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## EMBEDDED AND AUTONOMOUS MARKETS IN NORTH KOREA'S FISHING INDUSTRY: RESOURCE SCARCITY, MONITORING COSTS, AND EVOLVING INSTITUTIONS

### Abstract

North Korea today is a most unusual post-socialist state. Market actors and market prices are integral to economic life, but private property remains illegal, and private enterprise outside the household is de jure non-existent. In such an institutional context, some market processes are more autonomous in relation to the state, while others are more embedded within state structures. In this article, we offer a theoretical account of the shape that North Korea's market economy has taken, developed from a set of fishing industry case studies. We note four broad categories of enterprises: closely embedded, loosely embedded, semi-autonomous, and autonomous. By relative autonomy/embeddedness we mean control over fixed assets, cash flow, and operational decisions such as wage and price setting. We postulate three major determinants of embeddedness/autonomy: (1) relative strategic resource scarcity between state and market actors, (2) monitoring costs, and (3) institutional evolution that reflects these realities, though to varying extents.

### Keywords

North Korea, marketization, embeddedness, resource scarcity, monitoring costs, institutional evolution, fishing industry, case study

### INTRODUCTION

#### *EMBEDDED AND AUTONOMOUS MARKETS*

Today, much of North Korea's private sector continues to exist in a legal gray zone, but there are some shades of "gray." Some firms involving private entrepreneurs (embedded entrepreneurs) exist within state organizations. They form what we have termed elsewhere "Pseudo-state Enterprises" (Lankov et al. 2017). Conversely, other private entrepreneurs do not formally operate as part of state firms and are more autonomous in relation to state organizations. In this article, we examine the fishing industry to generate an empirically rooted theory as to why it is that some forms of market activities are more embedded within the state, while others are more autonomous in relation to state structures.

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A Marxist-Leninist Party-State, which to some extent North Korea remains, is a mono-organizational society where no legitimate form of social organization beyond the household itself exists outside the boundaries of the state (Rigby 1977; Ellman 2014, 29). Hence, to understand how North Korean market actors are socially embedded, one must analyze how market actors relate to the state.

Thus, to borrow terminology that Peter Evans (1995) used originally to describe the role of states in industrial transformation, but turn it on its head, market actors can be said to have become embedded within or autonomous in relation to the North Korean state. There is actually a continuum of possibilities between these two extremes: different market actors differ in the degree to which their firms are embedded in or autonomous in relation to the state-dominated political economy.

Using a set of case studies from the North Korean fishing industry, we offer an account of how and why some market actors become embedded within state structures while others have become and remained autonomous in relation to the state. We posit that there are two indicators of relative embeddedness. The first is the degree of resource/asset sharing: how much do state actors and organizations provide market actors and vice versa? The provision of strategic assets and resources (land, labor, licenses, and registrations *inter alia*) by state actors often comes with additional control from state actors and requirements for the provision of revenue. This leads to the second indicator: how much control does the state organization attempt to exercise over cash flow and the way business is conducted (the market actor firm's "business model")?

We argue that, first, a (more) embedded market actor has greater access to valuable and scarce state resources, but such access also implies greater control by the state, especially over cash flow and wage setting. In situations where resource scarcity and dependence are more mutual—that is, where the state organization provides more resources—one should expect a higher degree of embedding. This is primarily because the state organization has the necessary financial incentives (as well as ability to provide important or even vital administrative and legal support) to maintain closer and more intrusive ties.

Second, we also argue that the incentive or capacity to monitor is an important factor. Some market firms are less embedded in spite of reliance on state-owned resources because their operations are too small or dispersed to be monitored more effectively. This has led to the creation of new market institutions and their partial formalization by the North Korean state. Thus, excessive monitoring costs given resource scarcity faced by the North Korean state mean that many North Korean traders (wholesale and retail) in the domestic market, as well as household producers are partially or largely autonomous in relation to the state.

This relative autonomy has been partially recognized in North Korean law and in actual practice. And this recognition points to attempts, to a limited extent, by the government to institutionalize and regulate some market practices. This institutionalization can be termed a form of "institutional compromise," with market forces and actors, and it is also an important factor in the growth of autonomous market actors outside the confines of the state sector.

We believe the approach we set out is novel insofar as it analyzes market–state relations in North Korea with a particular emphasis on the limits of state power, and also the presence of strategic resources within state organizations that structure relationships between the state organizations and market actors. Moreover, this article contributes to a

growing literature on marketization by offering a theoretical account of why different types of firm have arisen.

#### *CASE STUDIES FROM THE FISHING INDUSTRY*

Herein, we focus on the fishing industry which can be seen as a good material of a case study. The industry contains a rich supply chain with niches that have elements comparable or broadly similar to those found in many other industries in the country. These include retail and wholesale marketing, a range of largely autonomous household activities, as well as involvement of the state Foreign Trade Companies (FTCs), and side-work units. Each part of the supply chain is comparable to a set of organizational forms/activities that today are integral elements of the North Korean economy as a whole, and thus the fishing industry can be considered as having features that may be generalizable to many other areas of the North Korean economy.

With respect to the level of embeddedness within the state, the four ideal types that we deduce from interview data and from the existing literature on North Korean marketization are as follows:

- the deeply embedded entrepreneur often operating within a Foreign Trade Company (frequently as its “head of a branch”), under relatively high degree of supervision and support from a state entity;
- the loosely embedded entrepreneur (like a boat owner) under relatively little supervision from the state entity they are embedded within;
- the semi-autonomous or fully autonomous trader (traders of fisheries products, but also potentially of many other exportable, producer, and consumer goods), sometimes under some state control in marketplaces, other times autonomous in relation to state structures
- the fully autonomous household producer, working from the autonomy of their own home with little if any government control

The kind of resources provided by the state appears to directly affect how much value the state organization is able to appropriate. This means that Foreign Trade Companies (FTCs), which usually are able to provide more resources, are also able to appropriate more value and have more control over their market partners than many domestically orientated state organizations were (at least until recently). FTC headquarters may also provide capital, as well as export rights and significant political protection (Yang 2008; Joung 2012; Lee et al. 2013; Kim 2013).

