

The Changes in North Korea's Fiscal and Financial Systems in the Kim Jong-Un Era

Ji Young Choi
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1

Research Background and Introduction

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This research explores changes in North Korea's fiscal and financial systems after Kim Jong-un came into power. North Korea has maintained a state system close to a classic socialist system for the longest time among other socialist states.¹⁾ Its fiscal and financial systems are an embodiment of these socialist characteristics. North Korea attempted to change its systems by reducing the state budget's burden on business' procurement of capital only after the mid-1990s when the country was hit hard with a fiscal crisis. Other old socialist countries began their fiscal and financial reforms under the awareness that economic growth was stagnant due to a failure to effectively distribute capital.²⁾ North Korea's changes, however, were mostly caused by the fiscal crisis during which the budgets were almost cut in half.³⁾ Even then, North Korea's changes were limited; more banks' credits, only to a limited extent, were relied upon to secure capital for production units; and it took a long time to finally overhaul fiscal and financial systems by reducing the number of planning

1) János Kornai, *The Socialist System: The Political Economy of Communism* (Princeton: Princeton University Press, 1992), p. 20.

2) Preceding studies suggest that it was the Kosygin reform launched in March 1965 that marked the beginning of a serious discussion on the role of credits in Soviet economic reform. Businesses' supervision by banks started to be considered more important to fulfill the planned goals in Kosygin reform. Accordingly, the reform of banks and the credit system was adopted as the Council of Ministers of the USSR made a decision titled 'Concerning Measures to Further Perfect the Extension of Credit and the Clearing System of the National Economy and Increasing the Role for Credit in Stimulating Production' on April 3, 1967: Omelan Kuschpëta, *The Banking and Credit System of the USSR* (Leiden: H.E. Stenfort Kroese B.V., 1978), pp. 49~53.

3) IMF Fact Finding Report published in 1997 contains some of the fiscal data submitted by North Korea at the time. 41.6 billion North Korean won of fiscal income in 1994 was reduced by half to 24.3 billion won in 1995: IMF, IMF DPRK Fact-Finding Report (Washington D.C.: IMF, 1997), <Table 1>, p. 16.

indicators, granting freedom for price-setting, expanding the authority of financial organizations, and facilitating cash distribution.

Even though the North Korean version of economic reform was adopted for the first time in the 2000s, such as ‘The July 2002 Economic Management Improvement Measures,’ there was little change to its fiscal and financial systems, with financial system in particular remaining almost entirely unchanged. These systems only started to change synchronously after Kim Jong-un took power, and the regime was only able to recognize the effects of these reforms on economic performance after it witnessed the value of its currency crashing due to a failed confiscatory currency reform and the rise of private financial markets. However, signs of worsening fiscal conditions started to emerge after 2020 with the toughening of sanctions imposed by the UN Security Council during 2016-2017. The North Korean regime partially revised their public finance law in August 2021 and implemented various financial measures to counter deteriorating fiscal conditions.

This research proceeds as follows. Section II addresses the fiscal and financial systems of real socialist countries at the classic socialist and reformist socialist stage. North Korea’s institutional characteristics will be analyzed in light of this comparison. North Korea expanded bank credits to secure capital for businesses and reformed how the budgetary income was collected to find new tax sources only in the face of the fiscal crisis of the mid-1990s. However, changes in financial system were limited until the 2000s. A lack of financial reform not only hindered effective capital distribution but also restricted the procurement of new sources of revenue.

Section III looks at changes to North Korea's fiscal and financial systems during the initial phase of Kim Jong-un's reign. North Korea revised fiscal regulations, such as the national budget revenue law (2011), the Enterprise Act (2012~2014), local budget law (2012), and public finance law (2015). The regime also provided capital for financial organizations through a series of financial reforms, such as *financial organizations' profitability system*. What stood out from changes of its economic management system in the 2000s was the connection between fiscal and financial reforms.

Section IV reviews changes to fiscal systems by analyzing official documents, involving the budget reporting of the Supreme People's Assembly (SPA), budget-related discussions at the Party Congress and Party Plenary Meeting, and the provisions of public finance law (2021). Changes in financial systems started to emerge with continued sanctions, such as an expansion of forced savings, a ban on the sale and encashment of phone money (trading cell phone airtime like a digital balance), and the issuing of money coupons (*dongpyo*). Such recent changes appear to be North Korean regime's policy response as shocks in trade, aggravated by stronger sanctions, have morphed into a fiscal crisis.

