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Economic Sanctions and Private Goods:
Focusing on North Korea's Trade and Finance Elite Coalition*

Han Jee Man[1], Moon Ye Chan[2], Lee Chul[3]

1. First Author Research Fellow, Soong-sil Institute for Peace and Unification,
Email: Jayman0826@gmail.com

2. Second Author PhD Student, Yonsei University, Republic of Korea,
Email: ans3981@naver.com

3. Corresponding Author Adjunct Professor, Soong-sil University, Republic of Korea,
Email: E.30115jon@daum.net

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Abstract

This study examines how North Korea's ruling coalition has been restructured over the course of prolonged international sanctions. Moving beyond macro-level analyses of sanctions, it focuses on internal changes within the elite coalition that sustains the regime, drawing on selectorate theory. Using role descriptions of North Korean individuals appearing in UN Security Council Panel of Experts reports, the study classifies elite types and traces annual compositional changes. It further conducts a longitudinal network analysis of trade and finance elites, whose prominence increased after sanctions. The findings show a structural shift from a military-centered coalition to one centered on trade and finance elites, characterized by sustained cohesion but declining concentration, indicating adaptive dispersion of roles and connections around private-goods provision.

Keywords: North Korea, Elite Coalition, Economic Sanction, Selectorate theory, Panel of Experts

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I. Introduction

Following a series of nuclear tests and intercontinental ballistic missile (ICBM) launches in 2016 and 2017, the North Korean regime was subjected to an unprecedented level of international sanctions (Smith, 2020). Moving beyond incremental and selective measures, the United Nations Security Council established a comprehensive sanctions regime that directly targeted North Korea's core sources of foreign currency earnings, including coal, iron ore, and refined petroleum products. These measures were further reinforced by bans on the overseas dispatch of labor, secondary sanctions on financial institutions and vessels, and asset freezes and travel restrictions imposed on specific individuals and entities, placing structural pressure on North Korea's external economic activities (Wertz, 2020). Such sanctions go beyond diplomatic signaling or cost imposition; they fundamentally pose a direct threat to the resource inflow channels and financing structures that the regime has relied upon for governance. This situation was further exacerbated in early 2020 by North Korea's full-scale border closure, justified by the spread of COVID-19 (Callegari, 2025). The dual external shocks of sanctions and border closure not only imposed severe burdens on the North Korean economy but also likely generated structural pressure on governance resources and reward mechanisms that form the core foundation of regime survival.

In authoritarian systems, such pressure carries political implications that extend beyond a mere economic crisis. According to selectorate theory, as articulated by Bueno de Mesquita and his colleagues, the stability of autocratic regimes depends less on broad popular support than on maintaining the loyalty of a very small group of core elites, namely, the winning coalition (Bueno de Mesquita et al. 2003). The primary means by which leaders secure the loyalty of this coalition is not the provision of public goods, but the selective distribution of private goods, such as monetary rewards, privileges, exclusive access, and status. Consequently, when external sanctions sharply reduce a state's foreign currency earnings and fiscal resources, the system's most vulnerable point is likely to emerge not in the living standards of the general population, but within the elite reward mechanism itself.

From a theoretical perspective, sanctions can therefore operate as a tool that directly pressures the ruling coalition of authoritarian regimes. As governance resources diminish, leaders are forced to distribute limited resources more selectively, a process that carries the potential risk of

intensifying elite competition and discontent. Existing sanctions research has repeatedly emphasized that the political effectiveness of sanctions may hinge less on mass suffering than on the likelihood of elite defection (Byman and Lind, 2010).

Despite being one of the most heavily sanctioned countries by the international community, however, North Korea has maintained regime stability since the late 2010s without experiencing regime collapse or open fragmentation of its elite coalition (McEachern, 2018). Beginning around 2018, the Kim Jong Un regime sustained policy initiative by pursuing diplomatic engagement alongside heightened military tensions, and even after sanctions became prolonged, it continued developing nuclear and missile capabilities, thereby demonstrating its external autonomy. This suggests that sanctions have not produced decisive fractures in North Korea's core power structure, while simultaneously raising the possibility that the regime has, in one way or another, managed to preserve or reconfigure its elite reward mechanisms.

Reports issued by the United Nations Security Council-mandated Panel of Experts (PoE) on North Korea have repeatedly provided concrete evidence supporting this possibility. According to these reports, North Korea has evaded sanctions by illegally importing refined petroleum products through ship-to-ship transfers in Chinese and third-country waters, and by smuggling coal and iron ore for export. Beyond this, the regime has reportedly secured resources for governance even under sanctions by mobilizing illicit financial activities, including the establishment of shell companies, financial intermediation, nominee transactions, and as well as cyber hacking and theft of virtual assets (United Nations Security Council, 2021; Kim, 2021). This study treats individuals appearing in PoE reports as empirically observable proxies for elite resource-generation and distribution networks under sanctions. Given the blurred boundaries between state authority, commercial activity, and illicit finance in North Korea's external economic operations (Hastings, 2022), actors visible in sanctions documentation are likely positioned at key interfaces through which resources are mobilized and channeled to regime-supporting coalitions.

The prolonged border closure since 2020 may have further transformed the nature of these sanctions-evasion structures. Recent studies suggest that even during phases of partial border reopening, these state-monopolized structures were not fully dismantled, and may instead have become institutionalized in ways that concentrated benefits among key agencies and officials (Kim, 2025). This implies that sanctions and border closures did not merely contract

the North Korean economy but may have reshaped the agents of resource inflow and distribution, thereby altering the structure of elite politics itself.

