

The Idea of Transport Independence in the Russian Arctic: A Scandinavian Institutional Approach to Understanding Supply Chain Strategy

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Abstract

Purpose – This study aims to explore how supply chain strategies emerge and evolve in response to contextual influence.

Design/methodology/approach – A qualitative single-case study presents the journey of a supply chain strategy, conceptualised as the *idea of transport independence* in the Russian Arctic context. Data from 18 semi-structured interviews, personal observations and archival materials is interpreted through the institutional concepts of translation and editing effects.

Findings – The study reveals how supply chain strategies evolve over time and can affect institutional factors. The case study further reveals how contextual conditions make a company reconsider its core competencies as well as the role of supply chain management practices. The findings show that strategy implementation through purposeful actions can represent a powerful resistance to contextual pressures and constraints, as well as being a facilitator of change in actual supply chains and their context. During the translation of the idea of transport independence into actions, the supply chain strategy transformed itself into a form of strategic collaboration and thereby made supply chains in the Russian Arctic more integrated than before.

Research limitations/implications – More empirical studies on strategy implementation in interaction with contextual and institutional factors are suggested. An institutional process perspective is applied in this study but we suggest that future research should include a human dimension by an exploration of day-to-day routines and challenges that employees face when strategising and the actions they take.

Originality/value – The study provides an understanding of how a new supply chain strategy emerges and how it changes during implementation. In this process oriented study – merging context, process and strategy content - it is further shown that a supply chain strategy may affect the context by responding to contextual and institutional challenges.

Keywords Supply Chain Management, Strategy Implementation, Case Study, Arctic Shipping, Translation Theory, Process Perspective

Paper type Research paper

Introduction

The literature on supply chain strategies largely concentrates on supply chain configurations that should ensure profitability, efficiency and/or customer responsiveness (Gunasekaran et al., 2008; Gammelgaard, 2010; Nakano and Akikawa, 2014). However, Fawcett and Magnan (2002, pp. 359-360) argue that “*supply chain strategies lack specificity and reach*” due to variations and inconsistency in the understanding of supply chain management (SCM) in practice. Further, supply chain strategies are often studied in isolation from their adoption in practice through models or hypotheses on supposed organisational actions (Qi et al., 2011; Qrunfleh and Tarafdar, 2013; Nakano and Akikawa, 2014). So it seems like there is a lack of understanding of how supply chain strategies are developed and implemented in practice. Without considering how supply chain strategies are deployed, their feasibility may become problematic (Qrunfleh and Tarafdar, 2013).

Further, supply chain strategy is most often understood through theories from the strategic management discipline such as transaction cost economics (TCE) (Williamson, 2008) and the resource-based view (RBV) (Prahalad and Hamel, 1990; Vickery et al., 2003; Zhao et al., 2011; Halldorsson et al, 2007). However, these theories are only concerned to some degree with the

1 potential influence of external contextual factors, which can compel companies to make certain
2 decisions and implement different strategies. The theories are, though, useful in understanding
3 supply chain strategy when companies focus on their core competencies and outsource f. ex.
4 logistics to logistics service providers (Gilbert et al., 2006; Lin et al., 2014). Or, alternatively,
5 when a company accumulates its capabilities and resources in developing an own transport
6 infrastructure to ensure full control over its supply chains. Despite the advantages and
7 contributions of these theoretical approaches to supply chain strategy, there is still a lack of
8 understanding of how supply chain strategies are developed over time as a result of the
9 interaction between supply chain and context. This includes how companies employ
10 organisational actions to develop their supply chains strategically according to their needs and
11 values as well as in compliance with external norms and practices due to various contextual
12 pressures (Oliver, 1997).