However, other state partners in the fishing industry and elsewhere have less to offer to their private partners, and less capacity to monitor them. In the fishing industry, for example, the “side-work boat” is less embedded within the state than FTC-based operations. Indeed, generally speaking, “side-work units” inside and outside the fishing industry appear to less deeply embedded within the relevant SOEs and other state structures and less subject to control, but also offered fewer resources by their state counterparts. This is partially a product of their institutional origins as part of state campaigns to stimulate semi-autonomous production within state-owned enterprises using waste and idle resources (Yun 2018).

The owners of side-work boats (who normally, but not always, also operate the boats as captains) pay state organization a fee for its willingness to register their boats as its property. This registration gives the owners the right to fish, since access to the sea is

controlled through licensing, thoroughly enforced by the coastguard. Getting sea access licenses requires a fixed regular payment to be made to the state agency, but little more control by that agency. Such ‘side-work units’ also operate in other sectors, such as on agricultural plots organized on the land of state enterprises, in bus transport, haulage, and also consumer services like catering; their continued proliferation indicates that they are a real source of income for state agencies (Yang and Yun 2016). For the state agencies, they generate predictable cash flow in the form of license fees with no additional resources offered or control exerted.

Other activities exist outside the state. The household economy of cottage industrial production is perhaps the clearest example of activities that are autonomous in relation to state structures. Many forms of household production exist: the 2008 Census indicates that over 80 percent of North Korean households were involved in such production on a daily basis (Jeong et al. 2012). Of respondents to UNICEF’s Multiple-Indicator Cluster Survey (MICS) in 2017, 53.7 percent of households reported having their own agricultural land, including 29.7 percent of urban households (UNICEF 2018). This is a major source of legal household production that can be sold on markets domestically, independent from the state. Interview testimony discussed below indicates that in the fishing industry, households have been an important source of equipment, boats, and nets *inter alia*. Catch processing and storage can also be done inside the household.

Some forms of market trading are also largely or completely autonomous in relation to state organizations beyond the payment of rental fees for usage of the market space. In some cases, traders do not require even market space, and this makes them even less dependent on the state. With the spread of mobile telephone ownership, this may have become a more viable option for more market actors (Lee et al. 2017).

In the next sub-section, we briefly lay out our methodology. First we offer a brief summary of the existing literature on markets in North Korea and interaction between markets and state organizations, pointing to issues that our study seeks to address. Next we consider the concept of embeddedness and outline the determinants we have deduced from the data we have been able to compile. Section 3 considers four types of relations with the state in the North Korean fishing industry. We offer conclusions in Section 4.

## METHODOLOGY

### SOURCES

In this article, we use interview data (gathered in 2016–17) from 15 interviewees (who worked in separate *de facto/de jure* firms connected to the fish/seafood supply chain). Interviewees were all former participants at different levels of the industry, from different parts of the country, who worked in the industry at different times. Furthermore, they are, to quote Eisenhardt and Graebner (2007, 28) “highly knowledgeable informants who view the focal phenomena from diverse perspectives.” We also cite refugee surveys regarding the North Korean economy to give some indication of how prevalent the types of business we are describing actually are.

Two issues often raised regarding the use of North Korean refugee interview data are reliability and generalizability. We use what Patton (2000, 1195) termed “triangulation of

qualitative data sources,” and the theoretical categories we postulate are based upon multiple data sources including North Korean official sources, our own interview data, and existing research published by South Korean researchers since 1990. By using a diverse range of sources we hope to maximize reliability and generalizability of our findings. The structures that we analyze are well known to researchers and have existed for decades (for instance, Seo 1994; Naewaetongsinsa 1995). Market actors began to strategically embed in FTCs in the early 1990s (Seo 1994; Yang 2008). Market actors began to emerge within side-work units even earlier, in the late 1980s (Yun 2013). Market trading and autonomous household production have always been a part of the North Korean economy to some extent.<sup>1</sup> We thus believe we are on relatively firm ground in creating a causal theory as to why they exist and take the form they do.

In addition to interview testimony, for context we cite North Korean official sources like *The Korean Compendium of Geography: Industrial Geography* (in Korean “Chosŏn Chiri Chŏnsŏ: Kyŏngje Chiri”), and *Reference Volume for Cadres in the Legal Field* (in Korean “Pŏpt’ujaeng Pumun Ilgundŭr-ŭl Wihan Ch’amgosŏ”), as well as North Korean laws. Where relevant, we also cite the works of North Korea’s leaders.

#### MEASUREMENT

The level of embeddedness cannot be measured quantitatively through interview data or the utilization of other currently available sources, but the same is true of many economic phenomena (Piore 2006). Through semi-structured interviews with former market actors about the role and power of the state and the autonomy of private actors, we have elucidated how and to what extent state organizations are able to control over market actors.

We extrapolate the four above-mentioned relative levels of embeddedness and autonomy. We seek to generate a set of empirically rooted causal explanations for the relative embeddedness/autonomy of different market actors deduced from comparable cases (Eisenhardt 1989; Ragin 2014, 34–52), North Korean official sources, and existing studies of North Korean marketization. The conceptual underpinnings of this are further described below.

#### EXISTING LITERATURE ON NORTH KOREAN MARKETIZATION

The literature on marketization generally has largely focused on the role of the central state vis-a-vis the market. The work of Han (2009), Yang (2010), Park (2011), Kim and Yang (2012), Yun (2013), Yang and Yun (2016) among others has highlighted the role of private actors and private finance within state-owned enterprises and other state institutions. Han (2009) analyzes changing central government policy toward the market in the 2000s and shifting attitudes to reform. Lee Seok-gi (2003) identifies a core institutional mechanism through which markets began to penetrate state-owned enterprises and other state institutions in North Korea: the cash plan (“aeksang kyehyaek” in Korean). Yang (2010) stresses the role of spontaneous market forces, while Park (2011) points to the key role played by many state organizations in promoting marketization. Kim and Yang (2012), Yun (2013), Haggard and Noland (2011) offer interesting, illustrative refugee survey data indicating widespread de facto privatization. However, we believe that the term “de facto privatization,” while useful, does not fully capture

the complexity of relations that can exist between market actors in certain niches and the lack of such relations in other niches.

