung admitted to the abduction of 13 Japanese citizens, out of which 8 had died. Soon after, North Korea broke the agreement with missile tests in 2006, which led to Japanese sanctions (Berkofsky, 2011). North Korea’s nuclear weapons program and missile tests, many of which were sent across to the Sea of Japan, threaten Japan and its security and therefore negatively impact the relations between the two countries strongly (Ploetzing, 2015).

4.3.3 China

According to Lee (2020), South Korea and China first established diplomatic ties in 1992. He states that PRC-ROK relations are predominantly based on a commercial and economic strategic partnership and to a much lesser extent on political relationship. Beijing-Seoul ties have tightened significantly since the early 90s. However, for decades before the establishment of diplomatic relations South Korea-China relations were much more hostile (J.-Y. Lee, 2020). The Korean War was a major crisis in PRC-ROK ties, as China joined the North Korean forces and therefore significantly altered the outcome of the war (Cumings, 2005, p. 289). Lee (2020) elaborates that after the establishment of the Armistice Agreement in 1953, relations stayed hostile for over 20 years until ROK dictator Park Chung-Hee moved towards a more open relation with socialist countries in 1973. He further states that this was a first step in South Korea’s policy shift towards a separation of economic interest and politics. As China’s economy opened up under Deng Xiaoping and South Korea’s export-oriented economy started to take off, a stronger

mutual interest in economic relations arose (J.-Y. Lee, 2020). In the 1980s South Korea made its intentions clear to establish the Nordpolitik policy, which sought to normalize relations with countries of opposing ideologies and social systems, in particular China and the Soviet Union (Cumings, 2005, p. 505). According to Kim (2022), their economic partnership was not only a necessity for both countries but also complementary, which was possible since South Korea had intermediate goods and technologies which China desired. After the initial establishment of “Friendship & Cooperation” between Beijing and Seoul in 1993, their relationship continuously improved from “Cooperative Partnership” to a “Strategic Cooperative Partnership” in 2017 (H. Kim, 2022). Furthermore, Kim (2022) states that throughout that time period PRC-ROK trade volume increased 47-fold from \$6.73 billion in 1992 to \$300 billion in 2021. However, in other aspects, China-South Korea relations did not develop as smoothly. The two main challenges in their relations were the issues surrounding North Korea as well as increasing ROK-US closeness (H. Kim, 2022). According to Lee (2020), the DPRK-ROK escalations in 2010, which resulted in the death of several South Koreans, not only significantly deteriorated PRC-ROK relationship, as Beijing was reluctant to condemn North Korea’s action, but also pushed South Korea closer to the United States. He further states that this unwillingness stems from Beijing’s interest in maintaining the status quo on the peninsula as they feared a potential collapse of the DPRK regime as well as the strategic value North Korea had in the US-China rivalry (J.-Y. Lee, 2020). Beijing perceived South Korea’s deployment of the American Terminal High Altitude Area Defense (THAAD) system as a threat to their national security and quickly introduced retributory actions in the form of economic sanctions as well as blocking Chinese tourists from visiting the ROK (H. Kim, 2022).

According to Wertz (2019), Sino-North Korean relations, which are stated to be as close as ‘Lips and Teeth’, are marked by distrust, mutual asymmetrical dependency, and tensions. Frohman et al. (2022) explain that North Korea’s complicated relations with China range back to the beginning of the Korean War. They state that Kim Il Sung initially refused military assistance from China for his June 1950 attack on the ROK but heavily relied on the Chinese intervention into the war less than half a year later (Frohman et al., 2022). They further note that this tensional relationship continued after the war as Beijing maintained armed forces in the country until 1958, during which North Koreans with ties

to China got purged from the DPRK leadership. Vu (2021) explains that Pyongyang masterfully exploited the Sino-Soviet competition, which resulted not only in economic aid from both countries but also in the *Treaty of Friendship, Cooperation, and Mutual Assistance* with Russia in 1961 and with China less than a week later. Under this treaty, China is obliged to aid North Korea militarily if it were to be attacked. While the economic and cultural part of the treaty was renewed as of July 2021, the automatic military assistance clause was removed (Vu, 2021). Frohman et al. (2022) claim that Sino-North Korean relations continued to stay shaky in particular due to the increasingly closer Chinese ties with the United States, which caused distrust from Pyongyang, as well as the development of the DPRK's nuclear program. They further state that Sino-North Korea relations further plummeted amid China's establishment of diplomatic ties with the ROK in 1992, which Pyongyang perceived as an immense betrayal by the PRC. According to Wertz (2019), China's main priority is to maintain the current state of the DPRK as it is. He states that Beijing fears that if the Kim regime were to collapse, North Korea would lose its 'buffer state' role and enable military deployment of US troops or its allies on the Chinese border. Albert (2018) states that China is by far North Korea's most important trading partner. She claims that China gained a deep influence over North Korea as its sanction-crippled economy was reliant on Chinese trade (Albert, 2018). Even though Pyongyang's nuclear tests promoted China to vote in favor of the UN sanctions of North Korea, Sino-North Korean trade steadily increased (Frohman et al., 2022).

4.3.4 Russia

Just like the US, the Soviet Union's relation, and therefore Russia's relation with the Korean peninsula can largely be traced back to the split of the peninsula and the Soviet's occupation of the northern part as well as its support of the DPRK in the Korean War (Zhebin, 1995). He claims that Russia has a significant interest in a stable Korean peninsula and wants to be included in the peace process. According to Kropachev (2020), the USSR regarded the DPRK as the sole legitimate Korea and therefore diplomatic relationship with the ROK was only established in 1992 after the USSR collapse. He states that in the following years ties grew closer, in particular economically, but also in terms of mobility, energy and humanitarian cooperation. The leadership of Russia and the ROK received mutual state visits in 2012 and 2018 respectively (Blank, 2018).

The relationship to the DPRK has been much closer ever since its inception. The Soviet Union provided vast amounts of economic and military aid into North Korea, on which the country heavily relied (M.-O. Park, 1983). Smith (2022) explains that after the collapse of the USSR, ties became less close as Russia did not engage in large-scale support for the DPRK anymore. While Russia was heavily engaged in the North Korean nuclear crisis and other diplomatic efforts, Pyongyang no longer relied on Moscow for military defense, thus further cooling down relations (Lukin, 2022). Despite tensions over Russia's support of the UNSC sanctions imposed on North Korea, Kim and Putin managed a close but uneasy partnership. In particular after Russia's invasion of Ukraine, Moscow-Pyongyang relations become closer as North Korea heavily supports Russia's aggressions (Lukin, 2022).

4.4 Switzerland and the Korea Peninsula

Switzerland has a closer relationship with North Korea than most other Western nations and was among the first to establish diplomatic relations with Pyongyang in 1974 (FDFA, 2022a). It is widely reported that many North Korean elite, including top leadership such as Kim Jong Un, have received education in Switzerland (Gao, 2017). Moreover, Switzerland has a long history of humanitarian aid in North Korea. Switzerland first began providing humanitarian assistance to North Korea in 1995 during the famine period of the 1990s (SDC, 2022). Since then, the Swiss Cooperation Office (2022) states that it has supported North Korea with various development projects and established an office in Pyongyang. The focus hereby lies on food security and access to drinking water. Through the World Food Program, Switzerland provides milk powder to the DPRK in order for facilitate access to nutritious meals for children and pregnant women. According to OEC (2019) this milk powder accounts for almost 99% of Swiss exports to North Korea. Trade between Switzerland and the DPRK is virtually non-existent due to the UN sanctions on North Korea (SECO, 2022). However, politically, Switzerland has been much more engaged in the Korean peninsula since end of the Korean war. Together with Sweden, Poland and Czechoslovakia, Switzerland formed the Neutral Nations Supervisory Commission (NNSC) and deployed 96 soldiers on the Korean DMZ with the mandate to supervise compliance with the Armistice Agreement (SWISSINT, 2023). In 1956 this mandate changed to a purely observing and symbolic role (SWISSINT, 2023). In 1991,

North Korea ceased to recognize the NNSC in 1991 and Poland and Czechoslovakia withdrew from the peninsula shortly after (SWISSINT, 2023). Nevertheless, to this day, Swiss representatives continue to maintain their presence on the southern side of the DMZ, while the NNSC continues its role of conducting observation and reporting tasks. SWISSINT (2023) states that the budget for the NNSC amounted to CHF 1.477 million in 2023.

Switzerland is much more economically connected with South Korea. According to OEC (2021) exports to South Korea amounted to \$3.67 billion USD while imports amounted to \$1.11 billion USD in 2021 which represents roughly 1% of Swiss exports and 0.34% of its imports. In 2023 Switzerland celebrates 60 years of diplomatic relations with the ROK (FDFA, 2022b). Cultural exchange between the countries is steadily increasing and Switzerland collaborates with the ROK on human rights issues, disarmament efforts, and sustainable development initiatives (FDFA, 2022b). Switzerland acted as a facilitator for inter-Korean dialogue. This can be seen by the 1994 Agreed Framework, which was negotiated in Geneva to ensure the freezing of North Korea's nuclear proliferation attempts as well as the Four-Party talks between the US, China, ROK and DPRK from 1997 to 1999 (FDFA, 2022b).

5 Findings from Scenario Analysis

5.1 Improbable Scenario Analysis

Improbable Scenario Analysis (ISA) was found to be a form of scenario analysis that currently lacks a widely agreed-upon definition or a single established conceptual framework. It is best described as an overall term for methods and models applied in the pursuit of analyzing events which have an extremely low probability of occurring and assessing their potential impact (Steyn, 2022). Furthermore, an essential characteristic of ISA is that the impact of the events analyzed is extraordinary grave in nature. Such events are often referred to as “Black Swan” events (Besslich, 2020).

5.2 Scenario Selection

There are two main approaches in creating a signpost-based scenario analysis. In backward-based scenario analysis first a set of different scenarios is developed (BH-3). From there the respective signpost trajectories are determined beginning with the ones with the closest proximity to the realization of the scenario. This approach tackles the question “What needs to happen in order for these scenarios to take place?” (BH-3). On the contrary, forward-based scenario analysis first established a set of increasingly deviating signposts (BH-3). This leads to the final goal of determining a set of scenarios. This approach tackles the question “What kind of scenarios does a set of signposts lead to?” (BH-3).

In order to conduct an improbable scenario analysis for a Korean reunification, a backwards approach was used. To cover a wide range of different scenarios, scholarly articles, which discuss possible reunification scenarios were looked at. Table 2 shows the selected scenarios of reunification, which were consolidated into nine different reunification scenarios. These again were grouped together into three categories.

Firstly, “War on the Peninsula” encompasses all the scenarios which are based on the invasion of either nation into the other’s territory. This would for example include the South Korean army crossing the 38th parallel and attempting to reunite the countries forcefully. The outcomes of the scenarios differ with either a ROK or DPRK leadership as a result of the forceful unification.

Secondly, “Collapse” consists of all the scenarios in which the regime of either country breaks down. This includes scenarios which assume regime collapse to occur through a variety of different means. The scenario results in either the other party absorbing the collapsing nation, or the regime change leading to a new pro-unification government.

Lastly, “Negotiation” deals with reunification scenarios which occur through a non-violent, diplomatic way. These scenarios typically take place over a long time period, as they describe a more gradual approach to unification. In particular, the degrees of unification differ drastically. Scenarios range from mere economic union to joint political leadership.