Nevertheless, existing research on North Korea and on sanctions has not sufficiently captured these micro-level changes in elite politics. Studies of North Korean politics have primarily focused on ideological control, politics of fear, and the maintenance of legitimacy based on the Kim family lineage (Koh, 1970; Dukalskis, 2013; Park, 2014; Greitens & Silberstein, 2022), while sanctions research has likewise centered on denuclearization outcomes or macroeconomic shocks. Systematic analysis of how sanctions operate within authoritarian regimes' internal power-maintenance mechanisms—particularly with respect to the composition and functions of elite coalitions—has remained relatively limited. Although some studies have shed light on North Korea's sanctions-evasion networks through defector interviews or corporate registration data, they have not sufficiently developed these actor configurations to their broader political-theoretical implications for regime survival.

This study seeks to address this gap. It constructs a database based on reports published by the United Nations Panel of Experts on North Korea between 2010 and 2023, as compiled by the Royal United Services Institute (RUSI) and NK News. Using this DPRK Reports Database, the study examines how North Korea's elite groups have been restructured under the external shocks of intensified sanctions and border closure, employing document-based time-series analysis.

By analyzing recurring actor configurations and role differentiation observed through the limited observational window of sanctions documents, this study aims to indirectly infer how authoritarian regimes under sanctions maintain or recalibrate private-goods-based reward mechanisms. In doing so, it also proposes an empirical approach for analyzing changes in power structures through document-based observation in cases like North Korea, where internal access is extremely restricted.

Based on this problematique, the subsequent analysis explores the following questions. How has the composition of core actors within the North Korean regime changed under the external shocks of intensified sanctions and border closure? In particular, what roles have elites responsible for trade and finance played in the sanctions environment, and how has the structure of their coalition been reconfigured? How can these changes be connected to the private-goods maintenance mechanisms proposed by selectorate theory? By providing empirical answers to these questions, this study seeks to contribute to a deeper understanding of how sanctions affect not only North Korea's

policy choices but also the internal mechanisms through which the regime sustains power.

II. Theoretical Background

The theoretical analytical framework of this study is grounded in selectorate theory as developed by Bueno de Mesquita and his colleagues (Bueno de Mesquita et al. 2003). Selectorate theory conceptualizes political systems as consisting of two core groups—the selectorate and the winning coalition—and posits that a leader's survival strategy is structurally constrained by the relative size and characteristics of these two groups. Rather than classifying political systems dichotomously as democracies or dictatorships, the core contribution of this theory lies in explaining political behavior by focusing on whom leaders must satisfy to remain in power and what they must provide in return.

According to selectorate theory, the selectorate refers to the entire potential group that can, in principle, replace a leader, while the winning coalition denotes the minimum-sized core support group that is actually essential for the leader's political survival. In democratic systems, the winning coalition is relatively large, requiring leaders to secure broad popular support; consequently, the provision of public goods becomes central to policy. In authoritarian systems, by contrast, the winning coalition is extremely small, such that the set of actors a leader must satisfy is limited to a narrow group of elites. Under such conditions, providing private goods that accrue exclusively to the winning coalition becomes a far more efficient governing strategy than improving the welfare of the population as a whole. Private goods may take the form of monetary rewards, exclusive economic rents, privileged access, political status, or institutional protection, and unlike public goods, they lack non-excludability and non-rivalry. This constitutes the core proposition of selectorate theory: in autocratic regimes, a leader's survival depends less on overall economic performance or the living standards of citizens than on the stability and predictability of private goods delivered to the winning coalition.

Selectorate theory has been widely applied to authoritarian cases (Jung, 2022; Zimmermann, 2024; Panaro, 2025), and closed authoritarian regimes such as North Korea can be regarded as prototypical cases explained by the theory (Lee, 2024). North Korea's winning coalition consists of a highly restricted group of elites drawn from the party, military, internal security,

public safety agencies, and state trading organizations, and their loyalty has functioned as a key determinant of regime stability. Prevailing assessments suggest that since coming to power, the Kim Jong Un regime has centered its governing strategy on maintaining the loyalty of core elites rather than securing broad political support from the population (Byman & Lind, 2010). In this context, North Korea's policy choices and external strategies should be understood not merely as issues of security or diplomacy, but within a political-economic logic focused on sustaining elite reward mechanisms.

Selectorate theory is particularly useful for clearly identifying points of vulnterability inauthoritarian regimes when they are exposed to external shocks. Autocratic governments generally possess the institutional latitude to shift the costs of economic crises or sanctions onto the general population. However, for such cost-shifting strategies to remain effective, there is a prerequisite that private rewards to the winning coalition must at least be maintained. When state finances and foreign currency revenues decline sharply, leaders are likely to seek regime stability by allocating limited resources even more intensively to the winning coalition. If, however, governance funds are depleted or existing resource acquisition channels are blocked to a significant degree, the material foundation of private rewards is structurally weakened. In such cases, elite loyalty becomes unstable, increasing the likelihood of regime fractures or pressure toward policy change.

From this perspective, international sanctions can be understood not merely as diplomatic instruments designed to induce specific policy changes, but as structural mechanisms that directly pressure the core power-maintenance mechanisms of authoritarian regimes. By reducing foreign currency earnings and fiscal resources at the state level, sanctions limit the total volume of private goods that leaders can provide to their winning coalition. Selectorate theory identifies two broad strategic responses available to autocratic regimes under such conditions. One is to pursue policy change or negotiation in order to ease sanctions and restore legal resource acquisition channels; the other is to maintain existing reward systems by circumventing or neutralizing sanctions (Bueno de Mesquita et al. 2003).