A central debate in the study of North Korea's contemporary political economy is currently about the extent to which marketization can be described as primarily being "from below" or "from above." In other words, it is debated to what extent North Korea's post-socialist market institutions, actors, and relations emerged spontaneously from coping strategies adopted by households and low-level agents of the state, or from above through the conscious action of FTC headquarters and central government agencies in Pyongyang (Lee et al. 2013).

We offer a new answer: many market actors have ties to or formally act within state agencies and SOEs, but such ties are not necessarily an indication solely of direct control or hierarchical relations. Rather, as evidence presented here demonstrates, they are indicative of a two-way process. On the one hand, market actors cede a level of operational autonomy to become embedded within state institutions and therefore subject to their oversight, while on the other hand state institutions also cede some discretionary control over certain assets/rights to market actors in order to obtain access to potential revenue streams. Thus marketization is often neither top-down, or bottom-up, but co-dependent.

#### THEORETICAL FRAMEWORK: EMBEDDEDNESS AND ITS PUTATIVE CAUSES

##### *MARKET ACTORS EMBEDDED IN THE STATE ORDER*

In North Korea, some state organizations are able to enter into relationships that involve the pooling of valuable assets like trade rights with private partners. Private market actors have, to borrow an expression from Peter Evans (1995), a form of "embedded autonomy," existing as quasi-independent actors within the confines of state organizations. However, the level of their embeddedness or autonomy varies greatly. Some market actors are more resource-dependent on state organizations, and hence are forced to accept more oversight, while others are more autonomous and have greater effective control over their fixed assets and cash flow.

We posit that two major causes determine the likelihood and level of embeddedness: resource scarcity and monitoring costs. The spread of market transactions and the emergence of new market actors, as well as marketized production units embedded within the state hierarchy can be understood as an institutional compromise necessary for regime survival (Lee 2003; Lankov et al. 2017). The institutional compromises made since the late 1980s are important in understanding how it was that state agencies and enterprises developed interdependent relations with market actors.

The structure of the relationship between state organizations and private actors appears to reflect the value of the assets provided by the two sides—i.e. the extent they have related resources (Dyer 2008). The state institution is potentially in a predatory position vis-à-vis market actors, having in theory the ability to dismiss their market partners, and dissolve their operations.<sup>2</sup> Yet, such actions, while possible, are counterproductive, in the most literal sense, since they destroy productive capacity and potential sources of revenue. Thus, state institutions often lack critical resources, including capital, industry-specific knowledge and skills, as well as the access to and knowledge of foreign

markets and local networks. Such resources are in scarce supply in the North Korean economy, and often are under control of the private market operators. Therefore, if state agencies wish to acquire some of the residual income that can be generated from the utilization of such resources they have to enter into arrangement with market operators.

Conversely, state agencies also possess a multitude of resources which are potentially useful for market actors. If market actors wish to acquire access to such assets and resources, they may also have to accept some form of control from state agencies. For example, state control over access to foreign markets can mean that private entrepreneurs enter arrangements with state agencies in order to gain less dangerous and more regularized access to export markets (Joung 2016).

Monitoring costs is another major factor. As Lankov et al. (2017) have demonstrated, relations between market actors and the state organizations are partially the product of the monitoring costs of evaluating performance. Indeed, the costs of monitoring are seemingly a major reason why some forms of market activity are largely autonomous in relation to the state. Limited monitoring capacity has increasingly been recognized through the legalization of a range of market activities in North Korean law. Many market activities on the part of state entities becoming legal since 2002–03 (Yang 2009).

The issue of monitoring costs was first recognized by Kim Il Sung himself in the late 1960s, with some forms of household production for market trading being legalized back then. The state's relative tolerance of autonomous market actors is thus also arguably the product of institutional compromise, compromise that emerged in the mid-1960s after attempts to completely eliminate all markets (Joung 2011). As North Korea has become more marketized, more production has occurred outside the confines of the state—including crops, livestock, garments, and various other commodities and inputs (Seo 1994; Choi and Koo 2003; Lankov et al. 2017; Kim 2017; Choi 2018).

In section 3 we will illustrate how these causal claims can be justified with reference to the case of the fishing industry.

## THE CASE OF THE FISHING INDUSTRY

### OVERVIEW

#### BACKGROUND

In the late 1950s, private fishing, hitherto dominant, fell victim to collectivization and nationalization programs. From then on, the North Korean fishing industry was composed of three different kinds of organization: state-run fishing enterprises, fishing cooperatives, and side-work fishing units (“puŏp chagŏppan”). In theory, the “side-work units” existed solely to produce foodstuffs and consumer goods to be eventually distributed to the workers of the SOE or state agency under whose auspice they were established. State-run fishing companies were directly managed either by the central government or by regional authorities. Cooperatives (actually state-owned in everything but the name) were usually under the provincial or local government, while side-work units were part of larger state organizations or SOEs (Various 1990, 245). Side-work units, relatively unimportant at early stage, came to serve as a key organizational vehicle for the marketization of North Korean fishing in the 1980s (Yun 2013).

**TABLE 1 North Korea's motorized fishing fleet in 1988**

Type of Vessel	Vessel Size (Tonnage)	Total Number
Fish Processing Vessel	10,000	8
Reefer Vessels	3,000~7,000	12
Large Trawlers	3,750	11
Multi-purpose Ships	450~485	554
Fishing Net Vessels	270	16
Fish Trap Vessels	30~100	766
Small Trawlers	30~100	170

Data from: Yu-jin Lee, "Ch'oegŭn Pukhanŭ Susanŏptongyanggwa Chŏngch'aek Pangyang Yŏn'gu" (Recent Trends in North Korea's Fishing Industry and Research into Policy Directions). *Sanŭnjosawŏlbo* 11 (2015), 85.

Notably, side-work units also became important in agriculture from the 1980s onward, and in mining in the 1990s (Choi 1998, 17–20; Joung 2016).