Nr	Category	Name
1	War on the Peninsula	Military conflict resulting in ROK ruled peninsula
2	War on the Peninsula	Military conflict resulting in DPRK ruled peninsula
3	War on the Peninsula	Forceful unification under third party
4	Collapse	DPRK regime collapses and absorbed by ROK
5	Collapse	DPRK regime collapses and unified under third party
6	Collapse	DPRK regime collapses and pro-unification gov. is established
7	Negotiation	Negotiations resulting in an economic union
8	Negotiation	Negotiations resulting in a political union
9	Negotiation	Negotiations resulting in a single state

Table 2: Korean Reunification Scenarios

5.3 Signposts

Appendix A shows a list of signposts which indicate the trajectory to the previously defined reunification scenarios. The column “stage” represents the proximity to scenario realization, where signposts labeled with 1 are far from the realization of the scenario and therefore low-weighted and those with 3 are relatively close and therefore heavy-weighted.

5.4 Plausibility Assessment

5.4.1 Expert Opinion

A pool of experts on the relevant topic was created in order to assess the likelihood of the previously determined signposts. The pool of experts is made up of a diverse group

with varying backgrounds and expertise relating to North and South Korea and their relation to each other. The group surveyed includes scholars, authors, university faculty as well committee members. A full list of the expert to which the survey was sent can be found in Appendix B. They were asked to label each signpost with the corresponding likelihood of occurring on a five-point scale as can be seen in Table 3.

Index	Category	Description
L1	<i>Impossible</i>	The expert believes that there is no way of that this action or event will occur.
L2	<i>Extremely Unlikely</i>	The expert believes that the likelihood of this event or action occurring is extremely low.
L3	<i>Rather Unlikely</i>	The expert believes that the likelihood of this event or action occurring is rather low.
L4	<i>Possible</i>	The expert believes that it is possible that this event or action will occur.
L5	<i>Likely</i>	The expert believes that it is likely that this event or action will occur.

Table 3: Experts Perceived Likelihood Index

5.4.2 Historical Precedence

The second indicator used to determine the plausibility of the signposts is their historical precedence. Every signpost is analyzed and indexed on a value between ‘No Historical Precedent’ (H1) and ‘Extensive Historical Evidence’ (H5).

Index	Category	Description
H1	<i>No Historical Precedent</i>	There have been no recorded cases of this action or event in the past.
H2	<i>Limited Historical Precedent</i>	This action or event has occurred rarely in the past. The cases are not common or frequent thus implying limited historical precedence.
H3	<i>Moderate Historical Precedent</i>	This action or event has taken place a number of times in the past, suggesting that there is a moderate level of historical precedent.

H4	<i>Strong Historical Precedent</i>	This action or event has occurred several times in the past. It is widespread and frequent therefore implying strong historical precedence.
H5	<i>Extensive Historical Precedent</i>	There is a constant pattern of this action or event taking place in the past. It is well established with an extensive historical precedent.

Table 4: Historical Precedent Index

5.5 Least Plausible Scenarios

Appendix F shows that the four least plausible scenarios of Korean reunification, based on the plausibility assessment are:

Scenario 1: Military Conflict resulting in DPRK-ruled Peninsula

Description:
North Korea forcefully unifies the peninsula by invading South Korea. The ROK military allies, in particular the United States, choose not to engage in the conflict directly, due to the risk of a nuclear strike as well as decreasing importance of South Korea in East Asia. Through the use of tactical nuclear weapons North Korea emerges as the winner of the conflict. The DPRK fully rules the Korean peninsula.
Assumptions:
<ol style="list-style-type: none"> 1. South Korea's demographic and economic trends continue. <ol style="list-style-type: none"> a. South Korea's military drastically shrinks due to its declining population. b. South Korea strongly loses in economic relevance in the region. 2. North Korea increases its nuclear and ICBM capabilities, including tactical nuclear weapons. 3. The US does not intervene in the conflict out of fear of nuclear retaliation. 4. No free movement of people.

Scenario 2: Negotiations resulting in an Economic Union

Description:
The previously established, but then discontinued joint economic projects at Mount Geumgang and the Kaesong industrial complex are reopened, and further joint economic projects are successfully introduced. Negotiations lead to the establishment of an economic union in order to closely tie the two countries together.
Assumptions:
<ol style="list-style-type: none">1. Human rights conditions in North Korea increase to some degree causing sanctions to be eased.2. Trade barriers between North and South Korea are removed.3. A common currency, central bank, as well as fiscal and monetary policies, are established.4. Strongly limited movement of people. In particular, North-South mobility is tightly regulated and controlled by the DPRK.

Scenario 3: Negotiations resulting in a Political Union

Description:
The democratic party has the lead in the ROK and North-South relations drastically improve. Reunification talks are initiated and result in the establishment of a political union. The union is based on the 1992 “Agreement on Reconciliation, Non-Aggression, and Exchanges and Cooperation between the South and the North” and takes the form of a confederacy.
Assumptions:
<ol style="list-style-type: none">1. The 1992 Agreement has three pillars, which are implemented gradually.<ol style="list-style-type: none">a. A central governmentb. Regional autonomyc. Joint economic cooperation2. The role of the central government is limited to the powers granted by the constituents.3. The central government rules matter of national significance such as national defense or foreign policy.4. Strongly limited movement of people. In particular, North-South mobility is tightly regulated and controlled by the DPRK.

Scenario 4: Negotiations resulting in Single State

Description:
Collaboration between North and South Korea is intensified with gradually increasing partnership and close cooperation in areas such as economy and culture. Reunification negotiations are initiated and result in a single state solution.
Assumptions:
<ol style="list-style-type: none">1. The state is run under a democratic system with a market economy.2. Both sides are comprehensively integrated into a single system.3. The free movement of people within the new state is largely unrestricted.

5.6 Switzerland and Scenario Analysis

According to the Swiss representation to North Korea (based in Beijing), in the context of Swiss foreign policy, it is part of the FDFA's work to address the potential thoughts that might arise in relation to various scenarios. Although specific preparations may not be made directly, thoughts on possible scenarios are undoubtedly familiar to the FDFA (personal communication, May 25, 2023). According to Nico Luchsinger there is an increasing tendency to work with scenarios in Switzerland as well as in other countries (personal communication, May 25, 2023). In April 2021, the FDFA launched a new policy planning division, which is responsible for formulating the Foreign Policy Strategy (FDFA, 2023). This includes the foreign policy report, which emphasizes the need to further develop the capabilities for early security detection and anticipation in cooperation with various federal agencies in a comprehensive and systematic manner (Fedlex, 2023). Moreover, the FDFA states that, especially after the COVID-19 pandemic, it further optimized and professionalized its security and crisis management through anticipation and situation tracking tools (Fedlex, 2023). In the case of Korean reunification, Nico Luchsinger assumes that Switzerland, like many other countries, is not fully prepared for a Korean unification, as the range of possible scenarios is too broad and distant to allow for effective scenario planning (personal communication, May 25, 2023). The Swiss representation to North Korea adds that Switzerland is not the first country that should prepare for such scenarios, as other countries have a more proximate connection and security interests in the Korean Peninsula (personal communication, May 25, 2023). Furthermore, the FDFA states that it engages in the practice of scriptwriting (personal

communication, May 22, 2023). It is stated that scripts show steps and sequences that can be taken as a result of events. This means that consideration is given in advance to which department - if necessary, in collaboration with other departments - undertakes which activities in which sequence and where responsibility lies (personal communication, May 22, 2023). Therefore, scripts provide a basic structure that still allows for sufficient flexibility to address individual facets of an event.

6 Findings from Interviews

This section seeks to show all insights gained from experts interviews on the impact of the four reunification scenarios.

6.1 DPRK ruled Peninsula

Alexander Zhebin, director of the Center for Korean Studies, points out that the extreme destruction and nuclear contamination that would result from such a violent conflict would devastate the peninsula (AZ-4). Zhiqun Zhu, Professor of Political Science at Bucknell University, adds that this destruction is only a part of an array of economic, political, and social challenges that North Korea would face in the South (ZZ-4). Song Namsun, president of the International Society for Korean Studies and Peter Ward, senior researcher at Kookmin University, state that after an invasion of North Korea, the DPRK would not have the capacity to integrate the South into its system (SN-4; PW-10). Ward adds that the DPRK would be likely to hold the South as a semi-colony (PW-10). This claim is further supported by Zhebin, Ward and Zhu. It is unlikely that Pyongyang would have the capability or means to incorporate South Koreans into the DPRK system, as they have lived under a democratic system for most of their life and have been strongly influenced from a young age into the view that the North is their vicious and immoral enemy (AZ-4; PW-10; ZZ-3). Both Zhu and Ward claim that for South Korea to be successfully invaded, it would have to lose significant international relevance so that Washington may oppose such a development but would not be inclined to interfere (ZZ-1; PW-11). Consequentially, Moscow and Beijing would in return not directly oppose such an invasion (ZZ-1; PW-11). Hochul Lee, Professor of International Relations at Incheon National University, adds that Russia and China would welcome any form of North

Korea-driven unification (HL-6). However, Zhebin and Song state that Moscow and Beijing have no interest in a violent conflict occurring in East Asia (AZ-4; NS-1).

6.2 Economic Union

Ward and Song claim that such a union could seriously undermine the stability of North Korea (PW-1; SN-5). According to Ward, this could be attributed to the influx of South Korean products, which would highlight the perceived inferiority of North Korean national products to the North Korean population (PW-1). Furthermore, the regime would be fearful of economic undermining, as their industries are not competitive and would be endangered by South Korean products (PW-1). However, it would allow North Korea to sell its commodities at world market prices, which previously was not the case as a result of the UNSC imposed sanctions (PW-1). Moreover, an economic union would give North Koreans access to goods from around the world (PW-1). Ward claims that these economic benefits would not be enough to significantly increase the living standards of North Koreans (PW-2). However, he further points out that this depends on the willingness of the government to invest the surplus into development (PW-2). Ward claims that the United States would not welcome such a development, as it would strengthen North Korea's position (PW-4). Lee disagrees and adds that both the US and China would not reject close economic partnership on the peninsula (HL-2). Moreover, Song states that it would be regarded positively by China and Russia, as it would strengthen a Russia-China-North Korea bloc, which stands against the US-Japan-South Korea bloc (SN-3). Ward continues that China, under the condition of being able to domestic South Korea's high-tech industry, would take a hostile position towards South Korea in such a development (PW-3).

6.3 Political Union

Zhu and Lee agree that an economic union would be a necessary precursor to a political union (ZZ-10; HL-4). They argue that establishing an economic union would serve as a crucial initial step toward achieving such an agreement (ZZ-10; HL-4). Tizzard and Ward issue concern that the integral challenges in a political union would be difficult to overcome and that the inability to surmount these challenges could result in the dissolution of the union or even in regime collapse (DT-1; PW-7). One such challenge is a shared military. Ward states that it would be unlikely for North Korean soldiers to further

fight for their country after having witnessed the system in the South (PW-7). Tizzard explains that for South Korea, such a construct would be bound to the political left and therefore would be in risk of discontinuance after the inevitable rise of the political right (DT-1). Moreover, Zhu, Tizzard and Ward state that a foreign policy of a political union would be difficult to implement (ZZ-8; DT-1; PW-6). Zhu and Ward add that it would be impossible for a political union to have a coherent foreign policy approach, since both parties have vastly opposed views (ZZ-9; PW-6). Lee, Ward and the North Korean representation in Switzerland suggest that a political union would take a very neutral approach to foreign policy (HL-4; PW-8; personal communication, May 4, 2023). Still, Ward claims that Japan would be opposed to a Korean political union and would seek to distance itself (PW-8). Zhu goes to the extent of claiming that Japan does not want a Korean reunification in any form or manner (ZZ-5). In contrast, Lee argues that Tokyo would not be opposed to a Korean political union since such a union inherently seeks to maintain friendly relations with its neighboring countries and would not adopt an antagonistic stance towards Japan (HL-5).