North Korea's behavior illustrates that these two strategies are not simply mutually exclusive options, but can be pursued simultaneously or combined sequentially depending on circumstances. The Kim Jong Un regime's active engagement in external negotiations after 2018 may have been driven by pressures on governance funding and elite reward systems generated by sanctions (Byman & Lind 2010). Yet even after negotiations failed to yield

substantive sanctions relief, the regime has persisted without collapse or elite defection. This suggests that North Korea did not entirely lose its capacity to generate private goods under sanctions, but instead reconstituted its private-goods provision mechanisms through new forms of circumvention.

From the perspective of selectorate theory, sanctions-evasion activities can therefore be interpreted not as a collection of isolated illegal acts, but as regime-level strategic choices aimed at maintaining elite loyalty. Ship-to-ship transfers, the establishment of shell companies, illicit financial transactions, cyber hacking, and cryptocurrency theft all function to replace resource acquisition channels blocked by sanctions. Resources generated through such activities are more likely to be selectively distributed to core institutions and elites rather than used to enhance general welfare (Escribà-Folch & Wright, 2010; Özdamar & Shahin, 2021; Portela & Mora-Sanguinetti, 2023). In this sense, sanctions-evasion networks can function as new supply sources of private goods for the winning coalition.

Importantly, the creation and distribution of private goods do not necessarily need to be maintained in the same manner as the existing elite configuration. Selectorate theory implies that the size, composition, and internal division of labor of the winning coalition can be adjusted in response to changes in the external environment. Under conditions of constrained governance resources, leaders may seek to manage the costs of loyalty not by indiscriminately expanding the coalition, but by differentiating or dispersing the functions responsible for generating and mediating private goods (Svolik, 2012). This can also be understood as a strategy aimed at reducing exposure risks and bargaining power that may arise from excessive dependence on particular individuals or groups.

These theoretical implications provide important analytical criteria for examining changes in North Korean elite politics under sanctions. If sanctions and border closures substantially weakened private reward mechanisms, one would expect to observe either a decline in the frequency with which core elites appear in sanctions documents or gaps in actors performing specific functions. Conversely, if private reward systems were maintained or reconfigured, changes in elite composition and functional roles should be reflected in documentary records. For example, the relative prominence of military and political elites may decline, while elites performing functions directly linked to private goods generation—such as trade, finance, shipping, and cyber activities—may increase, alongside a reconfiguration of coalition structures among them. Applying these theoretical considerations to the North Korean case, this study analyzes how the regime's winning coalition has been

maintained or restructured under the external shocks of intensified sanctions and border closure. Through this approach, the study seeks to move beyond the question of whether sanctions simply weaken authoritarian regimes and instead to examine how the functional foundations of power maintenance shift and are recalibrated under sanctions.

While existing studies provide valuable insights into North Korea's sanctions environment and regime stability, they provide limited explanation of how sanctions reshape internal elite coalitions. Preble and Willis (2024) highlight the external structural constraints imposed by sanctions networks, whereas Lee (2018), applying selectorate theory, emphasizes regime stability through a relatively stable winning coalition. Building on these perspectives, this study examines how sustained sanctions pressure may reconfigure the mechanisms of resource generation and distribution. It focuses on how authoritarian regimes adapt elite support structures under prolonged sanctions.

III. Research Methods

This study examines, on the basis of documentary evidence, how the winning coalition of the Kim Jong Un regime in North Korea is maintained and reorganized amid prolonged external shocks—namely, the intensification of international sanctions against the DPRK and extended border closures. To this end, the study conducts a document-based longitudinal analysis using the DPRK Reports Database, which systematically structures the reports of the United Nations Security Council Panel of Experts on North Korea (Panel of Experts, hereafter PoE). The methodological core of this study is to treat sanctions reports not as a mere collection of qualitative cases, but as repeatedly observable political records, thereby enabling the quantitative tracing of patterns in elite composition and functional change over time.

This approach aligns with a research design intended to empirically examine the central logic of selectorate theory. Selectorate theory posits that if an autocratic regime survives external shocks, this implies that its private-goods provision mechanism has not fully collapsed (Bueno de Mesquita et al. 2003). Yet in closed systems such as North Korea, it is difficult to directly observe the substance of elite rewards or their distribution channels. Accordingly, this study uses changes in the individuals and roles appearing in sanctions documents, as well as the relational structures among them, as

indirect indicators of the maintenance of the winning coalition. In other words, rather than analyzing the actual flow of private goods, this study examines the functional representation of elite politics under sanctions as observed through documentary records.

The primary data for this study consist of structured records provided by the DPRK Reports Database, which codifies information contained in PoE reports. The database assigns a unique identifier (id_entity) to each entity and includes aliases, affiliations, role descriptions (description), and document-linkage information (recordId_docu) indicating where an entity is mentioned. This structure makes it possible to identify the same individual across multiple reports and is well-suited for analyzing elite persistence and turnover, as well as functional shifts over time.