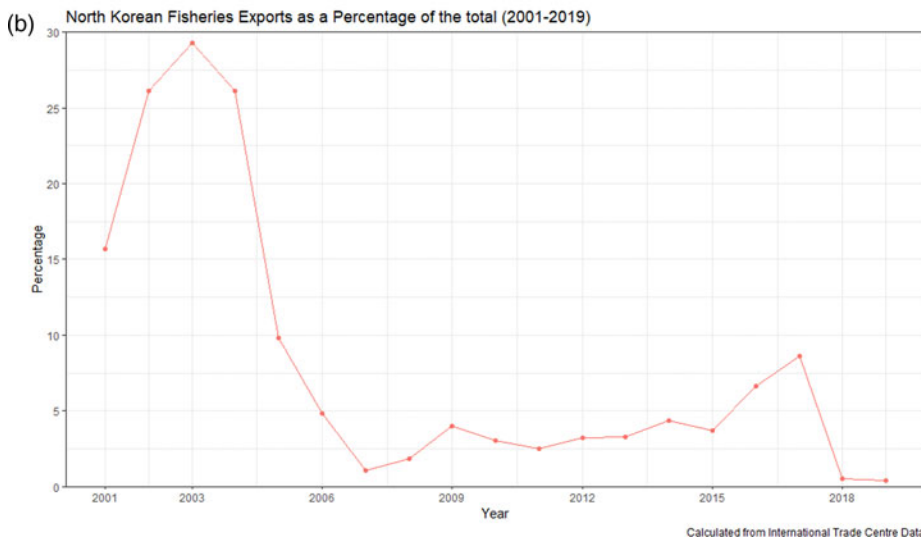
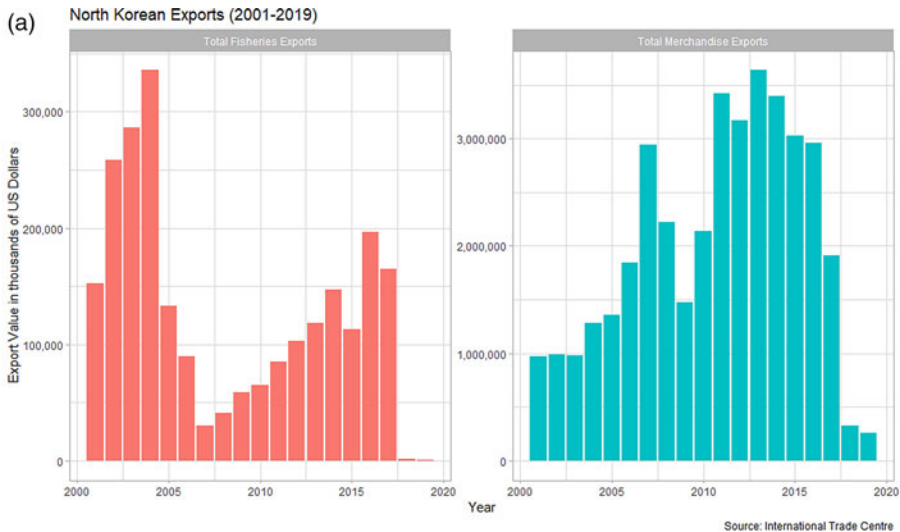
The state's investment and development strategy for much of North Korean history can be characterized by heavy emphasis on mass mobilization and large-scale production. Geographically dispersed production would be more costly and difficult to monitor, and Kim Il Sung (1993, 259) believed that limiting the number of firms was to be important in effective state planning. If official data is any guide, the four large state-run fishing companies under the DPRK Cabinet's Fishing Ministry produced at least 48 percent of the total catch in the 1980s (Various 1990, 237–238). This is probably explained by the steady build-up in capital stock at state-run companies. Ship tonnage at state companies between 1960 and 1982 rose by over 600 percent, the number of large fishing trawlers increased by over 400 percent between 1970 and 1980 in the industry overall, while the number of medium-sized trawlers rose by a factor of 41.5 between 1960 and 1982 (Various 1990, 242). The motorized fishing fleet as of 1988 is given in Table 1.

The steady build-up of capital stock created a cost structure that was only sustainable so long as Soviet oil was available at discounted "friendship prices" (Van Ree 1989; Mikheev 1993; Szalontai 2006). The economic collapse of the 1990s led to sudden and fundamental changes in the structure of the industry, with smaller "sub-work units" and nimbler semi-private FTC-run fishing operations becoming more important while large state-operated trawlers and fishing fleets were no longer usable. At the same time, the country's retail and wholesale sectors became increasingly marketized, while Foreign Trade Companies adopted to marketized realities with some forms of embedded marketized structures (Yang 2008).

Until the 2017 round of the UN-imposed sanctions, fisheries exports were one of North Korea's most important sources of foreign currency. Indeed, they were North Korea's number one export as recently as 2003, peaking that year at 37 percent of all exports measured in US dollars (KOTRA 2004, 21). They declined thereafter, but, having bottomed out in absolute dollar terms in 2007, the seafood export began to rise until 2016, as shown in Figure 1 below. The UNCTAD data presented below is also unlikely to be complete, but it is nonetheless illustrative of the fact that the fishing industry is an important part of the country's export earnings.

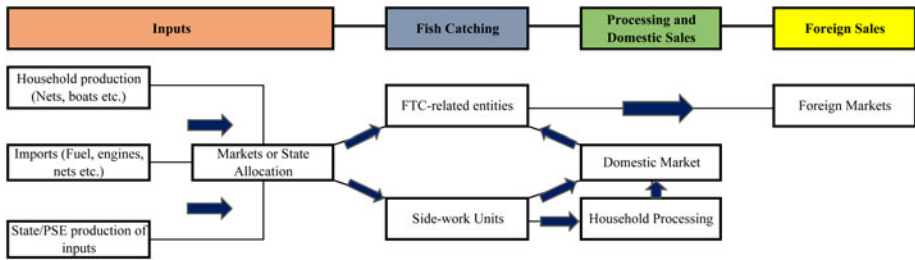


**FIGURE 1** (a) North Korean Exports (2001–2019) and (b) North Korean fisheries exports as a percentage of the total (2001–2019)



*THE CURRENT SUPPLY CHAIN*

Since the late 1950s, only state organizations and agencies have been legally allowed to engage in fishing (aside from fishing on land). The Fisheries Act, first adopted in 1995, codifies this, stipulating that fishing vessels can be registered to state institutions, enterprises, and other organizations (like collective farms), but not as individually owned fishing boats. The Boat Registration Act adopted in 2007 further codifies the system. Enforcement seems to be rigorous, and virtually all informants agree that the proper

**FIGURE 2** The North Korean fishing industry supply chain

Data from: Authors' reconstruction from interviews and official sources

registration with some official entity is necessary for any fishing boat to go out to sea (R2, R3, R4, R5, R6, R7, R10).