6.4 Single State

Chan S. Suh, lecturer at Chung-Ang University, agrees with Tizzard and Ward in that through unification a strong influx of cheap labor would occur (CS-1; DT-3; PW-13). This would be beneficial to the domestic Korean industries, particularly those experiencing a shortage of workforce, such as the low-skilled service sector and manual labor sectors like agriculture. The abundant natural resources present in North Korea would provide substantial economic advantages (PW-13). However, Kim Hyung-seok, professor at Korea Advanced Institute of Science and Technology, agrees with Ward that the economic benefits arising from unification would neither outweigh the costs of reunification nor have a significant effect on Korea's export-oriented economy (KH-2; PW-13). Song further emphasizes that in particular in the short-run, a reunification would be extremely costly to South Koreans (SN-6).

Moreover, Suh states that the social implications would be particularly challenging in fields like education (CS-5). Due to the substantial differences in educational content between North Korea and South Korea, the integration of North Koreans into the highly structured and standardized South Korean education system would pose significant

challenges. Contrarily, Tizzard argues that integration is not as difficult as perceived, as both education systems have a similar basis of memorization and respect (DT-7). Song and Tizzard add that it should not be neglected that many North Koreans are well-educated (SN-6; DT-7). Furthermore, Suh and Tizzard agree that there would be a significant amount of discrimination, which would further challenge an integration (CS-4; DT-5). Ward emphasizes the issue of migration, as it would have major implications on society after a reunification (PW-12). A large number of North Koreans would want to move South in order to increase their economic opportunities and prosperity. This would leave especially young Koreans struggling with a strong increase in competition, which is already significant, causing further social turmoil (DT-3).

According to Zhebin, China would strongly oppose a single state Korea (AZ-4). He explains that “[for China], losing North Korea would be like losing the Korean War again but without a single bullet.” (AZ-4). This would further open up the possibility for US troops to be stationed directly on a Chinese border (DT-9; AZ-4). Similarly, Russia does not wish for a reunification, as it would undermine North Korea as an ally and strengthen opposing countries (AZ-4). Japan would stay weary of a unified Korea, as it does not have any interest in an increasingly Korea (ZZ-11).

7 Discussion of Findings

This section seeks to interpret the findings gained from the expert interviews.

7.1 DPRK-ruled Peninsula

7.1.1 Economy

The economic implications of a war on the peninsula would be detrimental. The destruction of key economic hubs and infrastructure would disrupt industries, trade, and commerce, leading to a sharp economic downturn (KH-5). Moreover, contamination stemming from the use of nuclear, chemical, and biological weapons would impact the ability to reconstruct and therefore hinder economic development for an extended period of time. Furthermore, it is pointed out by Song, Ward and Zhu that North Korea would not have the means to integrate the South into its system (SN-4; PW-10; ZZ-3). Controlling millions of Koreans, which fundamentally oppose the regime, would be an enormous financial endeavor, exceeding the capabilities of the DPRK.

7.1.2 Society

The most immediate societal effect of this unification scenario would be the aftermath of the war. Not only would the warfare inflict massive destruction and kill millions but also lead to a wave of refugees trying to leave the country. Given the geographical characteristics of the Korean peninsula, escaping the country would be highly challenging, as only individuals who manage to secure a place on a ship would have the opportunity to seek refuge in neighboring countries. Out of these people, the vast majority would leave for Japan and to some extent to China.

The situation on the peninsula would further be complicated as the nuclear weapons used in the conflict would leave long-lasting contamination on the peninsula. Furthermore, Zhebin (AZ-4) states that it is very likely that in a conflict, several of South Korea's nuclear reactors would be hit. He states that nuclear reactors could be destroyed even with conventional warheads, which would lead to further contamination on the peninsula (AZ-4). Zhebin further points out that South Korea has a very developed chemical industry as well as oil refineries, which would add to the contamination, as they are bound to be damaged as part of the war. North Korea has one of the world's largest chemical and biological weapons arsenal, which it is likely to use in case of a conflict (Del Monte,

2017). This would further contaminate the region, greatly limiting the possibilities of humanitarian aid (B. Bennett, 2018).

After a defeat of South Korean forces, the North Korean government would be posed with the question of how to integrate millions of South Koreans into the DPRK system. It is unlikely that Pyongyang would have the capability or means to incorporate South Korean society into the Kim's system, as they have lived under a democratic system for most of their life and have been strongly influenced from a young age into the view that the North is their vicious and immoral enemy (AZ-4; PW-10). South Korean's baseline anti-communism sentiment would make this even more implausible. Ward argues as this would be not feasible and North Korea would have to resort to handling the South as a de facto colony. Incorporating South Koreans into the Songbun system is neither likely nor feasible, given that they do not fit the requisite characteristics to be classified even under the "Hostile" class. As long as North Korea can credibly threaten to inflict massive destruction on an unarmed South Korean society, the regime will be able to exploit the South to some extent (PW-10).

7.1.3 International Relations

The reactions from Russia, China, Japan, and the United States would vary to a notable extent. This scenario is based on the premise that the U.S. does not actively intervene in the conflict on the peninsula. For this to be the case, South Korea must have already lost significantly in economic and strategic value for the United States (PW-9). Consequentially, this shift in importance, largely driven by South Korea's demographic trends, could potentially diminish prioritization of South Korea in the United States' foreign policy objectives (PW-9). Furthermore, it would be posed with the threat of a government which has proven to be willing to employ nuclear weapons and is strongly opposed to the United States. Opting for non-intervention would significantly impact the United States' reputation as a guarantor of global security, particularly concerning states such as Taiwan that are confronted with a tangible risk of invasion.

Both Russia and China would likely exhibit mixed responses to such a development. Zhebin (AZ-4) points out that Moscow strongly opposes a conflict which would destabilize the region. Additionally, both China and Russia have trade links to South Korea which would be disrupted. However, Ward (PW-11) points out that it is conceivable

that the Russian and Chinese authorities would adopt a position of non-interference or disregard the situation, considering South Korea's decline in economic relevance as a prerequisite for this situation. Zhu adds that if the US lacks interest in defending South Korea, it is likely that China would also exhibit diminished concern for the security of the region (ZZ-1).

The country, which would be most opposed to such a development, would be Japan (ZZ-5). Firstly, they would have to accommodate a significant amount of refugees leaving the peninsula, causing destabilization. Secondly, given the historical context of colonialism and the hostile relationship between Pyongyang and Tokyo, Japan has legitimate concerns about potential retaliatory actions from a unified Korean Peninsula, particularly once it achieves stability and is able to redirect its military capabilities towards the east. Lastly, the war related contamination of Korea would expand to Japanese territory causing significant damage to environment and economy (H. Shin, 2023).

7.2 Economic Union

7.2.1 Economy

An economic union would mutually benefit both North and South Korea. Firstly, it would allow North Korea to sell its commodities at world market prices, which previously was not the case due to the UNSC imposed sanctions (PW-1). Furthermore, an economic union would give North Koreans access to goods from around the world. This facilitation of trade would have a positive impact on North Korea's economy. However, Ward (PW-1) points out that the import of South Korean goods could also be seen as a danger by North Korea. There would be a strong concern about South Korean goods flooding the North Korean market and as a result destroying domestic industries, which are weak and uncompetitive (PW-1). This would also crucially impact the Jangmadang markets due to the increase in competition. Moreover, it would allow for more foreign investment into North Korea, from which it would benefit. In particular, trade with China, which already is North Korea's biggest trading partner, would increase.

7.2.2 Society

The establishment of an economic union between the Koreas would pose a range of societal issues. South Koreans, in particular the political right, would be hostile toward

such a development as concerns of human rights violations would arise (PW-1). Ward points out that the human rights concerns of an economic union would be justified as North Korea has a record of forced labor (PW-1). Furthermore, the fear of ‘rewarding bad behavior’, which is already a widely discussed critical point of the Kim Dae-jung’s Sunshine policy, would further become relevant (PW-1; Darynaufal, 2018). On the North Korean side, hostility would be present too, as it would be perceived as an attempt of economic imperialism (PW-1). North Korea recently passed two new laws, the “Pyongyang Cultural Language Protection Act” and the “The Reactionary Ideology and Culture Rejection Act”, which prohibit the import of South Korean goods (Hui, 2023; Jang, 2023). Ward explains that Pyongyang fears that South Korean products will make their own look bad and therefore cause turmoil in society (PW-1). Song adds that these mutual exchanges could seriously undermine the stability of the regime (SN-5). North Korea is based on the premise for its society to believe to be superior to the rest of the world (Kurbanov, 2019). Therefore, South Korean products would constantly showcase the entire population that the South has won the economic competition, which started out after Korea’s split (Ellington & Ferrarini, 2017). This would cause great resentment towards the government for the incapability of developing the country to the same extent, in particular among the lower class (PW-1). It would negatively affect the perception of the upper class too, but to a much lesser extent, since they are more aware of the outside world and how it compares to North Korea (DT-2). Moreover, they have the resources to purchase luxury goods and are therefore less likely to be confronted with inferior North Korean goods (DT-2). On the contrary, Zhu argues that even individuals residing in rural areas of Korea have some level of awareness about global events, suggesting that this factor would not be as significant of concern for the regime (ZZ-7). Zhu further points to the example of China, where economic liberation did not lead to a change in regime, which is particularly noteworthy considering China’s significantly larger size compared to North Korea (ZZ-7). Yet still, Ward argues that the lower class could further be dissatisfied, as only a minimal portion of the economic benefits derived from an economic union would effectively trickle down to the general population (PW-2). The main beneficiary would be the regime and small groups, which are either able to take advantage of imported commodities or are connected to the export industry (PW-2). While an economic union would foster some development, neither the sale of North Korean raw

materials nor the import of South Korean consumer goods would be sufficient to significantly increase the living standard of the lower class (PW-2). However, this largely depends on the willingness of the government to use the surplus generated by the economic union on the development of the general population (PW-2). Ward claims that despite much of the money potentially being spent of propaganda and military, the regime would be inclined to spend a portion of the money on the population's welfare (PW-2). It wants to present itself as a people's regime, in order to maintain social order and mitigate potential unrest among the populace (PW-2).

7.2.3 International Relations

China has a strong economic interest in South Korea due to its advanced technologies like semi-conductors (PW-3). Ward assesses that the change in relations with China after the establishment of a Korean economic union would largely depend on China's ability to domesticate a high-end technology market (PW-3). If this is not the case, relations are likely to remain close to what they are now (PW-3). Furthermore, it would improve trade relations to North Korea. However, if China is able to build a comparable national high-tech sector, Beijing-Seoul relations would cool down and the economic union would be approached with open hostility by China (PW-3). Zhu proclaims that China would support the endeavor of an economic union, as China itself is promoting trade with both Koreas (ZZ-6). Moreover, trade serves as a means to reduce tensions between both sides, contributing to the stability that China seeks in the region (ZZ-6).

This development would further push South Korea economically towards the United States (PW-4). Washington would express some level of apprehension regarding the deepening ROK-DPRK relations due to the shift potentially creating favorable conditions for North Korea (PW-4). However, considering the growing significance of engaging and competing with China for global order and Pyongyang losing in relevance, Seoul would consequently receive a certain degree of support (PW-5). According to Ward, if China were to be dissatisfied with Korean economic union, it would be viewed favorably by the United States (PW-5).

Russia would take a supportive stance in such a scenario. Firstly, Zhebin (AZ-4) points out that Russia's key interest is stability in the region. It does not want to have another hot conflict on its far eastern border, which would be less likely considering inter-Korean

rapprochement and cooperation, as trade fosters stability (AZ-4; ZZ-6). Not only would this make North Korea more stable, but also more financially inclined to trade with Russia and China. According to Zhebin, an economic union would facilitate new avenues for Russian oil and gas export (AZ-4).