Section V employs text-mining to analyze North Korea's institutional changes. This section utilizes 228 papers written on the themes of 'the fiscal,' 'the financial,' 'currency,' and 'price' published in *Economic Research* during 1991-2020 to determine whether the connections between words relating to fiscal and financial systems have shown 'quantitative' changes.

2

Socialist Fiscal and Financial Systems and North Korea

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A. Socialist Fiscal and Financial Systems

Fiscal and financial reforms in a "real socialist economy" consist of a process through which the state and the market take up a divided role in the fiscal and financial realms. The financial sector is only given a passive role in executing the budget in the classical socialist stage. At the reformist and transitional socialist stages, however, the fiscal role of distributing capital in the national economy is reduced with the intermediary function of the financial sector becoming active. Growth stagnation leads to a recognition that the government's provision of the capital is ineffective, which in turn leads to an increase in the procurement of capital from bank loans. Although the mono-banking system is typically operated at the reformist socialist stage, household or business savings far outweighed the state budget as a source of capital for banks in some countries in the mid-1970s.

It is difficult to uniformly categorize the different level and process of fiscal and financial reforms implemented by each country under the real socialist economy. Financial reforms under the mono-banking system were relatively advanced in old-Soviet and East European countries. In particular, countries like Hungary, Poland, and the Czech Republic have been equipped with comparatively advanced banking systems. The role of credit in the distribution of capital across the economy has expanded, but only a limited authority on taking over businesses' Non-Performing Loan (NPL) has been given to the central bank. For that reason, the financial sector was held accountable for financial distress over the credit provided to the government and businesses. Old Soviet and East European countries adopted the two-tier banking system in

the regime transition periods. NPL being transferred to commercial banks caused a financial crisis in a significant number of countries.

By contrast, the role of the banks' credit in distributing capital across the economy was less prominent in China as financial reform was limited under the one-tier banking system. With the adoption of the two-tier banking system following increased reform and openness, financial organizations started to take over the skyrocketing number of NPLs from state-owned companies and it caused the government's fiscal deficits to soar. However, implementing fiscal reform reduced the government's budgetary burden to some extent. In addition, implementing financial reform made household savings rise rapidly, which poured capital into fiscal deficits caused by fiscal and financial reforms. China's case illustrates that the achievements of fiscal and financial reforms are correlated and that whether the stability of the macro economy is guaranteed during the reform process serves as an important factor to improve the policy effectiveness.

B. North Korea's Fiscal and Financial Systems

Unlike other real socialist economies, North Korea started a passive form of fiscal reform in the 1990s. As fiscal revenue dwindled, North Korea underwent an institutional change to increase bank loans for businesses in an attempt to procure capital. However, it failed to reduce its excessive reliance on tax revenue as the regime expanded the sources subject to turn-over tax. In addition, financial reforms designed to expand savings and facilitate bank credits were rarely implemented.

The 2000s witnessed economic reform measures that put

marketization and decentralization on trial for the first time. During that period, institutional reform retroactively acknowledged the already widespread market economic activities. North Korea made the income generated from market economic activities subject to taxation to expand tax income for the state budget. The regime gave economic incentives to businesses by granting them an expanded right to dispose of the income. However, barely any reform in financial systems took place. Households and businesses' savings and demand for loans appeared to rise significantly alongside their increased participation in market economic activities. With those fiscal reforms, however, financial reforms did not occur, at least not to an extent that could absorb household demand for savings and loans. As a result, the financial intermediary function between households and businesses has largely been taken over by the private financial market. In other words, the official financial system's ability to absorb the financial surplus has been replaced to a significant extent by the private financial market.

In particular, raging inflation in the North Korean market in the 2000s was indicative of the central bank's failure to manage money circulation and stabilize prices. The widening gap between the market and state-set price created favorable conditions for households and businesses to participate in unofficial markets. Nevertheless, North Korea is expected to face difficulties in improving its fiscal conditions due to a lack of laws and infrastructure that allow for securing newly generated income from the market for its budget. As the financial surplus from households and businesses has been absorbed into the private market, official financial organizations have failed to secure a source of revenue

substantial enough to offset the government's fiscal deficits. Overall, a dearth of financial reform before the Kim Jong-un regime continues to be a primary cause of this failed fiscal reform.