The unit of analysis is the individual (person entity). Each individual is observed in a given report year either as "mentioned" or as "recommended for designation." Rather than treating individuals as fixed, substantive entities, this study defines them as actors as documented. Thus, if the same person appears repeatedly across multiple years, this suggests that the individual is likely a core actor repeatedly captured in sanctions evasion or resource acquisition processes. Conversely, an increase in newly appearing individuals after a certain point may indicate coalition reorganization or functional differentiation. For the time-series analysis, this study constructs a report-year variable (report_year) by using the report identification code embedded in recordId_docu. Because PoE reports use document codes of the form "S/YYYY/NNN," the study extracts YYYY and converts it into an annual variable.

This study classifies individual-level actors appearing in UN Security Council PoE reports into elite types using a text-based, rule-based coding approach. Specifically, it draws on the individual description field in the DPRK Reports data to extract keywords that explicitly indicate roles, affiliations, and functions, and then matches them against predefined category-specific regular expression patterns to identify elite types. For consistency in text processing, all description text is converted to lowercase, and missing values are replaced with blanks. Each individual is then classified into one of the following six elite types.

First, Political elites are defined as individuals affiliated with central political and administrative institutions such as the Workers' Party of Korea, the Cabinet, and the Supreme People's Assembly. Keywords include "Workers' Party of Korea," "WPK," "Central Committee," "Politburo," "Presidium," "Secretariat," "Cabinet," "Premier," "Vice Premier,"

"Minister," "State Affairs Commission," and "Supreme People's Assembly (SPA)." This category is intended to capture institutional power elites constituting the core decision-making structure of the party-state.

Second, Security elites are classified as those linked to intelligence, policing, and surveillance agencies such as the Ministry of State Security (MSS), the Ministry of People's Security (MPS), and the Reconnaissance General Bureau (RGB). Terms in this category include "Ministry of State Security," "State Security," "Reconnaissance General Bureau," "Intelligence," "Counterintelligence," "Surveillance," "Secret Police," and "Law Enforcement."

Third, Military elites are defined as individuals directly associated with the Korean People's Army (KPA), the defense industry, or weapons, missile, and nuclear-related programs. Keywords include "Korean People's Army," "Military," "General," "Colonel," "Defense Industry," "Weapons," "Missile," "Nuclear," "Ballistic," "WMD," and "Strategic Forces."

Fourth, Cyber elites are those involved in cyber operations, hacking, malware, and IT-based asymmetric activities. This category includes terms such as "Cyber," "Hacker," "Malware," "Ransomware," "Phishing," "Exploit," "Information Technology," "Network Operations," and "Lazarus."

Fifth, Maritime elites are defined as individuals performing roles related to vessel operations, ports, crews, shipping, and maritime logistics. Key terms include "Maritime," "Shipping," "Vessel," "Port," "Harbour," "Captain," "Crew," "Seafarer," "IMO," "Flag State," and "Registry."

Finally, Trade/Finance elites are defined as individuals involved in the generation and circulation of private goods under sanctions, including foreign currency acquisition, trade mediation, the operation of front or shell companies, and the management of financial flows. This category is coded when descriptions include keywords such as "Trade," "Trading," "Export," "Import," "Procurement," "Broker," "Intermediary," "Agent," "Company," "Firm," "Enterprise," "Finance," "Banking," "Funds," "Money Laundering," "Front Company," and "Shell Company."

In this study, "elite" is not defined by formal rank or publicly visible hierarchy, but by a functional criterion: actors who are substantively involved in the creation of core resources and sanctions-evasion activities critical to regime survival. In this sense, individuals appearing in the DPRK Reports Database are not merely peripheral actors; they constitute the analytical population precisely because they are repeatedly highlighted by PoE reports as members of key networks.

PoE reports are designed to identify individuals and organizations involved in activities that directly violate or circumvent the sanctions regime, including North Korea's nuclear and missile development, arms trade, financial and trade intermediation, maritime shipping and transshipment, and cyber operations. Accordingly, individuals mentioned in these reports are typically described not as simple implementers, but as actors with organizational roles and decision-making authority. In particular, those included in the reports are linked to high-risk, high-value activities such as weapons procurement, financial intermediation, overseas trading-company operations, vessel management, foreign-currency acquisition, and money laundering—functions that are difficult to perform without trust and access within the North Korean system. On this basis, this study interprets these individuals as elites functioning as core nodes in networks that create and distribute private goods even under sanctions. The concept of "elite" here is not limited to formal political elites; it encompasses functional elites who operationally conduct sanctions evasion and resource mobilization across the military, security, trade, finance, maritime, and cyber domains. This definition is theoretically consistent with selectorate theory's emphasis that elites are centrally involved in accessing, controlling, and allocating the private rewards that determine regime survival.

The empirical analysis proceeds in three steps. First, the study analyzes year-to-year changes in the functional composition of elites to examine which types of elites rose or declined before and after intensified sanctions and border closures. This step is designed to observe whether, as selectorate theory would predict, the share of elites performing functions directly tied to private-goods creation increases when governance resources are constrained. To account for variation in the total number of individuals across years, the analysis uses proportions as the primary indicator, rather than relying solely on absolute counts.

Second, the study conducts a year-by-year network analysis focused on Trade/Finance elites. Specifically, it constructs year-specific sub-networks based on co-occurrence relationships among individuals who appear together within the same report. Co-mention networks are widely used in document-based network research to capture indirect ties among individuals who may have participated in the same sanctions-evasion activities or procurement structures. Using these networks, the study analyzes the cohesion and internal structural change of the trade/finance elite coalition over time.