7.3 Political Union

7.3.1 Economy

The economic framework of a potential political union in Korea would face a systemic challenge due to the divergent approaches to international trade adopted by the two parties. South Korea, being an export-driven economy, exhibits significant integration within the global economic network. In contrast, North Korea's trade approach, based on the principle of Juche, emphasizes self-reliance and isolation, leading to economic policies that are less open to international trade (Kurbanov, 2019).

As the third pillar of a political union is economic cooperation, the respective effects would be comparable to those of an economic union. Both Zhu and Lee emphasize that establishing close economic cooperation between North and South Korea is a prerequisite and an initial step toward achieving a political union (ZZ-10; HL-4). Therefore, the previously discussed economic benefits for North Korea such as exports at world market prices and corresponding costs are also present in a political union.

7.3.2 Society

The biggest societal impact a political union would bring is the inevitable exchange of information between the two societies (ZZ-6). Despite the regional autonomy that may restrict the free movement of people, it is inevitable that some level of interaction would occur between the two sides of the Korean peninsula. Through the third pillar, joint economic cooperation, North Korean citizens will be confronted with superior South Korean goods. Comparable to the societal effects of an economic union, this showcasing of North Korean struggle would lead to dissatisfaction and resentment in the populus (PW-2). However, the greater cause of friction lies in the first pillar – the central governmental institutions. Since a political union system incorporates a shared defense structure, having military personnel from both sides is necessary, as neither side would be willing to utilize only the other side's forces for shared military purposes. North Korean

soldiers would observe the much greater socio-economic prosperity and question their purpose of upholding national allegiance (PW-7). Ward predicts that a shared military institution would, as the North's regime would no longer fully control the military, inevitably causing a system collapse (PW-7). Furthermore, there would be great societal confusion among North Koreans, as the nation's underlying principle of Juche is strongly altered (CS-3). Being part of a joint system, where self-reliance is not possible by the pure nature of the system, would not align with the principles of Juche (Kurbanov, 2019).

7.3.3 International Relations

Ward states that a Korea unified in a political union would be characterized by the absence of a foreign policy (PW-8). Ward and Zhu state that in most cases such a political structure would have a split personality, where two strongly different views on international relations would struggle to find a common ground (PW-8; ZZ-9). According to the North Korean representation in Switzerland, one of the few points, which both sides could accommodate similar views on, is relations to Japan (personal communication, May 4, 2023). Despite that under the current administration, rapprochement with Japan is making strong progress, in a scenario where a political union becomes a reality it is much more likely to have a member of the democratic party as the leading force. As the democratic party has a much more hostile stance towards Japan, it is plausible that a common policy Japan could be achieved. Tokyo would seek to distance itself from a confederate Korea (PW-8). The North Korean representation in Switzerland further states that a confederate Korea would have a neutral stance and would not want to engage negatively with either major power (personal communication, May 4, 2023). Ward (PW-8) adds that a foreign policy could be comparable to Turkmenistan, which is famously neutral. Turkmenistan tries to position itself as decisively unthreatening state in order to not face pressure from Beijing or Moscow (PW-8).

7.4 Single State

7.4.1 Economy

Economically, there are both costs and benefits related to a full-scale reunification. The main benefits revolve around a strong increase in cheap labor as well as investment opportunities and natural resource extraction in the North. An increase in cheap labor

would be extremely beneficial to South Korean capitalists (DT-3; CS-1). Since South Korea has comparatively few migrant workers, many sectors, especially those related to manual labor, are experiencing extensive labor shortages, which could be filled with the influx of new workers (Seo et al., 2023). Another often-cited economic benefit are the DPRK's natural resources, in particular in ferrous metals, industrial minerals, rare earths and mineral fuels, such as coal (V. Cha, 2019). North Korea is reported to have the second-largest magnesite reserves in the world and the sixth-largest tungsten deposit (V. Cha, 2019). However, currently North Korea is not able to exploit these natural reserves due to lack of modern infrastructure, funds, as well as the UN imposed sanctions that prohibit the export of these goods to the international market (UNSC, 2017). Therefore, with South Korea having much more advanced technology and the necessary funds, companies have great opportunity to make use of these natural resources. In particular, the rare earth reserves would have an enormous impact, as they are a key component for the production of semi-conductor, which is one of South Korea's strongest sectors. However, the actual size of these rare-earth reserves is controversially debated (E&MJ, 2015).

Still, South Korea's Chaebols would largely benefit from this development, as they have the financial resources to largely invest in North Korea and use its cheap labor to further solidify their monopolistic trajectories. Tizzard (DT-3) points out that the strong influence Chaebols would have in a reunified Korea can be seen by former president Moon's decision to take the head of the Chaebols with him to the DMZ in the inter-Korean summit of 2018. However, Ward (PW-13) highlights that the two primary advantages of cheap labor and natural resources may not have a significant impact on South Korea's economy, especially not on its exports, as certain reports suggest. Firstly, he states that South Korea's economy is strongest in the high-tech sector, which is not labor intensive (PW-13; KH-2). It may have a significant impact on Korea's domestic market especially in service-focused industries, such as hospitality, or in labor-intensive industries such as textile production. However, it would not greatly impact South Korea's globalized economy, considering South Korea has a trade-to-GDP ratio of 80% as of 2021 (The World Bank, 2021). Secondly, most major South Korean companies, including Chaebols, have their value generation much further down the value chain than natural resource extraction. None of the Chaebol's operate large profit-making mining companies, as they do not have a competitive advantage in that sector (PW-13). Rather they profit from

adding value through technology. Consequentially, the beneficiaries would to a large extent be foreign investors (PW-13).

According to St. Brown et al. (2012), there are three main factors that influence the cost of integrating North Korea after a single state reunification. Firstly, labor migration: There will need to be comprehensive migration policies, as labor migration affects the overall output of the economy but also productivity of both sides. Secondly, capital transfer: There will be need for large-scale investment, funding, and redistribution to North Korea. This aims to support development and reduce economic disparity and therefore converge both sides economically and socially. Lastly, productivity catch up: As North Korea is far less technological developed than the South, the productivity of North Korean workers will need to increase as part of the integration process. Despite labor migration and capital having strong influences, productivity catch up plays the most significant role in converging the incomes of North and South (St. Brown et al., 2012). St. Brown et al. (2012) found that South Korea's largest cost would stem from a productivity slowdown.

7.4.2 Society

One of the key social aspects of a single state reunification scenario is the merger of two populations, one of which is more than double the other and significantly more prosperous. Unification, in particular with free movement of people, would alter Korea's demographics drastically. North Koreans, which previously had very limited access to health care, would experience an increase in life expectancy (Botto, 2021). This occurred in a similar manner in the case of German reunification, where the life expectancy of East Germans exceeded its pre-unification level by 3 full years within the next 10 years (Botto, 2021). However, the 77 million Koreans will still face the already existing issue of low birth rates. After German reunification, birth rate of East Germans dropped by almost half to 0.8 (Goldstein & Kreyenfeld, 2011). With South Koreans already extremely low birth rate, that would cause a major demographic shock and lead to a further decline in population (Eberstadt, 1994; Korean Statistical Information Service, 2023). Consequently, an increasingly aging population would cause further problems, as the retirement benefits for a steadily increasing retired population would need to come from a progressively decreasing working population.

Migration after reunification, in particular North-South migration, is very difficult to predict. Park (1997) estimates that over the course of 10 years post-unification 2 million North Korean workers would migrate from the North to the South. Similarly, Fukao et al. (2017) estimate that around 2% of North Korea's working population would migrate southwards every year. Considering North Korea's current population this would amount to 260'400 to 279'000 people per year (UN Department of Economic and Social Affairs, Population Division, 2022). Other approaches base estimates on the case of German reunification in which roughly 16.6% of East Germans migrated to the West (Pheiffer, 2019). However, there is a range of different factors that would affect the number of migrations. According to Cha and Kang (2010) past cases show that migration was often largely overestimated. Ward (PW-12) states that the number of people migrating would decrease, the later the reunification were to take place. This stems from the fact that North Korea has an aging population and migration is more feasible for the younger people (PW-12). Tizzard (DT-2) points out that some North Koreans may not like reunification and cannot adapt to the new circumstances. Cha and Kang (2010) add that many North Koreans would cling to their belongings as not to lose them under a new system. They state that one of the most decisive factors for migration is proof of an improved livelihood, as people who personally know of migrations who successfully resettled are much more likely to follow suit (V. Cha & Kang, 2010). The size of the migration flow and how well the government can handle it heavily depends on the policies and programs in place. Ward (PW-12) points out that migration could be reduced by giving North Koreans incentives to stay. This could include the right to their property, as the government leases housing to them under the condition that they must reside in them for an extended period of time (PW-12). He states that a further way to mitigate the impact would be to funnel migration to shrinking cities in areas which are economically depressed and due to structural-demographic decline have a lot of vacant housing (PW-12).

Nonetheless, the migration of such a large number of people would cause major disruption and create critical problems in different areas. South Korea's labor market would be flooded with cheap labor, affecting in particular the younger population, which is already struggling with limited and extremely competitive job opportunities (DT-3). A further negative implication of this development would be the societal rift and division between the North and South Koreans. Suh (CS-4) states that discrimination against North

Koreans would be unavoidable as South Koreans are not prepared to embrace such a huge influx of population without severely discriminating them. He further points out that South Koreans would try to impose their norms and values onto North Koreans which would contribute to social confusion among North Koreans (CS-4). The Confucian South Korean society further facilitates discrimination. According to Tizzard (DT-3), status transfers across the border of North and South Korea. Members of the North Korean elite will find themselves in the social elite of a reunified Korea, whereas peasants will remain in the lower class of a joint society (DT-3). Therefore, it will be difficult for North Koreans to overcome the issues associated with their Songbun status in the North. It is highly unlikely that the Songbun system would be officially continued but nevertheless, it is deeply rooted in North Korean society and therefore likely to have lasting negative implications. Hierarchy in Korean society would lead to even more intersectional discrimination as especially young female North Koreans would be discriminated not only for their origin and the consequential lack of education and resources but also in terms of age, gender, and socioeconomic status (CS-4).

Social confusion would further arise as North Koreans, who had been indoctrinated for generations with almost no information in the world outside North Korea are confronted with a new societal construct, which includes a multi-party system (CS-4; DT-8). Reunification could result in a significant political right swing due to two main factors. Firstly, many North Koreans are likely to resent their previous oppressive, self-proclaimed left system and join the political right (DT-7). This is strongly showcased by many prominent, elite and non-elite defectors such as Park Yeon Mi, who uses her celebrity status and reach to promote right-wing ideology in the United States, as well as Park Ji Hyun and Tae Yeong Ho who represent conservative parties in the parliaments of the United Kingdom and South Korea respectively (Bicker, 2020; Clynch, 2022; J. Lee, 2021). Secondly, in an environment, where a lot of jobs are threatened through the flood of cheap, North Korean labor and the South Korean lower class is neglected by the government in favor of North Korean migrants, there is space for populists to rise, who will take people's animosity and turn it against 'foreigners' (DT-3). Lastly, South Korea's fundamental anti-communism sentiment would not only be directed against North Koreans as a whole but more strongly cause social divergence in case a far-left party rises in the joint system. The feeling of being threatened by a 'other' group would not only be limited to the working

environment but would also be present in education. Suh (CS-5) describes how even a minimal change in educational policy causes a giant uproar. Integrating North Korean students in that system would completely disrupt the education system. Integration of North Korean students would be extremely difficult due to different educational upbringings and South Koreans strong desire to differentiate themselves from their northern peers as part of their endeavor to move to the upper social class (CS-5). On the other hand, Tizzard (DT-7) argues that despite the vastly different teaching subjects in North and South, North Korean would not have such a hard time integrating into the South Korean education system as is commonly assumed due to the baseline similarity of both education systems. The majority of education is based on sitting still, memorizing, and respecting the teacher in both Koreas (DT-7).