Not only must all boats be registered under a state organization, but all working-age males are also expected to register with a workplace within the state economy. Employment registration rights and sea access rights (the latter being intertwined with boat registrations rights) are two major assets only the state organizations can possibly possess in the North Korean system, but any aspiring entrepreneur needs these rights to run a fishing business (Lankov et al. 2017). A stylized portrait of the supply chain of the fishing industry is presented in Figure 2.<sup>3</sup>

There is a marked difference between FTCs and side-work units. Many FTCs are multi-unit firms with significant capacity, potentially including in-house haulage capabilities and fish processing (Yang 2008). They also can procure fish on the domestic market for sale to foreign markets. By contrast, side-work unit members interviewed indicated that they often sell their catch directly to traders, or else process it in their households before selling it on the domestic market.<sup>4</sup> Traders and households usually exist largely autonomously in relation to the state, though some do embed within state retail enterprises. Below we examine different parts of the supply chain in more depth.

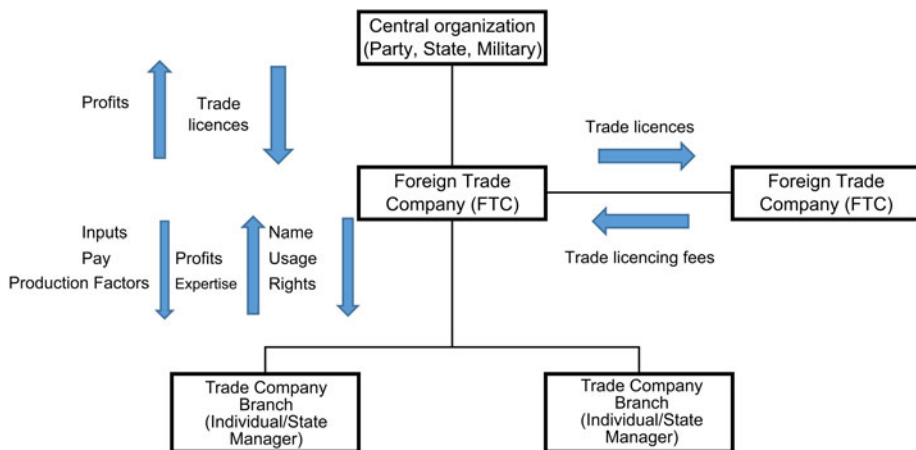
#### DEEPLY EMBEDDED FTC BRANCHES

In the early 1990s, quasi-independent trading entities within Foreign Trade Companies (FTCs) began to emerge, here again partially due to a relaxation of institutional constraints (Yang 2008).

FTCs answer to a central government agency. Internally, they have different branches or “bases” (“kiji” in Korean), which produce goods or provide services primarily for export or for sale in foreign currency. These units can include everything from mines to factories, fishing stations to restaurants. Some are akin to franchises of their respective FTC, run by “entrepreneur branch managers” that use the “brand” of the FTC and some aspects of its “business model,” in exchange for protection, trade rights, and sometimes other resources.

Figure 3 illustrates the complex inter-dependencies that pervade the North Korean foreign trade company system. Nominally it is hierarchical and under the complete control of the state, but in reality, it plays host to numerous market actors. The lines between the FTC

**FIGURE 3** The North Korean Foreign Trade Company System and the fishing industry



Data from: Kim Jic-soo (2013) with additions and revisions

and its branches indicate the maximal known amount of resource sharing that may occur, which includes the FTC offering nominal salaries and some inputs to branches.

Some FTC branches are run partially with individual investment and partly with loans from state banks and/or funds provided by central state organizations (R14), while some others fully rely on investment made by individuals (R2, R3). The decentralization of the system in the early 1990s was an institutional compromise made by Kim Jong Il in order to raise exports, but it led to the embedding of market actors in the state (Yang 2008).

Surveys of North Korean refugees indicate that the number of foreign-currency earning operations run or financed by individuals rose between 2005 and 2015, with as much as 45 percent of such operations believed to be private as of 2015 (Yang and Yun 2016, 63). Access to capital also appears to be a primary motivator for state organizations to enter into such arrangements. The government sought to address this particular manifestation of resource scarcity in 2014, by legalizing private loans to state companies (National Intelligence Service 2019, 579), but actual private management and ownership rights have not been recognized.

An FTC head office may not just lack financial resources, but also technical expertise, local market knowledge, managerial expertise and many other resources that cannot simply be acquired through visits to the local marketplace or lending from local informal credit providers. Thus, the comparison to franchising is a helpful one. As scholars of franchising have noted, resource scarcity can occur along multiple dimensions, and the franchisor (aka the FTC head office in our case) is thus induced to franchise, i. e. embed private actors, when vertical integration is not possible due to monitoring costs or lack of resources (Minkler 1992; Norton 1988; Combs and Ketchen 1999; Gonzalez-Diaz and Solis-Rodriguez 2012).

FTCs provide entrepreneurs, acting as branch managers, with a range of important resources. They can provide access to foreign markets, which other entities previously did not possess, provide physical resources (factory and warehouse space for processing

and dispatch *inter alia*), as well as the above-mentioned asset (boats) registrations, sea access rights and employment registration. Thus FTC branches do not just catch their own fish for sale but can also engage in fish wholesaling on international markets (R2, R14). FTC export rights come in the form of “trade plans” (colloquially known as “wak’ü” in North Korea).<sup>5</sup> In the case of fish, North Korean legal documents indicate that in the 2000s, the price of at least some exported maritime produce was regulated under the trade plan system (Various 2010, 249–250).

Greater embedding within the state involves a greater level of control from state agencies—as we have noted, the recourse access and control are two side of the same phenomenon, the more resources the state agency is capable of providing, the more control it can expect to exercise. Being within the FTC framework also allows entrepreneurs to run larger, vertically integrated operations of greater technical sophistication, involving storage, haulage, and logistics that state organizations may not be able to afford to fund and manage on their own. Such operations can provide large quantities of catch to foreign counterparties (R2, R3, R13, R14). These foreign trading rights make FTC branch management a lucrative proposition for would-be investor-managers—generating annual revenues sometimes measured in the hundreds of thousands of dollars (R2, R3). Indeed, within the North Korean system foreign trade rights are also a scarce resource in their own right. Foreign trade rights have not been a well distributed, open-access, resource, and this has further compelled entrepreneurs to create firms embedded within the state.