3

Changes in Fiscal and Financial Reforms at the Beginning of the Kim Jong-un Regime

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What sets North Korea's 'own economic management system' apart from the July 1st Measure (economic reform and marketization promotion of the Park Bong-joo cabinet during 2004-05) is that marketization and decentralization measures are connected to fiscal and financial reforms, albeit to a limited extent. Fiscal legislation was revised as part of reform measures, including laws on budget revenue, finance in the production unit, a plan for the people's economy as follows: The Law on National Budget Revenue (November 2011), public finance law (December 2011 and April 2015), the Enterprise Act (May 2014 and May 2015), the law on farmland (December 2014 and June 2015), and the People's Planned Economy Bill (June 2015). Fiscal system determines how to set the income and distribution between the state and the production units, involving farms and enterprises. Therefore, fiscal reform requires changes to legislation related to the national economic plan and finance in production units. The essence of fiscal reform in the early days of the Kim Jong-un regime was dividing planning indicators, making a clear distinction in the distribution of newly incurred income between the state and the production units. A reformative measure to expand the 'enterprise indicators,' which gives businesses self-management authority, granted the production units autonomy, and significantly expanded tax sources coming from market economic activities. For instance, North Korea encouraged businesses to increase their 'own capital' for investment in plants and equipment instead of relying on the state budget by revising the public finance law in 2015. Accordingly, businesses were given more authority and discretion in investing this capital in plants and equipment. Such fiscal reforms align with the 'Socialist Corporate Responsibility

Management System' that granted businesses the 'right to manage finance' at the beginning of the Kim Jong-un regime. A revision of the Enterprise Act in 2014 allowed businesses to fill a lack of management funds with bank loans or 'residents' idle funds' instead of relying on the state budget. In other words, fiscal and financial reforms occurred in tandem.

Financial reform measures were taken to facilitate the financial intermediary function of financial organizations by introducing the 'financial organization's profitability system' and by attempting to separate commercial banks organizationally and functionally. Reflecting an increasing cash distribution, North Korea has allowed businesses to hold both domestic and foreign currency and savings accounts and adopted e-payment cards for households, encouraging people to save and remit money. In particular, North Korea has made official financial organizations adopt this new system of linking residents' idle funds to business loans—an attempt to partially absorb an intermediary function of private financial markets.

The linkage of fiscal and financial reforms for the local budget has been strengthened by reinforcing the local budgetary system, having financial organizations implement the profitability system, and enforcing the local cash distribution system. In other words, North Korea expanded tax revenues for the local budget, bolstering the fiscal foundation for Local People's Committee. The increased revenue has been used as funding for loans for local commercial banks, enabling them to recover and manage the cycle of cash circulation. This could offer an increased source of revenue for loans for local production units or provide capital if regional governments' fiscal conditions deteriorate.⁴⁾

As such, North Korea's fiscal and financial systems in the initial phase of the Kim Jong-un regime adopted a two-track system where fiscal and financial reforms have been implemented in tandem. The sub-division of planning indicators clearly distinguished between income and expenses in state finance. Businesses have been given the right to manage their finances. Hence, the state finance's control over procuring capital and income disposal has been lessened. Financial system has allowed for the diversification of securing capital. As a result, only after Kim Jong-un took the helm did North Korea's fiscal and financial systems gradually started to deviate from the classical socialist format of maintaining an ambiguous distinction between the fiscal and the financial.

⁴⁾ Soo Min Hwang and Moonsoo Yang, "A Study on the Reform of the North Korean Financial System in the Kim Jong-Un Era," *National Strategy* vol. 26, no. 1 (2020), pp. 167~197.

4

Prolonged Sanctions and Changes in Fiscal and Financial Systems

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A. Changes in Fiscal System⁵⁾

The toughening of UNSC sanctions has caused the economic growth rate to nosedive in North Korea since 2017. It negatively impacted North Korea's fiscal conditions, signs of which started to emerge in 2020. The Supreme People's Assembly (SPA) made an announcement the same year that the growth rate of turn-over tax and deductions from corporate earnings—a major source of income for the state budget—had stagnated at around 1% and that the depreciation expenses for state investment-incurred fixed assets would be collected for the budget. In the past, the depreciation allowance for fixed property—the money yearly accumulated from the depreciation of fixed assets—was retained by businesses. The fact that these funds were mobilized for the state budget was a testament to North Korea's deteriorating fiscal conditions. The planned budget increase, which hovered at around 4-6% after Kim Jong-un took power, has stagnated at around 1% since 2021.