In order to process and overcome the hostile relations the two societies had for decades, transitional justice needs to be pursued. According to Binder (2013), transitional justice consists of the mechanism, with which a society deals with the lingering aspects of large-scale and society-wide past abuses. The underlying question being whether a society can gain more from the justice received by prosecuting the culprits of human rights abuses or if amnestying crimes works greater towards fostering a reconciliation of society (Binder, 2013). Having even limited transitional justice can greatly help to process societal trauma. This can be seen in the case of Cambodia, where only three people got persecuted on the basis of the human rights atrocities of the Khmer Rouge in its extraordinary chamber of transitional justice. Yet still, a Swisspeace report shows that most victims feel that the tribunal has contributed to justice (Williams et al., 2018). However, the implementation of transitional justice proves difficult as Ward (PW-15) points out that South Korea will not be able to credibly uphold any specific transitional justice principles. He adds that it is very unlikely that Pyongyang would ever commit to reunification that includes transitional justice (PW-15). This unwillingness also stems from the point that not only South Koreans would lust for accountability, but also North Korean society would broadly demand such, once the full extent of the abuses becomes clear (PW-15).

7.4.3 International Relations

A fully reunified Korea would significantly affect relations with major powers, in particular with China. Zhebin (AZ-4) states that China has a strong interest in keeping the

current status quo and would strongly oppose such a development, as a reunification would have a range of negative effects on Beijing. Firstly, a unified Korea would mean U.S. troops in a country that directly borders China. Currently, North Korea acts as a buffer state between China and the US-aligned South Korea. Having the ability to station U.S. troops directly at the Yalu River on the Korea-China border would be perceived as a major threat by Beijing. Furthermore, a reunification would potentially increase the number of North Koreans crossing the border to China. Under the scenario of a single state, freedom of movement would be much greater and less restricted than under the Kim regime. As the standard of living would only increase gradually, impoverished North Koreans, in particular those living in the border area, would turn to China, once the deadly border control is no longer as strictly enforced. Having to accommodate thousands of impoverished North Koreans would strongly destabilize the Chinese border region.

Similarly, Russia would be discontent with this development. As South Korea joined anti-Russian sanctions as a reaction to Russia's invasion of Ukraine, South Korea has been listed as a "unfriendly state" by Moscow (Tass, 2022). On the other hand, Zhebin (AZ-1) describes the political atmosphere between Pyongyang and Moscow as remarkably positive due to North Korea's support of Russia's position at the UN in regard to the Ukraine invasion. Therefore, a single state solution would not only cost Russia an ally but significantly strengthen and enlarge an opposing country, which would then have a small but existing shared border with Russia.

Relations with Japan would also be impacted considerably. As South Korea under the Yoon administration is in a phase of rapprochement with Japan, a unified Korea would help to ease tensions in the East Sea/Sea of Japan. North Korea frequently launches missiles, which cause disruption and tension in Japan, as they repeatedly have landed in the East Sea/Sea of Japan (McCurry, 2023). However, Tizzard and Zhu point out that Japan would not be content with a significantly stronger unified Korea, which now possesses nuclear weapons and with the legacy of Japanese colonial era still present until today (DT-9; ZZ-5).

For the United States, a unified Korea would be of significant geostrategic value. Firstly, the threat of a nuclear first strike would cease to exist as the nuclear arsenal is either deconstructed or fall under the control of a U.S.-aligned Seoul. Secondly, the ability

to station its military in North Korea, would close the belt of military allies that surrounds its global rival, China and further solidify its position in Asia-Pacific.

7.5 Implications for Switzerland

Switzerland would potentially experience economic benefits as a result of any of the peaceful reunification scenarios. The potential increase in living standards would reduce or fully cease the need for humanitarian aid Switzerland is providing to North Korea. Moreover, Switzerland would gain from increased trade opportunities. In particular, in the case of a single state solution, Swiss commodity traders such as Glencore, Vitol or Mercuria would be able to exploit the abundance of natural resources in the North. Until 2017, Swiss company Holcim had a 37% stake in Pyongyang's Sangwon Cement Joint Venture (Chung, 2021). Holcim is a Switzerland-based cement manufacturer and after its merger with French rival Lafarge in 2015, it became the biggest cement company worldwide (Mutegi, 2023). However, in the case of a DPRK-ruled peninsula, the economic implications would be unfavorable. According to the Swiss representation to North Korea, Switzerland would play a role at a political and international law level according to its foreign policy practices and principles. Economically, depending on the extent of the war, the possible consequences would be disruptive for various sectors of the world economy, which would also affect Switzerland (personal communication, May 25, 2023). Such a scenario could greatly destabilize not only the peninsula but the entire region. The Swiss Federal Department of Foreign Affairs (2022b) states that roughly 100 Swiss companies are present in the South Korean market. The operation of these companies would be impeded, and Switzerland would be forced to cease its trade with the Korean peninsula. Consequently, Switzerland would face the denial of approximately 1% of its exports and 0.34% of its imports (OEC, 2021). Although these percentages may not be substantial, the decline in imports would still have a notable impact on Switzerland, particularly affecting key sectors of the economy. This would include advanced technology such as semi-conductor, as South Korea is one of the world's leading chip producers (S. Kim, 2021).

According to Ivo Burgener (IB-1), the NNSC's head of delegation, the NNSC does work with various scenarios. These scenarios mainly consider military threats, as the main concern of this action is to ensure the safety and protection of the NNSC member (IB-1).

A violent conflict on the peninsula would imply that the 1953 Armistices Agreement ceases to be in force. Therefore, the NNSC troops are most likely to be withdrawn, given the absence of a current mandate during an ongoing armed conflict (IB-2). Increased economic cooperation, such as in an economic union, would not be affecting the work of the NNSC directly (IB-3). In the case of peaceful unification, Ivo Burgener (IB-4) confirms that the NNSC's mandate would not include any form of facilitation or supervision of a unification process. However, according to the Swiss representation to North Korea, Switzerland is well positioned within Europe to offer its good offices for peace and stability on the Korean Peninsula in the case of a Korean reunification (personal communication, May 25, 2023). According to Swiss Federal Councilor Ignazio Cassis, the case of a peaceful reunification would mean first and foremost that the NNSC troops can be withdrawn, thus resulting in cost savings for Switzerland (personal communication, April 25, 2023).

8 Conclusion

An improbable scenario analysis was determined to be an overall term for methods and models applied in the pursuit of analyzing extremely impactful events which have an exceptionally low probability of occurring and assessing their potential impact. Consequentially, the ISA was applied to the case of Korean reunification on the basis of an indicator-based plausibility assessment. This paper concludes that out of the scenarios analyzed, the three within the category “negotiations” are the most improbable scenarios by a large margin. Contrarily, the scenarios in which South Korea prevails as a dominating unification party either through force or North Korea’s collapse are the most probable. This paper further concludes that the impact of the four least probable scenarios would be grave in their own respective ways.

The emergence of a unified Korean peninsula under the rule of the DPRK would primarily lead to social upheaval and economic disruption, not only within the peninsula itself but also extending to the wider region. There is consensus that North Korea does not have the economic, political, or social means to integrate the South into its system. South Korea would be held as a de facto colony. With a United States non-interventionist stance, caused by a significant decrease in South Korea's global strategic and economic value, it is likely that neither Russia nor China would strongly oppose such a development. Japan would be the primary opposition to a Korean peninsula ruled by the DPRK. Given its geographical proximity, Japan would directly bear the impact of any conflict on the peninsula. Moreover, a strengthened and hostile Korean peninsula would pose a potential danger to Japan's security.

While economically, North and South Korea stand to gain from an economic union, as their trade capabilities increase and economic opportunities arise, social issues are bound to occur. An economic union would seriously undermine the stability of the North’s regime and could plant dissatisfaction in society. The US and China would both have mixed reactions to such a development, as it strengthens North Korea as well as South Korea. Russia would take a supportive stance, as trade fosters peace and stability in the region while Japan would seek to distance itself from the peninsula.

A Korean political union would have similar economic implications as an economic union, yet the social and geopolitical impacts fall out differently. It is found that a political union has a decent chance of collapsing due to the inevitable exchange of information as well as the centralization of defense. Moreover, this union would fundamentally lack a foreign policy, as it cannot accommodate two opposing factions. This would result in a neutral and therefore vacuous relationship with major powers.

A single state reunification would come with significant economic challenges as well as certain benefits such as cheap labor and natural resources. However, these benefits would not outweigh the costs. Social implications connected to reunification would include discrimination, greater social confusion as well as migration and demographic changes. China would be particularly opposed to a South Korea-dominated reunification, as this would give the United States the ability to place its troops right on the Chinese border. Similarly, Russia would not support this change, as it would lose an ally in North Korea while simultaneously strengthening an opponent. Furthermore, Japan has no interest in a strengthened Korea. While Tokyo also approves of the increased stability, the main international beneficiary and supporter would be the United States through Korea's increased strategic value.

Finally, this paper concludes that Switzerland is not explicitly prepared for Korean reunification. However, while specific preparations may not be made directly, Bern addresses the potential thoughts that might arise in relation to various scenarios. There is an increasing tendency to utilize scenarios as anticipation work is being expanded on an interdepartmental level. It is further found that Switzerland would experience two primary benefits from a peaceful reunification of the Korean peninsula. Firstly, there would be cost savings as improved living conditions for North Koreans would reduce the need for humanitarian aid from Switzerland. Additionally, the withdrawal of Swiss NNSC troops from the DMZ would result in further cost savings. Secondly, the enhanced economic openness and prosperity would create opportunities for increased trade with Switzerland. More importantly, the most significant potential lies in economic prospects in North Korea, particularly in relation to accessing inexpensive labor and exploiting natural resources. Contrarily, a war on the peninsula and a DPRK rule would negatively impact Switzerland. Not only could up to 1% of Swiss exports vanish but also miss out on key goods, such as

semi-conductors from its imports. Considering South Korea's interconnection with the world economy, various global sectors would be disrupted, which would further affect Switzerland.