In the network analysis, network density and degree concentration (Herfindahl–Hirschman Index) are employed as key indicators (Lu et al.,

2017; Capoani & Martin, 2024). Network density reflects how tightly cooperative relations are formed within the coalition, while degree concentration indicates the extent to which connections are concentrated among a small number of actors. By combining these two measures, the study can structurally assess whether the trade/finance elite coalition was maintained under sanctions and whether its internal structure shifted from a centralized to a more dispersed configuration.

Third, to verify how observed structural network changes relate to substantive functional-role changes, the study performs text-based role coding for the detailed operational roles of trade/finance elites. It defines "trade operation" as a core implementation function responsible for generating and channeling private goods under the sanctions environment, and codes an individual as performing this role when the description includes statements directly related to export-import activities, transactions, or the management of counterparties. This step empirically tests whether the dispersed structural changes observed in the network analysis are indeed reflected in the diffusion of trade-execution functions across a larger number of actors.

IV. Findings

1. Changes in Elite-Type Composition

This study classifies North Korean individuals (persons) who appear repeatedly in United Nations Security Council Panel of Experts reports into elite types based on their role descriptions and analyzes year-by-year changes in composition. Figure 1 presents a stacked bar chart (in percentage terms) showing changes in the shares of elite types among North Korean individuals appearing in the reports from 2010 to 2024. The purpose of this analysis is not to identify simple increases or decreases in particular elite groups, but to structurally assess how the functional center of North Korea's winning coalition shifted before and after the exogenous shocks of intensified sanctions and border closure.

The results indicate that in the early 2010s, North Korea's elite configuration exhibited a clearly military-centered structure. In 2010, military elites accounted for approximately 70 percent of all individuals, and they maintained a majority share in 2012 and 2013 at 52.6 percent and 52.0

percent, respectively. This reflects the international community's focus during this period on North Korea's nuclear tests and missile launches, as well as the perception of military figures as key actors in sanctions documents. In other words, sanctions discourse at the time centered on North Korea's military threat, and consequently, elites captured in the documents were concentrated in the military domain.

Around 2014, however, gradual changes in elite composition began to emerge. In 2015 and 2016, the shares of maritime and security elites increased sharply. Notably, in 2015, maritime-related individuals accounted for 54.7 percent of the total, constituting the largest single elite category that year, while in 2016, security-agency elites rose markedly to 44.9 percent. These shifts coincide with the period when UN sanctions began to target maritime and logistics networks more intensively, and can be interpreted as reflecting the rise of ship-to-ship transfers, disguised vessel operations, and port and maritime networks as key channels of sanctions evasion. In this sense, the change in elite composition during this period suggests that North Korea's sanctions-evasion strategy moved away from direct military activity toward logistics and maritime domains that lay in the blind spots of sanctions enforcement.

A more pronounced structural transition is observed after 2017. Beginning in that year, the share of trade and finance elites increased rapidly, accounting for 59.3 percent of all individuals in 2018 and 48.1 percent in 2019. This shift reflects the adoption of highly restrictive sanctions resolutions after 2017, which comprehensively blocked North Korea's official trade and foreign-currency acquisition channels, thereby moving the center of sanctions evasion and resource procurement toward trade and finance networks. Put differently, as military provocation and maritime logistics alone became insufficient to circumvent the sanctions environment, trade and finance elites responsible for foreign-currency acquisition and transaction brokerage assumed a core functional role within the winning coalition.

This trend intensified further following the COVID-19–induced border closure. In 2020, trade and finance elites accounted for 67.7 percent of all individuals, rising to 76.1 percent in 2021. These figures indicate a sharp increase in the importance of elites capable of managing and brokering limited trade channels and informal networks at a time when official trade collapsed, and the movement of physical resources was severely constrained. The results suggest that the regime's survival under the dual constraints of sanctions and border closure depended less on coercive control or military

power than on the maintenance of trade and finance networks that enabled the inflow and distribution of private goods.

An anomalous pattern appears in 2023, when the share of political elites temporarily rose to 62.4 percent. This can be interpreted as reflecting a phase in which sanctions-evasion structures became partially institutionalized during border reopening, accompanied by strengthened management and coordination functions at the party and administrative levels. This shift, however, proved short-lived. In 2024, trade and finance elites once again regained overwhelming dominance, accounting for 81.9 percent of the total. This indicates that even after border reopening, North Korea's winning coalition remained structurally dependent on trade and finance networks.

Overall, the composition of North Korea's elite groups shifted from a military-centered structure to maritime and security-centered intermediaries, and ultimately to a trade- and finance-centered configuration as sanctions intensified and border closures persisted. This transformation reflects not a simple replacement of elites, but a reorganization of the functional core of the winning coalition in response to changes in the nature of governance resources under sanctions. The findings are consistent with the predictions of selectorate theory, which posits that as public-goods provision capacity weakens under sanctions, dependence increases on elites who directly contribute to the creation and distribution of private goods. In this sense, the results shown in Figure 1 suggest that sanctions did not weaken North Korea's elite structure per se, but instead operated by recalibrating the functional center of the regime's winning coalition.