A budget report at the 2022 SPA unusually mentioned an expansion of 'income from money collection.' This referred to

⁵⁾ This section discusses changes in fiscal system impacted by prolonged sanctions by analyzing the contents of amendments in the (new) public finance law and the *Rodong Sinmun* article that covered the budget reporting of the SPA and the 8th Party Congress. Contents on SPA's budget reporting during 2020~2022 are an updated version of the author(s)'s papers: Jea Hwan Hong et al., "Analysis of the 8th Party Congress of WPK in North Korea(2): Economy, Society, and Culture," Online Series CO21-02, Korea Institute for National Unification, <<https://repo.kinu.or.kr/handle/2015.oak/12123>> (Date accessed: June 1, 2022); Ji Young Choi, "Analysis of the 4th Session of the 14th Supreme People's Assembly in North Korea: A Focus on Budget and Accounts," Online Series CO21-04, Korea Institute for National Unification; Min Hong et al., "An Analysis of the 6th Session of the 14th Supreme People's Assembly of the Democratic People's Republic of Korea," Online Series CO22-05, Korea Institute for National Unification (Date accessed: June 1, 2022).

income generated from taxation of money earned through the market trade from production units or individuals, such as the market rental fee, and a fee for storing bicycles and luggage.⁶⁾ This unusual specificity at the 2022 SPA might suggest that the scale of *income from money collection*—a primary source of regional budgetary income during 2020-2021—was reduced to a significant extent as market trade shrank after the spread of COVID-19.⁷⁾

Worsening fiscal conditions appear to be a reason for the revision to public finance law in August 2021, which is characterized by the following aspects. First, the source of the state budget was changed to ‘social net income’ and ‘revenue’ became subject to taxation (Articles 13, 15, 19, and 38). Accordingly, deductions from profits in the production-unit were renamed ‘deductions from corporate earnings’ as confirmed at the 2022 SPA. ‘Deductions from corporate earnings’ are not designed to distribute a portion of enterprises’ net income, but a ‘centralized net income’ mobilized by the regime whenever sales income is incurred.⁸⁾ The revision to the public finance law primarily aims to strengthen the centralized taxation of deductions from earnings. In the meantime, it is probable that North Korea extended the coverage of taxation to

⁶⁾ Hyeong-Jung Park and Jinwook Choi, “An Analysis of the 3rd Session of the 11th Supreme People’s Assembly of the Democratic People’s Republic of Korea” (Seoul: Korea Institute for National Unification, 2005), p. 12.

⁷⁾ Income from money collection was designed and adopted by the North Korean regime to recognize market trade and to expand fiscal revenue by finding new sources of taxation. It appears to be a source of regional budgetary income as it is managed by the Local People’s Committee. Min Hong et al., “An Analysis of the 6th Session of the 14th Supreme People’s Assembly of the Democratic People’s Republic of Korea,” Online Series CO22-05, Korea Institute for National Unification.

⁸⁾ Yong-soo Kim, “Some Issues Facing Deductions from Corporate Earnings and Its Reasonable Mobilization,” *Economic Research* vol. 1, (2004).

‘income’ as a reflection of the new ‘income distribution measure’ which has been operated in its pilot form since 2012.⁹⁾ This refers to how the production units’ fiscal income has been distributed, which was adopted as a pilot project since the so-called *June 28 economic measures* in 2012.¹⁰⁾ Mandatory payments to the regime are calculated as follows: those subject to taxation are based on ‘income’ not ‘net income,’ and the ‘state budget payment duty’ (mandatory payment to the state) is determined depending on ‘sales revenue’ which reflects ‘state payment rates.’ ‘Sale revenue’ includes revenue from market sales, and it is not necessary to separate production costs when calculating the ‘state budget payment duty,’ so the collection method has been simplified. Given North Korea’s poor tax collection infrastructure, these changes help the state secure budgetary income more easily. In other words, ‘public finance law’ may have been amended in a way that allows for the simplification of taxation data on top of the existing centralized tax collection of deductions from corporate earnings.