9 Appendix

9.1 Appendix A: Signposts towards Korean Reunification

Nr	Signpost	Stage
1	South Korean development of nuclear weapons	3
2	South Korea drastically increasing its military capabilities	3
3	The U.S. or other ROK military allies not intervening in an DPRK invasion into ROK	3
4	North Korea drastically increasing its military capabilities	3
5	US showing intentions to militarily invade North Korea	3
6	China showing intentions to militarily invade North Korea	3
7	Civil unrest or mass protests in North Korea	3
8	A sharp downturn of the North Korean economy	2
9	Increasing calls for intervention as a response to DPRK human rights abuses from the international community	3
10	The rise of political opponents in the DPRK	3
11	Joint investment and development of economic projects	3
12	Roadmap to the establishment of shared institutions (e.g., joint environmental, energy or cultural centers)	3
13	A joint agreement on a roadmap for reunification	3
14	Escalating tensions towards other countries or international organizations	2
15	North Korea forming new military alliances	2
16	South Korea forming new military alliances	2
17	Denuclearization of North Korea	3
18	Political hostage takings, assassinations, or other violent acts on the Korean peninsula	2
19	Increased number of high-level defections from North Korea to South Korea	3
20	Breaking of existing agreements (e.g., Military agreements, Fisheries Agreement, etc.)	1
21	An increased scarcity of basic goods (i.e. food, power, shelter) in North Korea	2

22	Imposed sanctions on North Korea being lifted	2
23	Increase in sanctions on North Korea	1
24	Increase in general human rights condition in North Korea	2
25	Decrease in general human rights condition in North Korea	1
26	Allowing consumption of foreign media in North Korea.	2
27	Withdrawal of U.S. troops from South Korea.	1/2
28	An increase of inter-Korean communications	1
29	An increasing number of defections from North Korea to China	2
30	Resumption of family reunions.	1
31	Mutual end to the claim to other part of the Peninsula	2
32	Formally end the Korean War	2
33	Increase in joint collaborations (sports, research, etc.)	2
34	China ceasing trade with North Korea	2
35	Increased North Korean missile tests	1
36	Increasing cyber-attack or espionage cases on the Korean peninsula	1
37	Increase in Border incidents	2
38	North Korea conducting its seventh nuclear test	1

9.2 Appendix B: List of Survey Participants

Name	Organization
Chris Carothers	Associated Scholar at University of Pennsylvania
Edward Goldring	Assistant Professor in the Department of Politics at the University of York
Benjamin Engel	Research Professor at Seoul National University Institute of International Affairs
Antonio Fiori	Associate Professor University of Bologna
Edward Howell	Lecturer at University of Oxford
Benjamin Katzeff Silberstein	Associate Research Fellow Swedish Institute for International Affairs
Xavier Boltaina-Bosch	Associate Professor Universitat Oberta de Catalunya
Kevin Gray	Professor of International Relations at University of Sussex
Min Hye Cho	Lecturer at BNU-HKBU United International College
Christopher Green	Assistant Professor Leiden University
Fahy Sandra	Carleton University Program Director in Global and International Studies
Alexander Dukalskis	Associate professor at University College Dublin in the School of Politics and International Relations
Taehyung Ahn	Member of the European Centre for North Korean Studies
Elin Bergner	Research Assistant Open Nuclear Network
Vadim Akulenko	Research Professor at Chung-Ang university

9.3 Appendix C: Historical Precedent

Signpost Name	H-Value
SP1: South Korean Development of nuclear weapons	1
In order to deter Soviet, Chinese or North Korean attacks during the Cold War, the U.S. included the Republic of Korea in their protection under the United States' nuclear umbrella (Ahn & Cho, 2014). This guarantees a country the backing of the U.S. in terms of nuclear thereby dissuading the nation from pursuing independent development of such weapons. South Korea has signed the Nuclear Nonproliferation Treaty, by which it is prohibited to develop or acquire nuclear weapons (UNODA Treaties, n.d.).	
SP2: South Korea drastically increasing its military capabilities	4
In the 1970s and 1980s, the ROK heavily invested in its military, building a modern army with advanced weaponry and technological capabilities (V. D. Cha, 2001). Since then, South Korea has continued to expand its armed forces in close cooperation with the United States, its key military ally. In 2023 South Korea's Ministry of National Defense increased its military budget by almost 5% (Grevatt & MacDonald, 2022).	
SP3: The US or other ROK military allies not intervening in an DPRK invasion into ROK	2
There have been few instances where the United States did not stand by its allies when required. This includes the abandoning of the South Vietnamese, Kurdish forces in Syria as well as the abandoning of Afghanistan (Huaxia, 2021).	
SP4: North Korea drastically increasing its military capabilities	5
There is strong historical precedence of the DPRK increasing its military capabilities since its founding. North Korea has almost 1.3 million active personnel and successfully conducted nuclear arm and ICBM test (C. M. Lee & Botto, 2020).	
SP5: US showing intentions to militarily invade North Korea	1
There is no historical precedent of the U.S. showing intentions to invade North Korea since the end of the Korean War.	
SP6: China showing intentions to militarily invade North Korea	1
There is no historical precedent of the U.S. showing intentions to invade North Korea as the PRC has established, while tense at times, good relations to the DPRK.	
SP7: Civil unrest or mass protests in North Korea.	2
There have been occasional cases of civil unrest in North Korea. In particular in the northern part of the DPRK some small-scale protests in the cities of Sinuiju, Chongjin and Hyesan have occurred (North Korean Economy Watch, 2011). However, there have been no reports of large-scale protests movements in North Korea.	
SP8: A sharp downturn of the North Korean economy	3
The most devastating economic crisis North Korea faced occurred in the mid-1990s. During the "Arduous March" 600 thousand to 2 million North Koreans died from starvation (Seth, 2011). Other instances of economic downturn can be seen after Kim Jong Il's death in 2011 or as a direct consequence of the international sanctions on North Korea (Human Rights Watch, 2021). Other critical events such as natural disasters in 2020 or the collapse of trade with China due to Covid-19 have also put North Korea's economy into recession (Revere, 2021).	
SP9: increasing calls for intervention as a response to DPRK human rights abuses from the international community.	2

<p>There are frequent calls for North Korea to be held accountable for its human rights violation. However, there have been no calls to militarily intervene in North Korea (Office of the High Commissioner for Human Rights, 2021).</p>		
SP10:	The rise of political opponents in the DPRK.	2
<p>According to a 2016 report of the Institute for National Security Strategy (INSS), the North Korean supreme leader frequently executes potential political rivals. The report claims that in the first five year of his governing alone, he has executed over 140 senior government officials. This shows how fast potential political opponents are removed. This includes one of his strongest political opponents and uncle Jang Song Taek in 2013 as well as his half-brother Kim Jong Nam in 2017 (Hu, 2017; Lockett, 2016).</p>		
SP11:	Joint investment and development of economic projects.	2
<p>The Korean Ministry of Unification (n.d.) explains that the only joint economic development project between North and South Korea were the 2003 Kaesong industrial Complex as well as the Mt. Geumgang tourist project.</p>		
SP12:	An agreement of a roadmap to the establishment of shared institutions (e.g. joint environmental, energy or cultural centers)	3
<p>Inter-Korean negotiations have thus far led to the a few joint projects such as the Mt. Gumgeung site or the 2018 joint Olympic team but there have been no long-standing shared institutions nor roadmaps for their establishment (Ministry of Foreign Affairs, Republic of Korea, 2018)</p>		
SP13:	A joint agreement on a Roadmap for Reunification	3
<p>There have been attempts to create and implement a roadmap for Korean reunification such as the “Joint Declaration for the Advancement of South-North Korean Relations, Peace and Prosperity” in 2007 or the “Panmunjom Declaration for Peace, Prosperity and Unification of the Korean Peninsula” in 2018 (Il & Roh, 2009; Ministry of Foreign Affairs, Republic of Korea, 2018).</p>		
SP14:	Escalating tensions towards other countries or international organizations	3
<p>Tensions towards neighboring countries are not uncommon for both the DPRK and the ROK. South Korea has a long history of territorial and historical disputes. Furthermore, the installment of the American THAAD missile system has been a driver for tensions with China (Taylor, 2021). The DPRK has had constant tensions with the United States since its founding. In 1969 an American surveillance aircraft was shot down by the DPRK, which killed over 30 US soldiers (Martinez, 2017). North Korea frequently threatens the US with the launch of their intercontinental ballistic missiles (ICBM) (B. W. Bennett, 2023).</p>		
SP15:	North Korea forming new military alliances	3
<p>Due to the history of its separation and the Korean War, North Korea has formed military allied with China and Russia. Furthermore, North Korea has been extending is military ties with countries like Iran, Syria or Russia, which includes the transfer of defense technology, military guidance as well as trade of weapons (Beaumont, 2022; Kerr et al., 2016).</p>		
SP16:	South Korea forming new military alliances	4
<p>South Korea’s main military ally is the United States with more than 28’000 troops stationed in South Korea and a mutual defense treaty in force (Manyin et al., 2023). Furthermore, South Korea has established military treaties with multiple countries including Australia, New Zealand, France, Canada, and the United Kingdom (Brooke-Holland, 2017; Ljunggren, 2023).</p>		
SP17:	Denuclearization of North Korea	1

	Even though there has been a significant effort to urge North Korea to denuclearize, it was largely unsuccessful. In 1994 North Korea agreed to freeze its nuclear programs in return for significant aid, in particular building two light-water reactor (Davenport, 2022). This agreement however was violated shortly after. In more recent attempts, the U.S. have tried to negotiate a denuclearization agreement but with no concrete results (Davenport, 2022).	
SP18:	Political hostage takings, assassinations, or other violent acts on the Korean peninsula	3
	The DPRK has a long track record of assassinations and other violent acts. Most prominently the case of the 1968 “Blue House Raid” in which KPA special forces attempted to assassinate South Korean president Park Chung-hee (Brimelow, 2023). In more recent times, the successful 2017 assassination of Kim Jong Un’s half-brother Kim Jong Nam in Kuala Lumpur how shown the lengths the DPRK is willing to go (Broom, 2019). There have been repeated cases of abduction of Japanese citizens (Ministry of Foreign Affairs of Japan, n.d.).	
SP19:	Increased number of high-level defections from North Korea to South Korea	4
	High-level defections from the DPRK have occurred frequently over the years. They often include diplomats and ambassadors such as Kang Chol Hwan (1992), Thae Yong Ho or Jo Song Gil (2019) (Hollingsworth, 2020; ifangbremer, 2023; Watanbe, 1995).	
SP20:	Breaking of existing agreements (e.g. Military agreements, Fisheries Agreement, etc.)	4
	Both North and South Korea have frequently disregarded agreements between the two countries. Most of these violations took place in the context of military agreement. In particular the DMZ has been showplace of the constant military disputes and frequent breaking of agreements. After the 1953 Armistice Agreement North Korea continued to expand its military forces against the border, which ended in several armed incidents (Cumings, 2005). In 2017 South Korea violated the 2015 military agreement by broadcasting propaganda across the border (Ingber, 2018).	
SP21:	An increased scarcity of basic goods (i.e., food, power, shelter) in North Korea	5
	Seth (2011) states that North Korea has continuously had food shortages. The mid-1990s famine was the most devastating account of scarcity of basic goods (Seth, 2011). The DPRK continues to struggle with shortages and is particularly vulnerable to extreme weather events such as the 2020 floods, which leave houses and crops destroyed (Silberstein, 2020).	
SP22:	imposed sanctions on North Korea being lifted.	2
	There have been very few incidents of sanctions on North being lifted or eased. Most of which were eases in economic sanctions in return for engaging in negotiation talk or abolishing its nuclear programs and were swiftly reverted after North Korea did not fulfill the agreement. (Council on Foreign Relations, 2022).	
SP23:	Increase in sanctions on North Korea	4
	The Council on Foreign Relations (2022) describes how as a response to North Koreas nuclear tests and human rights violations several countries have imposed heavy sanctions against the DPRK. Furthermore, they show that these sanctions have increased in recent years, as North Korea has significantly intensified their missile tests. Examples of such sanctions include the 2017 sanctions by the United Nations or the United States, which launched more extensive sanction in	