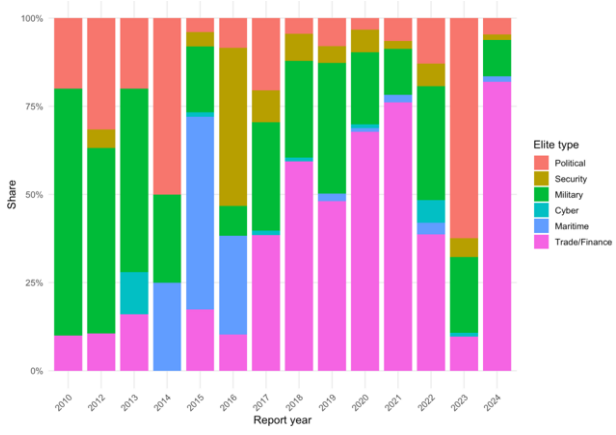


Figure 1. Changes in the composition of North Korean elite types
(Compiled by the author)

2. Changes in the Cohesion of the Trade and Finance Elite Network

The preceding analysis showed that, before and after the intensification of sanctions and border closures, the functional center of North Korea's elite composition shifted from the military, maritime, and security sectors toward trade and finance elites. However, an increase in the relative share of a particular elite type alone does not allow us to determine whether that group actually functioned as the core of the winning coalition, or whether it was merely captured more frequently in sanctions documents. Accordingly, this study conducts a network analysis to examine how the internal coalition structure of trade and finance elites was maintained and reorganized under the external shocks of sanctions and border closures. The central concern of this section is not the mere "existence" of a trade and finance elite coalition, but rather how that coalition organized and coordinated connections to sustain the functioning of private-goods-based reward mechanisms.

The analysis focuses exclusively on actors classified as Trade/Finance elites among individuals appearing in UN Security Council Panel of Experts reports. This group can be understood as the functional core sustaining the material base of the winning coalition, insofar as it plays a central role in securing governance resources under sanctions through foreign currency inflows, illicit transactions, shell companies, and financial intermediation. While military, security, and political elites constitute the institutional and coercive foundations of power, trade and finance elites directly contribute to regime survival by operationally managing channels for procuring and circulating resources that have been curtailed by sanctions. In particular, Panel of Experts reports provide detailed accounts of the actors and pathways involved in sanctions evasion, repeatedly highlighting trading company representatives, financial intermediaries, managers of overseas front companies, and transaction facilitators linked to maritime and logistics networks. Analyzing the coalition structure among these actors, therefore, offers the most direct means of assessing how the North Korean regime has maintained and adjusted its private-goods reward system under sanctions.

This study constructs year-specific trade and finance elite sub-networks using co-occurrence within the same document as the criterion for linkage. Specifically, pairs of trade and finance elites who appear together in the same report in a given year are defined as having a tie (edge), and these ties are used to construct the network for that year. To assess network cohesion and internal power structure, the analysis employs network density and degree concentration (Herfindahl-Hirschman Index, HHI) as the key indicators.

Network density is defined as the ratio of observed ties to all theoretically possible ties and indicates how tightly cooperation and coalition structures are formed within the group. Degree concentration measures the extent to which connections are concentrated among a small number of actors, capturing the degree to which brokerage authority and access to resources are centralized within the coalition.

Figure 2 presents year-by-year changes in the density of the trade and finance elite network from 2010 to 2024. The results show that even after sanctions against North Korea were substantially strengthened, the trade and finance elite network generally maintained a high level of density. This suggests that rather than becoming fragmented or individualized under sanctions, these elites continued to sustain interconnected cooperative structures to evade sanctions and secure resources. In other words, sanctions appear to have pressured the trade and finance elite coalition not to weaken, but to reinforce or reorganize network-based cooperation. Temporary declines in density observed in certain years can be interpreted as periods of network readjustment triggered by abrupt changes in sanctions measures, exposure of key actors, or shifts in evasion strategies. However, the tendency for density to recover to high levels after such fluctuations indicates that the trade and finance elite coalition possesses an adaptive and resilient structure rather than one that is highly vulnerable to sanctions shocks. This, in turn, suggests that the core resource-procurement coalition on which the regime depends remained stable even under sustained sanctions pressure.

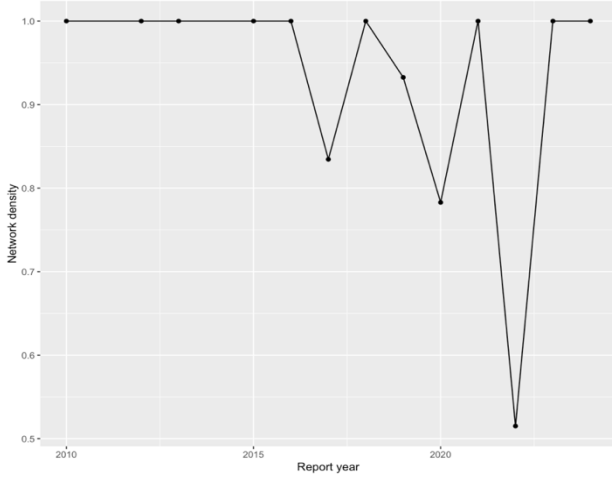


Figure 2. Year-by-year changes in network density of the trade and finance elite coalition (Compiled by the author)

Figure 3 presents year-by-year changes in degree concentration (HHI) within the same network. The results show that during the early phase of sanctions, degree concentration was relatively high, indicating a centralized structure in which a limited number of core intermediaries led trade, financial activities, and sanctions evasion. As sanctions became prolonged and monitoring intensified, however, the degree of concentration exhibited a declining trend, with connections becoming more dispersed across a larger number of actors rather than being excessively concentrated on specific individuals. This suggests that while overall network cohesion was maintained, the internal connection structure shifted from a single-center configuration to a more polycentric one. Such a pattern can be interpreted as a strategic adjustment aimed at reducing reliance on particular individuals and dispersing exposure risks, and targeting by sanctions enforcement.