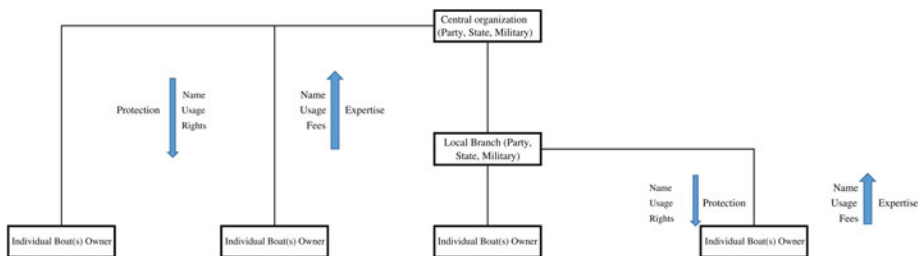
At the same time, maximizing profit and minimizing embezzlement entails significant monitoring costs for state agencies (Lankov et al. 2017). FTC head office monitors its branches to make sure that they do not embezzle excessively and also abide by certain state rules regarding various aspects of operations. The amount of embezzlement and other rule breaking allowed differs by the time period and the FTC’s own characteristics to an unknown extent.<sup>6</sup>

The FTC monitoring regime means that the operational autonomy of entrepreneur branch managers is more restricted than that of other boat operators. State mandated practices such as the payment of monthly wages in North Korean won, and delivery of food rations to employees is seemingly mandatory as well (R2, R13, R14). This is partially because the North Korean leadership and its police are interested in ensuring that such norms are upheld (Han 2009; Various 2010).

What’s more, as noted above, at least some prices are set not by the branches or the FTCs, but by the Ministry of Trade, which issues “trade plans” (“Muyök Kye kwaek”). Hence, in a real sense, even though many branches of FTCs are financed by private individuals, they are run at least partially according to rules set by head office and by the state regulator of foreign trade. To use the terminology of franchising, private investors use not just their host FTC’s “brand” but also important aspects of its “business model.” This represents both an institutional compromise on the part of the state, and a significant constraint on market actors operating under such arrangements.

This level of control, with the monitoring costs it appears to entail and the level of resource sharing that both sides engage in, appears to be absent from much of the rest of the fishing industry. It does, however, appear to be common within the foreign trade sector (Yang 2008; Yang and Yun 2016). Attempts to reform the sector under Kim Jong Un have recently been reversed, and there is little sign that the arrangements described above will be replaced by greater formal property rights in the near future.<sup>7</sup>

**FIGURE 4 Boat Registration Schemes within North Korean state entities**



Data from: Authors' reconstruction from interviews and official sources

*LOOSELY EMBEDDED SIDE-WORK BOATS*

Surveys of North Korean refugees indicate that there are a large number of fishing boats which are bought by market actors, or made to their order, but registered to state organizations, officially being productive equipment used by “side-work units” (puǒp). This practice seems to be becoming more common (Yang and Yun 2016). The boat owners pay a regular cash fee for the right to use registration (Lim 2009, 127). Like boat registration with the FTCs, such schemes remain technically illegal, but have been largely tolerated from the center, though certain forms of private enterprises embedded within the side-work institutional form have been subject to crackdowns in the recent past (Han 2009, 205). This de facto private ownership of fishing boats as an institutional compromise traces back to the late 1980s when such arrangements appear to have begun and were tolerated by the government (R10; Yun 2013, 133)

Interviewees agree that the boat and, where provided by captains or crew, other equipment, is de facto private property, and can be bought and sold on the open market outside the supervision of organization to which such property is nominally registered. This scheme is illustrated in Figure 4.

As Lankov et al. (2017) have catalogued elsewhere, fixed payment schemes are widely used by North Korean state organizations who lack the requisite monitoring capacity. In the fishing industry the problem is particularly acute, with so many state organizations being permitted to organize their own fishing “side-work units.” In 2011, Kim Jong Il (2015, 526) even mentioned this, saying “not a few state organizations break the law and use their ‘specialness’ as an excuse to overfish.”<sup>8</sup> This is a further indication of how unregulated the industry is in practice.

However, issues are not merely a product of monitoring costs: they also seem to reflect resource scarcity faced by the state organizations—pretty much like the situation we have seen in the FTCs case. Respondents agree that state organizations primarily hand over their name to would-be captains or boat owners in order to acquire a source of reliable and valuable income, so it is the resource scarcity which leads state organizations into loosely embedded relations with market actors. However, the price they charge appears to differ on the basis of the quality of the name—likes the brands of franchises. The political police (powibu), the military as well as central party-related organizations tend to be particularly expensive to register with (R4, R5, R10).

Yet, even the lower reaches of these politically powerful organizations compete for market actors as a source of supplemental income (R5). It is also important to note that the actual boat owner chooses the state organization to register with, and can switch registration to another organization with relative ease and few if any penalties (R4, R6). This “right to free exit” is a clear indicator of actual ownership rights increases the competition between the state agencies and adversely influences the leverage they have over their private partners.

The above described registration schemes are by no means unique to the fishing industry. Similar registration schemes are also prevalent in transport and haulage, and they have basically existed in agriculture since the 1980s (Yang and Yun 2016). This is a further indication that conclusions drawn from case studies from the fishing industry are potentially generalizable to other sectors. Such schemes were made explicitly illegal in 2008 under Article 36 of the Equipment Management Act (National Intelligence Service 2019, 642). In practice, however, this regulation seems to have little if any impact on the actual situation. The owners have the right to dispose of boats and profit from their use, and they are in daily operational control, with compensation agreed upon by the captain or owner and his crew.

Owners make use of a variety of different compensation schemes for their workers, dependent on their structural position vis-à-vis their state partners. Fishermen often have to provide their own equipment (nets, boats) and bring their own provisions. They are frequently compensated with a percentage of the catch. The practice seems to be widespread in side-work units (R4, R5, R6, R7). R1, a woman who worked on a coast guard vessel as a fisherwoman to supply the unit with food, was also given a percentage of what she caught.