the same year, targeting more specific individuals (Council on Foreign Relations, 2022).		
SP24:	Increase in general human rights condition in North Korea	1
There is no historical precedent for an improvement in human rights condition. The DPRK regime is one of the most repressive regimes in the world with human rights issues ranging from forced labor to imprisoning regime critics (Roth, 2021). North Korea has not taken any significant steps towards the human rights of its citizen.		
SP25:	Decrease in general human rights condition in North Korea	4
The DPRK has had constant human rights violation throughout its history and the general level of human rights conditions are extremely low (Roth, 2021). The United Nations called out North Korea for its crimes against humanity in 2014 (United Nations Human Rights Office of the High Commissioner, 2014). Its horrific human rights record has significantly worsened after the death of Kim Jong Il and have even further deteriorated through the global Covid-19 pandemic (Roth, 2021).		
SP26:	Allowing consumption of foreign media in North Korea.	1
Smith (2021) describes how on the northern side of the DMZ, the DPRK has a rigorous and extreme strict ban on all foreign media. Even though consumption of foreign media has severe punishments, many North Korean elites and those living in the border region have limited access to certain media through illegally imported USB sticks. There have been no indications of North Korean moves towards an ease on these strict regulations.		
SP27:	Withdrawal of US troops from South Korea.	1
In 1949 the United States significantly reduced, but not fully withdrew, their military presence in South Korea before the start of the Korea War (Cumings, 2005, p. 251). However, U.S. troops have been stationed ever since the Korean War in the Republic of Korea.		
SP28:	An increase of inter-Korean communications	4
Armstrong (2005) elaborates that the amount of communication between the two governments have always fluctuated heavily and largely depend on the strategy which the political leaders peruse. He claims that there have been several periods under which inter-Korean communications saw a high such as the sunshine policy, which was introduce by Kim Dae-jung in 1998 (Armstrong, 2005).		
SP29:	An increasing number of defections from North Korea to China	4
North Koreans have defected from the Hermit Kingdom since its inception. King (2021) describes how particularly after the grave economic crisis in the 1990s, thousands have left the country via China in order to increase their economic prospects and food security. Since the beginning of the century over 30 thousand North Korean refugees have made their way to South Korea, whereas thousands more are located in other places such as China or Southeast Asia.		
SP30:	Resumption of family reunions.	3
The effort to reunite family which were separated during the Korean War first started in 1985. Since then, there have occasionally been family reunions until 2008 when tensions between the DPRK and ROK started to increase (Foley, 2020). Thereafter, only a comparatively small number of families were able to be reunited in infrequent events up until 2018 (Yoon, 2023). More recently, North Korea has dismantled the Mount Kumgang resort area, which has been the		

showplace of many of the family reunions (Zitser, 2022).		
SP31:	Mutual end to the claim to other part of the Peninsula	2
The mutual relinquishment of the claim to the other part of the Korean peninsula has been brought up in various inter-Korean negotiations over the years, however there have constitutional claim still exists (Maxwell, 2020).		
SP32:	Formally end the Korean War	2
Both North and South Korea have stated a desire to set an end to Korean War beyond the existing Armistice Agreement (Pak, 2018). In particular former president Moon Jae-in had vowed to formally end the conflict (Pak, 2018).		
SP33:	An increase in joint collaborations (e.g. sports, research, ..)	2
Through inter-Korean sports diplomacy there have been a few collaborations such as in the 2018 Pyeongchang Olympics as well as economic cooperation. However, such joint projects occur only sporadically and are short-lived (Kobierecki, 2018).		
SP34:	China ceasing trade with North Korea	2
China is by far North Korea's trading partner and while trade has periodically plummeted due to international sanctions or DPRKs isolation during COVID-19, China continued to trade with North Korea even under limited possibilities (B.-Y. Kim, 2017; OEC, 2023).		
SP35:	Increased North Korean missile tests	5
North Korea launched its first missile test in 1984 and has frequently continued to do so (Ahn, 2011). In particular in recent years the number of missile test has significantly increased. In 2022 alone North Korea has tested 70 missiles, which is more than four times the number of missiles tested in the previous year (IISS, n.d.).		
SP36:	Increasing cyber-attack or espionage cases on the Korean peninsula	5
In recent years, cyber-attacks have become a staple tool in the DPRK's arsenal. Over the last North Korea has frequently used its cyber capabilities not only overseas to attack high profile targets such as in the 2014 Sony Pictures hack but also on the Korean peninsula as can be seen in the 2013 "Dark Seoul" attack (Herald, 2013; Laughland & Rushe, 2014).		
SP37:	Increase in Border incidents	4
There has been a large number of border incidents since the end of the Korean War. This includes the Axe Murder Incident of 1976, the Yeonpyeong battles of 2002 and 2010 as well as the 2015 landmine incident and 2017 DMZ defection case (Ahn, 2011; V. Cha, 2010; Li, 2020).		
SP38:	North Korea conducting its seventh nuclear test	4
Pabian and Coblenz (2017) state North Korea is developing its nuclear program since the 1980s and conducted its first nuclear test in 2006. The further explain that from then on there have been periodically 5 more tests of its nuclear capabilities (Pabian & Coblenz, 2017).		

Appendix: Historical Precedent

9.4 Appendix D: Plausibility Values

Nr	Signpost	History-Rating	Expert-Rating	Plausibility
1	South Korean Development of nuclear weapons	1	2.92	1.96
2	South Korea drastically increasing its military capabilities	4	4.31	4.15
3	The U.S. or other ROK military allies not intervening in an DPRK invasion into ROK	2	2.08	2.04
4	North Korea drastically increasing its military capabilities	5	4.15	4.58
5	U.S. showing intentions to militarily invade North Korea	1	2.08	1.54
6	China showing intentions to militarily invade North Korea	1	2.46	1.73
7	Civil unrest or mass protests in North Korea	2	2.85	2.42
8	A sharp downturn of the North Korean economy	3	4.08	3.54
9	Increasing calls for intervention as a response to DPRK human rights abuses from the international community	2	2.15	2.08
10	The rise of political opponents in the DPRK.	2	2.62	2.31
11	Joint investment and development of economic projects	2	3.23	2.62
12	Roadmap to the establishment of shared institutions (e.g. joint environmental, energy or cultural centers)	3	3.54	3.27
13	A joint agreement on a roadmap for reunification	3	2.46	2.73
14	Escalating tensions towards other countries or international organizations	3	3.58	3.29
15	North Korea forming new military alliances	2	2.85	2.42
16	South Korea forming new military alliances	4	3.38	3.69
17	Denuclearization of North Korea	1	1.92	1.46
18	Political hostage takings, assassinations, or other violent acts on the Korean peninsula	3	3.38	3.19
19	Increased number of high-level defections from North Korea to South Korea	4	3.62	3.81
20	Breaking of existing agreements (e.g. Military agreements, Fisheries Agreement, etc.)	4	4.46	4.23
21	An increased scarcity of basic goods (i.e. food, power, shelter) in North Korea	5	4.23	4.62

22	Imposed sanctions on North Korea being lifted.	2	2.92	2.46
23	Increase in sanctions on North Korea	4	4.08	4.04
24	Increase in general human rights condition in North Korea	1	2.77	1.88
25	Decrease in general human rights condition in North Korea	4	4.08	4.04
26	Allowing consumption of foreign media in North Korea.	1	2.23	1.62
27	Withdrawal of US troops from South Korea.	1	2.15	1.58
28	An increase of inter-Korean communications	4	3.77	3.88
29	An increasing number of defections from North Korea to China	4	3.54	3.77
30	Resumption of family reunions.	3	3.23	3.12
31	Mutual end to the claim to other part of the Peninsula	1	2.38	1.69
32	Formally end the Korean War	2	3.15	2.58
33	Increase in joint collaborations	2	3.69	2.85
34	China ceasing trade with North Korea	2	2.08	2.04
35	Increased North Korean missile tests	5	4.62	4.81
36	Increasing cyber-attack or espionage cases on the Korean peninsula	5	4.46	4.73
37	Increase in border incidents	4	4.15	4.08
38	North Korea conducting its seventh nuclear test	4	4.46	4.23

9.5 Appendix E: Signposts Assignment per Scenario

Scenario	Signpost Nr 1	Signpost Nr 2	Signpost Nr 3	Signpost Nr 4	Signpost Nr 5	Signpost Nr 6	Signpost Nr 7
1	Breaking of existing agreements (e.g. Military agreements, Fisheries Agreement, etc.)	Increased North Korean missile tests	Increase in Border incidents	Political hostage takings, assassinations, or other violent acts on the Korean peninsula	South Korea forming new military alliances	South Korea drastically increasing its military capabilities	South Korean development of nuclear weapons
2	Breaking of existing agreements (e.g. Military agreements, Fisheries Agreement, etc.)	North Korea conducting its seventh nuclear test	Withdrawal of US troops from South Korea.	Political hostage takings, assassinations, or other violent acts on the Korean peninsula	North Korea forming new military alliances	North Korea drastically increasing its military capabilities	The US or other ROK military allies not intervening in an DPRK invasion into ROK
3	Breaking of existing agreements (e.g. Military agreements, Fisheries Agreement, etc.)	Increased North Korean missile tests	China ceasing trade with North Korea	Political hostage takings, assassinations, or other violent acts on the Korean peninsula	Escalating tensions towards other countries or international organizations	US showing intentions to militarily invade North Korea	China showing intentions to militarily invade North Korea
4	decrease in general human rights condition in North Korea	Increase in sanctions on North Korea	An increased scarcity of basic goods (i.e. food, power, shelter) in North Korea	A sharp downturn of the North Korean economy	South Korea drastically increasing its military capabilities	Civil unrest or mass protests in North Korea.	Increased number of high-level defections from North Korea to South Korea

5	Decrease in general human rights condition in North Korea	Increase in sanctions on North Korea	An increased scarcity of basic goods (i.e. food, power, shelter) in North Korea	A sharp downturn of the North Korean economy	An increasing number of defections from North Korea to China	Civil unrest or mass protests in North Korea.	Increasing calls for intervention as a response to DPRK human rights abuses from the international community.
6	Decrease in general human rights condition in North Korea	Increase in sanctions on North Korea	An increased scarcity of basic goods (i.e. food, power, shelter) in North Korea	A sharp downturn of the North Korean economy	Allowing consumption of foreign media in North Korea.	Civil unrest or mass protests in North Korea.	The rise of political opponents in the DPRK.
7	An increase of inter-Korean communications	Withdrawal of U.S. troops from South Korea.	Increase in joint collaborations (e.g.	Increase in general human rights condition in North Korea	imposed sanctions on North Korea being lifted.	Denuclearization of North Korea	Joint investment and development of economic projects.
8	An increase of inter-Korean communications	Resumption of family reunions.	Formally end the Korean War	Mutual end to the claim to other part of the Peninsula	Withdrawal of U.S. troops from South Korea.	Denuclearization of North Korea	Roadmap to the establishment of shared institutions (e.g. joint environmental, energy or cultural centers)
9	An increase of inter-Korean communications	Resumption of family reunions.	Formally end the Korean War	Increase in general human rights condition in North Korea	Withdrawal of U.S. troops from South Korea.	Denuclearization of North Korea	A joint agreement on a roadmap for reunification

9.6 Appendix F: Plausibility Assessment per Scenario

		Scenarios								
		1	2	3	4	5	6	7	8	9
Signposts & Respective Plausibility Value	0.75x	20	20	20	25	25	25	28	28	28
		4.20	4.20	4.20	3.93	3.93	3.93	3.93	3.93	3.93
		35	38	35	23	23	23	27	30	30
	1x	4.73	4.20	4.73	3.97	3.97	3.97	1.53	3.13	3.13
		37	27	34	21	21	21	33	32	32
		4.07	1.53	2.00	4.57	4.57	4.57	2.83	2.60	2.60
		18	18	18	8	8	8	24	31	24
		3.20	3.20	3.20	3.47	3.47	3.47	1.93	1.73	1.93
		2	4	9	2	29	26	22	27	27
	1.25x	4.13	4.53	2.10	4.13	3.80	1.63	2.40	1.53	1.53
		16	15	14	7	7	7	17	17	17
		3.73	2.40	3.21	2.37	2.37	2.37	1.47	1.47	1.47
1		3	6	19	9	10	11	12	13	
1.93		2.00	2.46	3.73	2.10	2.23	2.60	3.27	2.70	
		3.598	3.010	3.013	3.674	3.335	3.049	2.336	2.440	2.368
Average Plausibility Value per Scenario										