During the period of border closure triggered by COVID-19, degree concentration temporarily increased, suggesting that amid a sharp decline in official trade and a contraction of transaction channels, a more centralized structure centered on key intermediaries may have been reinforced to manage limited resources and pathways. However, the renewed decline in degree concentration in more recent years indicates that even after border reopening, the trade and finance elite coalition has been recalibrated toward dispersing connections by function and route, rather than concentrating authority in specific individuals. Overall, the findings indicate that under sanctions, North Korea's trade and finance elite coalition did not disintegrate or weaken, but instead maintained high cohesion while flexibly adjusting its internal connection structure. The persistence of network density supports the interpretation that this group functioned as a core component of the winning coalition sustaining the regime, while fluctuations in degree concentration demonstrate strategic adjustments in the allocation of power and access to resources in response to changes in the sanctions environment.

These relational network changes further suggest that the trade and finance elite coalition did not respond simply by expanding in size or by concentrating authority in a small number of key actors. Rather, the combination of sustained high network density and a long-term decline in degree concentration indicates that even as power and connections became more dispersed within the coalition, cooperative relationships themselves remained stable. This can be interpreted as an organizational adjustment designed to minimize exposure risks while sustaining trade and resource inflows under sanctions. Moreover, this interpretation is directly linked to the subsequent analysis of functional role differentiation among trade and finance elites.

Whereas the network analysis reveals structural cohesion and dispersion within the coalition, the role-frequency analysis demonstrates how these structural changes were implemented through the diffusion and allocation of specific operational functions. In other words, the persistence of density alongside declining degree concentration suggests not an abstract structural shift, but a concrete process in which trade-execution functions—such as procurement, brokerage, transport, and the operation of front companies—were dispersed across a broader set of actors.

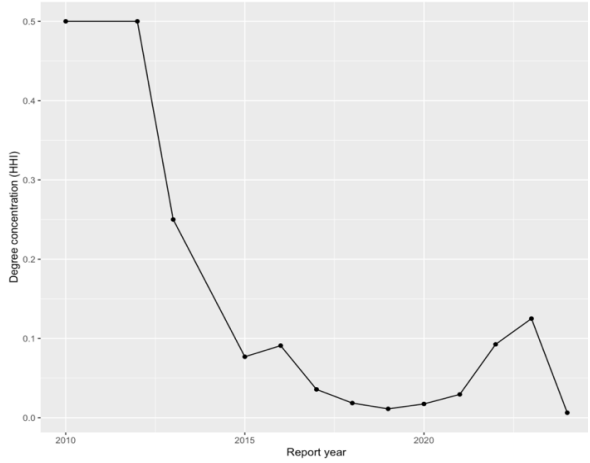


Figure 3. Changes in degree concentration (HHI) of the trade and finance elite network (Compiled by the author)

To verify this interpretation, this study additionally codes a trade operation role variable based on the descriptive text contained in the UN Panel of Experts reports. Trade operation is defined as a set of core trade execution functions responsible for the creation and inflow of private goods under a sanctions environment, and it is intended to capture actions directly related to the execution of transactions rather than mere affiliation or formal titles. Coding is conducted at the document–year level only when such functions are explicitly mentioned in the reports. To do so, recurrent key expressions are operationalized through regular-expression patterns to identify whether the role is performed. Specifically, the coding includes not only references to import(s/ed/ing) and export(s/ed/ing), but also mentions of transaction-performing entities such as trading companies, trade offices, and commercial entities. Roles implying direct contractual engagement with counterparties—such as sales agent, buyer, and seller—as well as procurement-related

functions indicated by terms such as procured, procurement, and procuring, are also included within the trade operation category. These criteria are designed to identify whether trade and finance elites functioned as actual executors of transactions within sanctions-evasion networks.

Notably, the increasing frequency of trade operation–related roles after 2016 suggests that the trade and finance elite coalition may have adopted a strategy of functional reconfiguration in response to the dual external shocks of intensified sanctions and border closures. The decline in degree concentration observed at the network level indicates that no single individual monopolized trade and finance activities, which in turn presupposes that trade execution functions were dispersed across multiple actors. The empirical expansion over time of trade operation–related roles—such as trade implementation, financial intermediation, transport coordination, and the operation of overseas nodes—demonstrates that this dispersed structure was not merely reflected in abstract network metrics, but was implemented through concrete changes in role allocation.

These findings substantiate the survival logic of authoritarian regimes proposed by selectorate theory as applied to the North Korean case. Under conditions in which governance resources are constrained by sanctions, the regime appears less likely to expand the size of the winning coalition than to sustain its reward mechanism by internally differentiating and dispersing the functions responsible for the creation and distribution of private goods. The formation of a trade and finance elite coalition that maintains high cohesion while avoiding fixed concentration of connections on particular actors can be interpreted as a rational strategy to lower the costs of elite loyalty, preserve replaceability among elites, and disperse exposure risks in the sanctions-evasion process. Accordingly, the diffusion of trade operation roles should be understood not as a simple increase in activity, but as the outcome of institutional and functional adjustments aimed at sustaining the private-goods reward system of the winning coalition under a sustained sanctions environment.