Second, fiscal privileges were given to exemplary units while the production units’ authority to autonomously dispose of surplus state budgetary income was reduced. The (new) public finance law

⁹⁾ Contents below were based on the written consultation of Dr. Jeong-wook Choi (September 23, 2022).

¹⁰⁾ Pilot reformative proposals in eight sectors were established according to ‘June 28 economic measures,’ after Kim Jong-un took power, as released in “teaching material on revising the economic management method.” Distributing finance of production units (factory, enterprises) appeared to be governed by “3. Regarding the transition of pilot units’ factory and enterprises’ distribution of fiscal revenue to income distribution format.” Ki Bum Han, “North Korea’s Economic Reforms and Bureaucratic Politics, 2019,” (Seoul: North Korea Research Center, 2019), pp. 244~246. Recited: Jeong-wook Choi, “Changes in the Tax-related Legislative System in North Korea” (Seoul: Sunin, 2021), pp. 246~253.

significantly limits the types of capital available for production units' own use after paying for national budget revenue. The law also removed the wording that production units' own capital that went unused during the planned periods would not be mobilized for the state budget. As fiscal conditions deteriorated, the production units' authority for the possession of its own capital was reduced while the state mobilization for money was enhanced. These changes could reduce the incentives of production units, so a separate article (Article 20: Fiscal Privilege) appears to have been added, which used to be included in the local budgetary system, titled 'Fiscal Privilege for Exemplary Units.'

Third, the amended 'public finance law' added the 'Right to Fiscal Management' or 'Compensation for the Management Cost Loss.' An article 'Right to Fiscal Management,' which used to be included in the Enterprise Act, was newly established as a separate article, demonstrating the continuum of 'Socialist Corporate Responsibility Management System.' There was a heightened emphasis on the responsibility of the production units to pay back the capital procured on their own. The prolonged sanctions likely worsened business profitability and made it difficult for production units to pay back the loans borrowed from banks or residents. As the mobilization of residents' idle funds was newly adopted under Kim Jong-un, the need appeared to legally hold the businesses (the debtor) accountable for paying back the loans.

Fourth, an article was newly added regarding the "implementation of a sectoral budget system for each unit under the overarching central budget" (The Article 16). It appears to point out that each unit, which makes up the central budget, should at least strike a balance between income and expenses given

the following sentences: “Income and expense in the unit’s budget should be balanced by each unit on its own, offering more benefits to the state” or “the capital required for each unit should be guaranteed by the unit’s budgetary income.” It indicates that a certain unit’s budgetary surplus balance should not offset the deficit of other units and that each unit should achieve a surplus or at least strike a balance between income and expense. The 2021 SPA mentioned that some units failed to achieve the planned goal set for budgetary income. Given that, the unit-based budgeting system governed under the central budget appears to aim to strengthen the state control over the budget balance for each unit.

Fifth, punishment in case of violations of the public finance law was specified in detail and civil liability was newly added. Detailed punishment seems to aim to strengthen fiscal control. Adding civil liability on top of administrative and criminal liability appears to define who should be held accountable if loaned funds from the private sector are not paid back.

B. Changes in Financial System

As changes to the financial system after the prolonged sanctions have either been temporary or in a pilot form, official documents rarely cover such occurrences. This information has only been obtained from media outlets with networks with North Korean refugees residing in South Korea. North Korea appeared to attempt to incorporate the surplus of households and businesses into official financial system by mobilizing “forced savings,” limiting the use of phone money, and having the central bank issue money coupons (*dongpyo*) starting in 2019. While financial reforms at the

beginning of the Kim Jong-un regime were implemented by providing economic incentives, they have shifted toward the forcible measure as the sanctions continue.

An expansion of forced savings takes the form of increasing the subscription to indemnity insurance, making it mandatory for people to open a bank account and deposit the money, and limiting the withdrawal of deposits. This is not a nation-wide measure, but an attempt by regional commercial banks to mobilize household surplus by associating with *Local People's Committee*, as *financial organizations' profitability system* has been implemented.

Phone money is known to be used as remittance between individuals or payment for commercial transactions aside from being used for communication services thanks to the convenience of wire transfers. In particular, a 'rechargeable foreign currency card,' which can charge phone money up to the maximum of \$20, competed with the remittance service of official financial organizations. Measures implemented in July 2020 limit the frequency and the maximum amount of remittance for phone money and ban its sales and encashment, aiming to block financial transactions that bypass official financial organizations.