Outside the foreign trade sector, there seems to be little integration between individual boat owners and other parts of the industry beyond the household (R4, R5, R6, R7). Fishermen and women may sell their catch at market, their families may process, store and/or sell their catch, but interviewees indicated that larger, vertically integrated firms based on side-work boats do not yet exist. This could be why respondents agree that the sale of catch is not regulated or controlled by the state organization to which the boat is registered. Instead the captain and/or the owner (if separate from captain) and the crew dispose of the catch and acquire the income from its sale directly at port or at market.

Some of the state’s larger fishing companies, dormant for nearly three decades, appear to have been rehabilitated in recent years, though their actual ownership structure is not known (Bermudez and DuMond 2018). At present, however, so far as interviewees and survey data indicate, it appears that much of the fishing industry remains loosely embedded within the state, and is de facto privatized with respect to operations, profit-sharing, and the disposability of tangible fixed assets.

*AUTONOMOUS HOUSEHOLD PRODUCERS, SEMI-AUTONOMOUS TRADERS, AND PSEUDO-STATE RETAILERS*

Domestic sales and input production part of the fishing industry has significantly autonomous elements. The August 3 Consumer Goods Movement (“the 8.3 Movement”), major institutional compromise, launched in 1984, presaged a rapid expansion in the scope of market transactions and market actors in the economy (Lee 1992; Choi and

Koo 2003; Yun 2018). The spread of household commerce, largely autonomous in relation to state retail organizations, presaged the spread of embedded market actors inside the North Korean state mono-organizational society—creating a market for embedded entrepreneurs to purchase inputs and sell their product domestically.

In the fishing industry, the retail and household sectors have integrated to some extent, with traders also sometimes involved in food processing (R10). The same is also true of other household industries, with household producers also sometimes selling the product they make at market (Choi 2018, 50–52). There are also specialized producers of nets and even boats who sell to traders or customers inside the market sector (R11, R12), though imports of equipment appear to be highly important—South Korean sources estimate that over 80 percent of North Korean fishing equipment and over 90 percent of nets are now imported from abroad, overwhelmingly from China (KDB 2015, 882), and our informants also unanimously say that Chinese imports dominate the North Korean fishing industry.

For these market actors, strategic embedding may serve no purpose because nearby enterprises and other state organizations may not possess useful resources or have no significant enough incentive to share these resources with households. Here, resource scarcity does not lead to embedding due to a lack of related resources that would incentivize state organizations and households to enter into partnerships for the production of nets/boats/baits. The monitoring costs also play a role, since state agencies have limited capacity, and can only utilize so many opportunities. The low value of the product and its dispersion across a large number of households means that monitoring costs given the potential revenues (or lack thereof) appear to be too high for state agencies to seek embedded relations with these private actors.

These concerns are reflected to some extent in the central government's legalization of some household activities. The sphere of individual property for control and profit purposes (though not legally sellable or leasable under Civil Code) is a well-established institution under North Korean law. The North Korean government has issued manuals for the police whose legal analysis defends the right of households to profit from the legal use of their property (Various 2010, 95–96). This includes one's garden, kitchen utensils, and home appliances, as well as potentially the labor power of the household itself when not at regular state assigned workplaces or schools.

In the fishing industry, another such household-based and relatively autonomous group are seafood traders. Interviewees report that sales of fish at the wharf and market are done relatively freely, with wharf guards being bribed where needed (R1, R5, R6, R7, R8, R9, R10, R15). This practice appears to have occurred as early as the 1980s and to have become commonplace in the 1990s. Since 2002, marketplace transactions may occur within officially designated market spaces, with stall rental fees collected by state market management organizations (Lim 2008). State regulation in this area can be intrusive and systemized: prices charged in marketplaces are regulated (Han 2009; Kim 2011), and traders paying stall fees or rents (Hong et al. 2016; Cha and Collins 2018).

There have been crackdowns on market activity in the past, especially in the 2005–09 period (Han 2009; Yang 2010), but transactions are not limited to this space, and, thanks to the spread of mobile phones, they can increasingly occur outside officially prescribed places (Lee et al. 2017). However, transacting outside the market, out of view of the state, either through makeshift “grasshopper markets”/alleyway markets (peripatetic markets),

or at home having met prospective clients at designated meeting points is by no means a new phenomenon (Choi 1998).

There are cases when traders also make use of the state-owned assets, sometimes engaging in spot transactions with state enterprises. For instance, wholesale traders have to use large refrigerating facilities which tend to be owned and administered by the SOEs, often the old large fishing companies whose fleets have been moored since the early 1990s (for such companies, the still-operational refrigeration facilities sometimes constitute a major source of income) (R8, R10, R11). However, such a relationship does not directly affect the autonomy that traders have with respect to the operations of their business—i.e. the sale of maritime produce.

The sale of maritime produce is bifurcated into two rather distinct groups: FTCs, which play host to entrepreneurs embedded in state structures, and private traders, who are often not a formal part of any particular state structure. Granted, the market system is becoming increasingly institutionalized, with permanent physical markets growing in number and scale (Joung 2010). Such institutionalization means that traders have to pay regular stall fees, but it does not appear to substantially impact their business otherwise.

There are also cases where traders make use of state retail space, or even embed their operations within state retail institutions. The sale on consignment of consumer goods by state shops on commission for private traders (this practice was legalized fully in the early 2000s; Lim 2008), while traders actually taking over the running of state shops has become increasingly common but remains illegal (Lee et al. 2017, 85). This is a form of embedding of retail operations within state structures that is akin that of a side-work boat insofar as traders pay fees for the use of state assets (physical space and the right to trade), but appear to be much freer of state control than FTC branch managers. Here again the state organization has far less scarce resources to offer—sales rights—than an FTC, so thus is able to exercise far less control on the enterprise.

Refugee surveys indicate that the embedding of market actors into state retail organizations became more prevalent between 2005 and 2015, with over 50 percent of state retail establishments being such embedded firms (Yang and Yun 2016, 65). For larger traders, involvement in such schemes in the past, prior to 2002, would likely have afforded them protection, and state retail institutions would have benefited from the resources of these traders. Since 2002, the seeming further rise of such a practice may be due to the fact that state shop space is an alternative to market retail space.