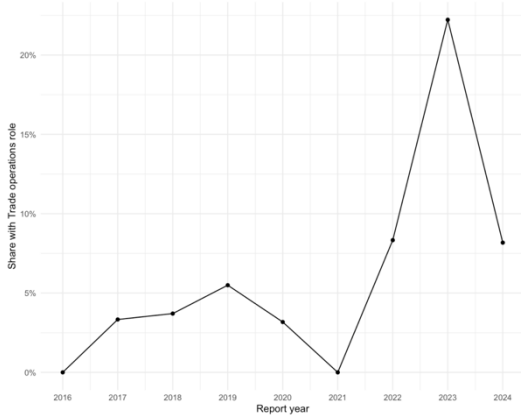


Figure 4. Changes in the share of trade operation roles among trade and finance elites (Compiled by the author)

V. Conclusion

This study empirically examined which elite groups the North Korean regime has relied upon and how it has reconfigured its winning coalition over the course of prolonged international sanctions. Whereas prior research has largely focused on the macro-level effects of sanctions or on enumerating individual cases of sanctions evasion, this study is distinctive in that it systematically utilizes United Nations Security Council Panel of Experts reports to dynamically examine changes in elite composition and the reorganization of internal coalition structures. In particular, by combining elite-type classification, network analysis, and role-frequency analysis, the study sheds light on how North Korea's winning coalition has operated under sanctions from both structural and functional perspectives.

The findings yield several important discussions. First, as sanctions intensified and border closures were imposed, the center of North Korea's elite structure shifted from military elites to maritime and security intermediaries, and ultimately to trade and finance elites. This suggests that as governance resources became constrained by external sanctions, the regime increasingly relied not on coercive control, but on groups capable of substantively generating and distributing private goods. In other words, sanctions did not weaken the elite coalition per se but instead functioned to recalibrate its composition and functions.

Second, network analysis focusing on trade and finance elites demonstrates that this coalition did not disintegrate or fragment under sanctions. The sustained high level of network density indicates that trade and finance elites maintained stable cooperative relationships even in a sanctions environment. At the same time, changes in degree concentration reveal that internal power and connectivity structures were not fixed in a rigidly centralized form, but instead flexibly shifted between dispersion and recentralization in response to changes in sanctions intensity and context. This pattern can be interpreted as a strategic adjustment aimed at minimizing exposure risks and reducing dependence on specific actors in the sanctions-evasion process.

Third, the diffusion of trade operation functions identified through role-frequency analysis shows that these network-structural changes were not merely abstract phenomena. The dispersal of trade execution functions—such as import–export activities, transaction implementation, and counterparty management—across a broader set of trade and finance elites indicates that the core functions responsible for generating and channeling private goods were functionally differentiated within the coalition. When combined with the observed decline in degree concentration, these findings suggest that under sanctions, the North Korean regime opted not to expand the size of the winning coalition, but rather to maintain it through the dispersion and reallocation of functions.

Beyond the internal dynamics of elite coalition management, these findings also carry broader geopolitical implications. The reorientation toward trade and finance elites suggests that North Korea's resilience under sanctions increasingly depends on access to external economic networks. In the context of intensifying U.S.-China strategic competition, deepening Russia-North Korea cooperation, and the gradual consolidation of China-Russia-North Korea alignment, opportunities for sanctions evasion and alternative economic partnerships may expand. Such geopolitical shifts could reduce the isolating effect of sanctions by providing new channels for trade, finance, and technological exchange. Consequently, sanctions may become less effective not simply because of domestic adaptation, but also because of evolving international alignments that create structural space for authoritarian resilience. This implies that future sanctions policy cannot be assessed solely at the level of domestic elite adaptation; it must also consider broader geopolitical realignments that reshape the external environment in which sanctioned regimes operate.

These results concretely extend the survival logic of selectorate and winning coalition theory to the North Korean case. As sanctions weakened

the regime's capacity to provide public goods, sustaining regime stability required a more efficient operation of private-goods reward mechanisms to lower the costs of elite loyalty. The findings suggest that by reorganizing the creation, intermediation, and distribution of private goods around a trade and finance elite coalition, the North Korean regime has been able to preserve coalition cohesion and regime stability even under prolonged sanctions.

The policy and scholarly implications are also clear. Evaluations of sanctions effectiveness that rely solely on changes in trade volumes or macroeconomic indicators are inherently limited. As this study demonstrates, sanctions can operate by reshaping internal elite coalitions and patterns of functional allocation within authoritarian regimes—factors that are critical for assessing the substantive impact and sustainability of sanctions. Future discussions of sanctions against North Korea should therefore more carefully consider the structure of sanctions-evasion networks and the adaptive mechanisms of elite coalitions.

Finally, this study has several limitations. Because the analysis relies on UN Panel of Experts reports, it cannot fully rule out the possibility that reporting standards or shifts in international attention influenced the frequency with which elites were captured in the data. Moreover, the use of co-occurrence as the criterion for network ties limits the precision with which the intensity or direction of actual interactions can be measured. Nevertheless, this study represents one of the few systematic empirical analyses of the structure and functions of North Korea's winning coalition under sanctions. Future research could further develop this analytical framework by conducting comparative analyses of sanctions-evasion networks across countries or sectors, or by more explicitly examining interactions between trade and finance elites and other elite groups.

Under the sanctions regime, the North Korean regime has not dismantled or contracted its elite coalition; rather, it has maintained its private-goods reward mechanisms through a functional reorganization centered on trade and finance elites. This constitutes an important empirical case demonstrating that sanctions do not automatically amplify the vulnerabilities of authoritarian regimes, but can instead trigger internal adaptation and recalibration.

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