The issuance of money coupons (*dongpyo*) by the central bank in the latter half of 2021 is similar to a cash check, a payment bill given in exchange for a promise of cash in the future. Considering that *dongpyo* is available for use after exchanging foreign currency, it also features the characteristics of a foreign check. As the existing cash check and foreign check were used only in a limited capacity, they are not fit for the current economic reality where cash transactions are more dominant for trading production goods between businesses.¹¹⁾ North Korea appeared to have difficulty

with its cash flow as revealed by its internal documents and the central bank's issuing of *dongpyo* to absorb domestic and foreign currency held by the private sector. However, the central bank-issued *dongpyo* has too large of a coverage and its volume of issuance is meager; it is unlikely for *dongpyo* to completely replace the transaction of existing domestic and foreign currency. Hence, the North Korean regime appears to intend for *dongpyo* to be a temporary currency.

Limiting the use of phone money and issuing *dongpyo* by the central bank are similar policies given that the liquidity of the private sector is frozen or absorbed by official financial organizations. It is impossible to liquidate a rechargeable foreign currency card possessed by individuals, *Dongju* ("money masters"), and phone money sellers within a short time. Rechargeable foreign currency cards functioned as a channel for trading foreign exchange associated with the remittance of phone money. Hence, a new measure of banning this practice may align with the regime's various policies of absorbing and restricting the use of foreign currency.

11) 'Cash check' and 'foreign check' are existing systems in North Korea along with 'non-cash check.' Under the existing system in North Korea, cash (domestic and foreign currency) should be converted into checks and used for transactions. While 'non-cash check' is used by companies to trade production goods, 'cash check' is used by residents to trade consumer goods. However, as the use of cash in domestic and foreign currency expanded, the use of 'cash and foreign check' became almost obsolete. North Korea's money coupon is presumed to be an expansion of existing cash and foreign check to absorb the cash liquidity.

5

Changes in North Korea's Fiscal and Financial Systems Viewed through *Economic Research*

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Fiscal and financial reforms adopted at the beginning of the Kim Jong-un regime were confirmed through a text-mining analysis of North Korea's official documents. This research analyzed papers on the themes of 'the fiscal' and 'the financial,' 'currency,' and 'price' published in *Economic Research* from 1991-2020.¹²⁾ Two major hypotheses were tested based on the DOC2VEC method.¹³⁾ DOC2VEC utilizes machine-learning technology called the Artificial Neural Network (ANN) to determine the distance between words found in papers by measuring it from the origin of the coordinates. Various distances can be measured with this concept. The most frequently used method is to find similarity between words. This research examined changes in words similarity by setting fiscal- and financial-related words extracted from *Economic Research* as a 'word of reference' and a 'word of comparison.' Major findings are as follows.

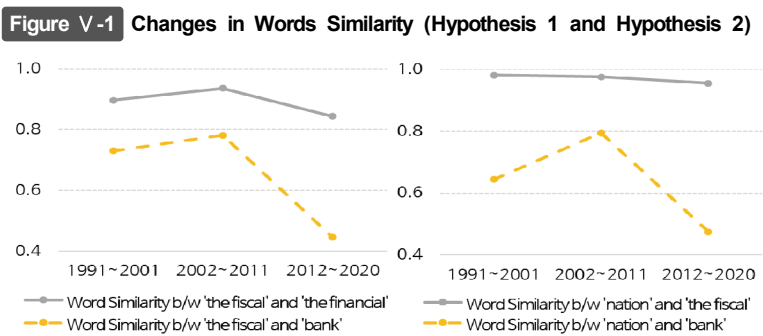
First, the similarity between 'the fiscal' and 'bank' was confirmed to be weakened after Kim Jong-un came into power. The picture on the left features changes in words similarity when setting a 'word of reference' as 'the fiscal (*jaejeong*)' and a 'word of comparison' as 'bank (*eunhaeng*).' This similarity weakens distinctively during 2012-2020. On the other hand, when 'the financial (*geum-yung*)' was set as a word of comparison, the

¹²⁾ The Korean version of this paper tested six hypotheses based on term frequency, TF-IDF, text network analysis, Lasso, and DOC2VEC. This Study Series paper only introduces three hypotheses, which utilized the DOC2VEC method ('Hypothesis 1': 'Linkage between the fiscal and the financial is becoming weak.' & 'Hypothesis 2': 'The state control on banks (the financial) is being relaxed.' 'Hypothesis 5': 'Functions (savings, loans, payment, and transmissions) of commercial banks are facilitated.'