9.7 Appendix G: List of Interview Partner

Name	Abbreviation	Organization	Position	Residing Location	Interview Location	Date
Beat Habegger	BH	Zurich University of Applied Sciences	Lecturer	Switzerland	Winterthur	08.03.2023, 11:00
Chan S. Suh	CS	Chung-Ang University, Department of Sociology	Lecturer	South Korea	Zoom	13.04.2023, 16:00
<i>Anonymous</i>		South Korean Unification NGO	Program Manager	South Korea	Zoom	20.04.2023, 15:00
David Tizzard	DT	Hanyang University	Lecturer	South Korea	Zoom	25.04.2023, 01:00
<i>Anonymous</i>		DPRK Embassy Switzerland	Counsellor	Switzerland	Muri bei Bern	04.05.2023, 15:00
Alexander Zhebin	AZ	Center for Korean Studies	Director	Russia	Zoom	07.05.2023, 10:00
Peter Ward	PW	Kookmin University	Senior Researcher	South Korea	Zoom	10.05.2023, 01:45
<i>Anonymous</i>		Swiss Foreign Office, Department Asia-Pacific	Academic Intern	Switzerland	E-Mail	11.05.2023, 14:58
Song Namsun	SN	International Society for Korean Studies, Osaka University of Economics and Law	President, Professor	Japan	Zoom	19.05.2023, 07:30
Ivo Burgener	IB	Neutral Nations Supervisory Commission	Head of Delegation	Korea	E-Mail	19.05.2023, 12:16
Zhiqun Zhu	ZZ	Bucknell University, Department of Political Science	Professor of Political Science and International Relations	United States	Zoom	24.05.2023, 22:00
Hochul Lee	HL	Incheon National University, Center for Korean Studies	Professor of International Relations and China Studies	United States	Zoom	25.05.2023, 02:30

<i>Anonymous</i>		Swiss Embassy to North Korea	Counsellor	China	Zoom	25.05.2023, 09:00
Nico Luchsinger		Asia Society Switzerland	Director	Switzerland	Zoom	25.05.2023, 16:30
Kim Hyung-Seok	KH	Korea Advanced Institute of Science and Technology	Professor	South Korea	Zoom	27.05.2023, 14:00

9.8 Appendix H: Survey Responses – Expert Assessment

Sign-post Nr	2023/04/30 12:28:31 AM OESZ	2023/04/30 1:08:03 AM OESZ	2023/04/30 1:47:07 AM OESZ	2023/04/30 8:41:39 AM OESZ	2023/04/30 11:00:00 AM OESZ	2023/04/30 12:08:43 PM OESZ	2023/04/30 8:48:10 PM OESZ	2023/04/30 11:33:25 PM OESZ
	Chris Carothers	Edward Goldring	Benjamin Engel	Antonio Fiori	Edward Howell	Benjamin Katzeff Silberstein	Xavier Boltaina-Bosch	Kevin Gray
1	Rather Unlikely	Extremely Unlikely	Extremely Unlikely	Rather Unlikely	Rather Unlikely	Possible	Rather Unlikely	Rather Unlikely
2	Rather Unlikely	Likely	Likely	Likely	Likely	Possible	Likely	Possible
3	Rather Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Rather Unlikely
4	Impossible	Likely	Possible	Likely	Likely	Likely	Likely	Rather Unlikely
5	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Rather Unlikely		Extremely Unlikely	Extremely Unlikely	Extremely Unlikely
6	Rather Unlikely	Extremely Unlikely	Extremely Unlikely	Possible	Possible	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely
7	Possible	Extremely Unlikely	Rather Unlikely	Rather Unlikely	Rather Unlikely	Possible	Extremely Unlikely	Rather Unlikely
8	Possible	Likely	Possible	Possible	Likely	Possible	Possible	Possible
9	Extremely Unlikely	Rather Unlikely	Impossible	Rather Unlikely	Rather Unlikely	Extremely Unlikely	Impossible	Rather Unlikely
10	Rather Unlikely	Extremely Unlikely	Extremely Unlikely	Rather Unlikely	Rather Unlikely	Rather Unlikely	Extremely Unlikely	Rather Unlikely
11	Possible	Rather Unlikely	Extremely Unlikely	Possible	Possible	Rather Unlikely	Rather Unlikely	Rather Unlikely
12	Possible	Extremely Unlikely	Possible	Possible	Possible	Possible	Rather Unlikely	Rather Unlikely
13	Extremely Unlikely	Extremely Unlikely	Possible	Rather Unlikely	Possible	Extremely Unlikely	Impossible	Rather Unlikely
14	Likely		Rather Unlikely	Rather Unlikely	Possible	Possible	Possible	Rather Unlikely
15	Extremely Unlikely	Possible	Impossible	Rather Unlikely	Rather Unlikely	Possible	Extremely Unlikely	Rather Unlikely
16	Possible	Possible	Extremely Unlikely	Possible	Possible	Possible	Rather Unlikely	Rather Unlikely
17	Impossible	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Impossible	Extremely Unlikely	Impossible	Rather Unlikely
18	Possible	Possible	Rather Unlikely	Possible	Extremely Unlikely	Rather Unlikely	Extremely Unlikely	Rather Unlikely

19	Possible	Rather Unlikely	Possible	Rather Unlikely	Rather Unlikely	Likely	Extremely Unlikely	Rather Unlikely
20	Possible	Likely	Likely	Possible	Likely	Likely	Possible	Possible
21	Possible	Likely	Possible	Possible	Likely	Possible	Possible	Possible
22	Rather Unlikely	Extremely Unlikely	Possible	Rather Unlikely	Extremely Unlikely	Rather Unlikely	Rather Unlikely	Rather Unlikely
23	Possible	Likely	Possible	Likely	Possible	Rather Unlikely	Possible	Possible
24	Rather Unlikely	Extremely Unlikely	Rather Unlikely	Rather Unlikely	Rather Unlikely	Extremely Unlikely	Possible	Rather Unlikely
25	Possible	Likely	Possible	Possible	Possible	Likely	Rather Unlikely	Possible
26	Impossible	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Rather Unlikely	Impossible	Impossible	Rather Unlikely
27	Extremely Unlikely	Rather Unlikely	Extremely Unlikely	Rather Unlikely	Extremely Unlikely	Impossible	Impossible	Rather Unlikely
28	Likely	Possible	Likely	Possible	Rather Unlikely	Possible	Rather Unlikely	Rather Unlikely
29	Rather Unlikely	Impossible	Possible	Possible	Possible	Possible	Extremely Unlikely	Rather Unlikely
30	Extremely Unlikely	Rather Unlikely	Possible	Possible	Possible	Rather Unlikely	Rather Unlikely	Rather Unlikely
31	Impossible	Impossible	Rather Unlikely	Extremely Unlikely	Rather Unlikely	Extremely Unlikely	Possible	Extremely Unlikely
32	Rather Unlikely	Rather Unlikely	Possible	Rather Unlikely	Rather Unlikely	Possible	Possible	Rather Unlikely
33	Possible	Rather Unlikely	Possible	Possible	Possible	Rather Unlikely	Possible	Rather Unlikely
34	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Rather Unlikely	Extremely Unlikely	Extremely Unlikely	Impossible	Rather Unlikely
35	Likely	Likely	Likely	Likely	Likely	Likely	Likely	Possible
36	Likely	Likely	Likely	Possible	Likely	Likely	Possible	Possible
37	Likely	Likely	Possible	Possible	Possible	Possible	Possible	Possible
38	Likely	Likely	Possible	Possible	Likely	Likely	Likely	Possible

Sign-post Nr	2023/05/01 9:12:03 AM OESZ	2023/05/01 10:28:08 AM OESZ	2023/05/01 5:53:52 PM OESZ	2023/05/02 11:35:11 AM OESZ	2023/05/03 9:36:10 AM OESZ	2023/05/08 5:08:16 PM OESZ	2023/05/10 4:42:10 AM OESZ
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	Min Hye Cho	Christopher Green	Fahy Sandra	Alexander Dukalskis	Taehyung, Ahn	Elin Bergner	Vadim Akulenko
1	Possible	Possible	Extremely Unlikely	Rather Unlikely	Extremely Unlikely	Rather Unlikely	Extremely Unlikely
2	Rather Unlikely	Likely	Rather Unlikely	Possible	Likely	Possible	Possible

3	Extremely Unlikely	Extremely Unlikely	Impossible	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Impossible
4	Rather Unlikely	Likely	Likely	Rather Unlikely	Likely	Possible	Rather Unlikely
5	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Possible
6	Possible	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Impossible	Extremely Unlikely	Extremely Unlikely
7	Extremely Unlikely	Rather Unlikely	Rather Unlikely	Extremely Unlikely	Rather Unlikely	Rather Unlikely	Impossible
8	Possible	Rather Unlikely	Likely	Possible	Rather Unlikely	Possible	Extremely Unlikely
9	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Rather Unlikely	Extremely Unlikely
10	Extremely Unlikely	Rather Unlikely	Rather Unlikely	Extremely Unlikely	Rather Unlikely	Extremely Unlikely	Impossible
11	Extremely Unlikely	Possible	Possible	Rather Unlikely	Rather Unlikely	Extremely Unlikely	Possible
12	Possible	Possible	Possible	Extremely Unlikely	Possible	Rather Unlikely	Possible
13	Rather Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely
14	Rather Unlikely	Rather Unlikely	Likely	Possible	Extremely Unlikely	Extremely Unlikely	Rather Unlikely
15	Rather Unlikely	Extremely Unlikely	Rather Unlikely	Possible	Rather Unlikely	Possible	Impossible
16	Rather Unlikely	Extremely Unlikely	Possible	Possible	Rather Unlikely	Possible	Possible
17	Rather Unlikely	Extremely Unlikely	Impossible	Extremely Unlikely	Rather Unlikely	Extremely Unlikely	Extremely Unlikely
18	Rather Unlikely	Possible	Likely	Possible	Rather Unlikely	Possible	Rather Unlikely
19	Possible	Rather Unlikely	Likely	Possible	Possible	Rather Unlikely	Extremely Unlikely
20	Possible	Likely	Likely	Possible	Possible	Likely	Rather Unlikely
21	Possible	Possible	Likely	Possible	Possible	Possible	Rather Unlikely
22	Rather Unlikely	Possible	Impossible	Rather Unlikely	Possible	Extremely Unlikely	Extremely Unlikely
23	Possible	Possible	Likely	Rather Unlikely	Possible	Possible	Extremely Unlikely
24	Extremely Unlikely	Rather Unlikely	Rather Unlikely	Extremely Unlikely	Rather Unlikely	Extremely Unlikely	Likely
25	Possible	Rather Unlikely	Likely	Possible	Possible	Rather Unlikely	Extremely Unlikely

26	Extremely Unlikely	Extremely Unlikely	Rather Unlikely	Possible	Rather Unlikely	Extremely Unlikely	Rather Unlikely
27	Extremely Unlikely	Rather Unlikely	Impossible	Rather Unlikely	Extremely Unlikely	Extremely Unlikely	Impossible
28	Rather Unlikely	Possible	Possible	Rather Unlikely	Possible	Likely	Possible
29	Possible	Possible	Likely	Possible	Possible	Likely	Rather Unlikely
30	Extremely Unlikely	Possible	Extremely Unlikely	Possible	Possible	Rather Unlikely	Possible
31	Rather Unlikely	Rather Unlikely	Extremely Unlikely	Extremely Unlikely	Rather Unlikely	Extremely Unlikely	Possible
32	Rather Unlikely	Rather Unlikely	Extremely Unlikely	Rather Unlikely	Rather Unlikely	Rather Unlikely	Possible
33	Possible	Possible	Possible	Rather Unlikely	Possible	Rather Unlikely	Possible
34	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Extremely Unlikely	Impossible
35	Possible	Possible	Likely	Possible	Possible	Rather Unlikely	Possible
36	Possible	Likely	Possible	Possible	Possible	Likely	Possible
37	Possible	Possible	Possible	Possible	Possible	Likely	Rather Unlikely
38	Possible	Possible	Likely	Possible	Possible	Possible	Possible