## CONCLUSION

Among the post-socialist states, North Korea occupies an unusual position: unlike China or Vietnam, it has not experienced officially approved market-oriented reforms (until recently, at least); unlike the ex-Soviet states, it has not made a formal switch to the market economy. Nonetheless, the market relations in the country have existed since the late 1980s and have come to play a major role in its economy since the late 1990s. However, the market actors in North Korea operate in a very peculiar legal and institutional environment which makes necessary an unusually close interaction between them and state agencies/enterprises of different kinds.

In spite of all changes, the state has maintained near monopolistic legal control in some areas which are of key significance for a number of private businesses: for example, only



government agencies or SOEs can officially own vehicles, real estate, or seagoing vessels. It means that the rights to register such assets (unusable without proper registration), which are vital for any aspiring business in many fields, constitute an important resource which the official entities might be willing to share if and when conditions are right. Apart from the fixed assets, the SOE and state agency to a large extent control cash flow as well as wage and price settings. These privileged rights of the state entities make close cooperation with them a necessary condition for many types of private businesses.

On the other hand, the newly emerging private operators have their own unique resources which are beyond the reach of the SOE and/or government agencies—like capital, always in short supply in the state economy with a dysfunctional banking system. Frequently, they also possess vital technical expertise or access to important networks.

In this situation it makes perfect sense for both sides to enter a mutually profitable arrangement which would allow them access to the vital resources controlled by other side. Given the institutional environment of North Korea which leaves little if any operational space for the non-government economic actors, the best solution is to embed what is essentially a private entity within the SOE or state agency.

Such embedded companies are very common in the present-day North Korean economy. The level of embeddedness or autonomy, however, varies significantly. Research indicates that it depends largely on the amount of resources both parties can contribute. Generally, the more valuable resources can be presented by the state entity, the greater the level of embeddedness is likely to be.

This trend is well illustrated by the difference between two types of arrangements which are common in North Korean coastal fishing nowadays. While nearly all fishing boats nowadays are effectively run privately, their owners/operators can choose whether they will register with the foreign trade companies (FTC) or with side-work units of SOE. The FTC, being privileged entities, can bring significantly more resources into the deal. Their registration usually provides better legal protection, many more opportunities for vertical integration, and direct or semi-direct access to the overseas markets. The side-work units have fewer resources, even though it is possible to arrange vertical integration across the state/household barrier, or find access to the export networks.

Given such differences, it is predictable that FTC-associated private entities have a greater level of embeddedness, with more control exercised by the FTC supervisor. Nonetheless, these bodies also tend to attract market operators with greater amount of capital and better access to resources in general. So the logic behind the embeddedness is sound, and these schemes are mutually beneficial for both sides. They constitute an interesting case of post-socialist arrangement, being neither fully marketized nor fully administrative.

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#### CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

#### NOTES

1. For a discussion of South Korean literature on North Korean government policy toward markets, see Ward and Green (*Forthcoming*).

2. We are grateful to one of the reviewers for pointing this fact out.

3. For simplicity's sake, vertical integration between household producers and market traders has been omitted, as has informal, small-scale smuggling.

4. Smuggling has been omitted from the schema, but certain types of smuggling could be considered autonomous market trading by individuals or households obtaining (illegal) access to foreign markets. Other forms of smuggling are reported to involve FTCs, especially since the implementation of UN sectoral sanctions in 2017.

5. The exercise and leasing of trade rights is codified under the Trade Act, last amended in 2015. The scope of legal ownership of fixed capital assets and the registration process is covered under the Equipment Registration Management Act, last amended in 2015, and does not allow private individuals to own commercial machinery or facilities, nor register them as state assets but continue to utilize them for personal gain (National Intelligence Service 2019, 642).

6. Under Kim Jong Il the auditing system also involves the sporadic dispatch of auditing teams from the Ministry of State Security to detect and curtail embezzlement at the lower levels of the trade bureaucracy (Han 2009; Kwak 2016).

7. From 2015 the North Korean trade system underwent a number of important legal changes that may lessen the scarcity of trade licenses. Enterprises and collective farms are no longer required to use FTCs as an interface through which to access foreign markets, meaning that private actors potentially have far more potential entities in which to embed their foreign-market-orientated activities (Lee et al. 2018). However, these changes were reversed in 2018, and the old system appears to have largely been restored (Ward 2019).

8. The terms "specialness" and "special unit" are euphemisms for the military, Office 39 (the Kim family's fundraising office in the Central Party), the military industrial complex, and the Ministry of State Security.

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## Appendix: Interviewees

	Sex	Age	Period working in the industry	Position	Year of escape	Region of work
R1	F	40s	Late 1990s	Fishing and sales	2004	Yellow Sea (West Sea)
R2	M	60s	1995–2003	Trade Company Branch Manager	2012	Sea of Japan (East Sea)
R3	M	50s	1989–96	Trade Company Branch Manager	2001	Sea of Japan (East Sea)
R4	M	50s	2003–11	Side-work Boat Captain	2011	Sea of Japan (East Sea)
R5	M	20s	2003–07	Boat security and boat crew member	2007	Yellow Sea (West Sea)
R6	M	40s	2000–03 2011–12	Boat crew member	2013	Sea of Japan (East Sea)
R7	M	40s	2005–09	Boat crew member	2012	Sea of Japan (East Sea)
R8	F	30s	2003–05	Seafood wholesale	2006	Sea of Japan (East Sea)
R9	F	50s	Late 1990	Seafood sales	2000	Sea of Japan (East Sea)
R10	F	50s	1980s	Seafood processing and wholesale	2004	Yellow Sea (West Sea)
R11	F	20s	2000s	Net making	2009	Sea of Japan (East Sea)
R12	M	20s	2000s	Net making	2014	Sea of Japan (East Sea)
R13	M	20s	2010s	Seafood Trade Management	2015	Pyongyang
R14	F	50s	1990s–2000s	Seafood Trade Company Administration	2012	Sea of Japan (East Sea)
R15	F	30s	2000–03	Wholesale Trader	2003	Sea of Japan (East Sea)