¹³⁾ Q. Le and T. Mikolov, "Distributed representations of sentences and documents," in proceedings of the 31st international conference on machine learning, vol. 32, no. 2 (2014), pp. 1188~1196.

similarity was not distinct as the word ‘the financial’ itself was not frequently used in North Korean literature.¹⁴⁾

Second, the state’s financial control was confirmed to be weaker after Kim Jong-un took power. The picture on the right features the words similarity when a ‘word of reference’ was set as ‘nation (*guk-ga*)’ and a ‘word of comparison’ as ‘bank (*eunhang*).’ The similarity was at the highest during 2002-2011 and at the lowest during 2012-2020. The discussion of commercial banks emerged in North Korean literature only after the 2000s. A high similarity between the words ‘nation’ and ‘bank’ during 1991-2001 appears to be attributed to the fact that the central bank-focused fiscal planning was mentioned quite frequently in documents. The words similarity between ‘nation’ and ‘bank’ became distinctly weaker after Kim Jong-un came into power. This partially confirms Hypothesis 2 (The state control over banks (the financial) is weakened). This is in contrast to the continuation of a high similarity between words ‘nation’ and ‘the fiscal.’



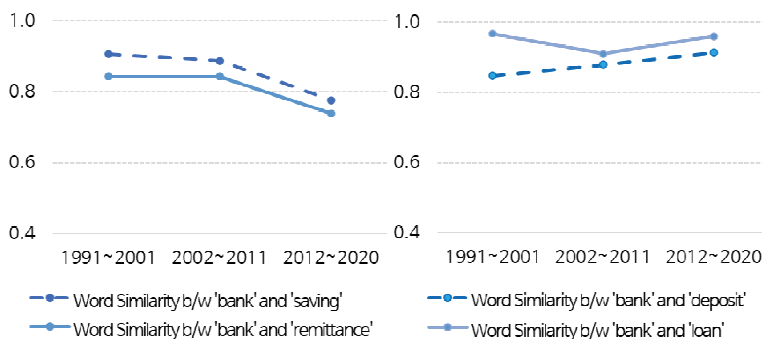
Source: written by the author

¹⁴⁾ The word ‘financial’ (*geum-yung*) is frequently used when referring to a market economy (capitalism) or the international economy rather than North Korea’s systems.

Second, the function of commercial banks appears to be somewhat activated. The functions directly related to business finances, rather than household finances, are confirmed to be more activated. In other words, the similarity between business financial-related words such as ‘deposit (*yegeum*)’ and ‘loan (*dae-bu*)’ increased when setting ‘bank’ as a word of reference. On the other hand, the similarity between compared words, such as ‘saving (*jeo-geum*)’, ‘remittance (*song-geum*)’, and ‘settlement (*gyeol-je*)’, was confirmed to be decreasing.¹⁵⁾ This result might be attributed to the fact that a series of fiscal and financial reforms at the beginning of the Kim Jong-un regime were linked to business’ ‘Right to Fiscal Management’ and that they mostly focused on improving business’ capacity to procure capital or absorb financial surpluses. Institutional reforms are still lacking regarding household finances, such as official financial organizations not providing loans to households, despite some reformative efforts, such as improving the payment system with the adoption of e-cards and expanding remittance services. In general, when the level of financial development is low, official financial system increasingly focuses their services on businesses rather than households since the latter has lower credit ratings and less demand for loans. This leads households to resort to the private financial market, a phenomenon now occurring in North Korea.

¹⁵⁾ In North Korea, the word of deposit (*yegeum*) refers to corporate saving and the word of saving (*jeo-geum*) refers to household’s saving.

Figure V-2 Changes in Words Similarity (Hypothesis 5)



Source: written by the author

Meanwhile, the text-mining analysis did not find distinct changes after the toughening of sanctions against North Korea. As the sanctions have continued, changes in fiscal and financial systems started to become more visible after 2020. A lack of papers published during that period seems to be a reason why it has not appeared in the text-mining results.

The Changes in North Korea's Fiscal and Financial Systems in the Kim Jong-Un Era