13 Motivated by the above-mentioned shortcomings in the literature on supply chain strategy, *the*
14 *present study aims to explore how supply chain strategies evolve and are translated in practice*
15 *in response to contextual influence.*

16 In doing so, the study presents an empirical case of the development and implementation of a
17 supply chain strategy to ensure a company's control over its supply chain in the Russian Arctic.
18 In the region, this strategy is referred to as "transport independence". The Russian Arctic
19 provides a unique empirical setting, where mining enterprises are challenged by harsh climatic
20 conditions, remote location, sparse transportation links with global markets and a limited amount
21 of logistics providers and suppliers. They have to apply specific supply chain strategies to ensure
22 regular deliveries of cargoes for their own needs as well as those of their customers. Maritime
23 transportation is often the only link to the market but was challenged by many regulatory norms.
24 In addition, the Russian government played a role both as regulator of cargo transportation and
25 as one of the main suppliers, particularly providing icebreaker assistance. In response to state
26 regulatory pressure in the early 2000s, some enterprises tried to implement a new supply chain
27 strategy to ensure control over their cargo delivery. This strategy has entrenched itself as the *idea*
28 *of transport independence* among practitioners (Gromakova, 2007) where independence implies
29 release from coercive regulatory constraints in order to find supply chain solutions for regular
30 cargo deliveries without delays.

31 The study applies Scandinavian institutional theory to illustrate the process of how supply chain
32 strategy implementation affects the external environment including regulatory factors and SCM
33 in practice. In particular, the concepts of translation and editing effects are employed to
34 emphasise "... *not of those who did it (the actors), but how it was done (the actions)*" (Lindberg
35 and Czarniawska, 2006). This process approach is helpful in revealing the interplay between the
36 company's supply chain strategy and the contextual constraints through the organisational
37 actions of developing and adopting a new strategy.

38 The study is organised as follows: The next section outlines the field of supply chain strategies in
39 more detail. This is followed by the theoretical framework taken from the Scandinavian
40 institutional approach. The fourth section describes the research method. Then the context and
41 the case study are presented. The findings are discussed in the following section. The article
42 concludes with implications for theory and practice as well as giving an outline of future
43 research opportunities.

44 **Supply chain strategy literature**

45 Overall, supply chain strategies can be divided into two types – those that focus on efficiency
46 and those that deal with responsiveness (Gammelgaard, 2010). The efficiency focus is
47 particularly found in concepts such as Lean supply chain, just-in-time and business process
48 redesign, which aim to achieve a low cost of product inventory and delivery and thereby improve
49 the quality and efficiency of the supply chain (Qrunfleh and Tarafdar, 2013). A strategy of

1 supply chain responsiveness, on the other hand, is commonly typified as an agile supply chain
2 strategy (Christopher and Towill, 2001, Gunasekaran, 2008) aiming at adapting swiftly to rapidly
3 changing customer needs and market demand (Qrunfleh and Tarafdar, 2013). To achieve
4 customer responsiveness, the importance of strategic supplier selection and the forging of close
5 ties with relevant suppliers is often highlighted (Bernardes and Zsidisin, 2008; Vanteddu et al.,
6 2011; Qrunfleh and Tarafdar, 2013). However, the two strategy types commonly employ supply
7 chain practices such as building relationships with suppliers, eliminating waste, facilitating
8 customization and information sharing (Qrunfleh and Tarafdar, 2013). Both strategy types have a
9 common understanding of context as being limited to customers, demand factors and/or
10 suppliers. The external and institutional environment does not play a role.

11 Most SCM literature considers strategy as a goal and plan to be performed by employing
12 appropriate activities and developing certain supply chain practices (Qrunfleh and Tarafdar,
13 2013; Nakano and Akikawa, 2014). The focus is on strategy formulation rather than
14 organisational actions to implement the strategy in practice. In this way supply chain strategies
15 become an outcome of rational supply chain configuration and design (Gammelgaard, 2010).
16 However, the literature's understanding of how the individual supply chain strategy is
17 implemented is limited. This may lead to an unwanted and unforeseen discrepancy between what
18 a company rationally formulates as its supply chain strategy and the practices actually
19 implemented.

20 Recent literature reviews have pointed to intense use of TCE and RBV as the theoretical
21 foundation of logistics and SCM studies (Sachan and Datta, 2005; Defee et al, 2010; Swanson et
22 al, 2017). Being under increasing pressure to cut costs and improve return on investments,
23 companies face the dilemma of whether to keep key functions in-house or outsource them to
24 third-party suppliers. The RBV analysis recommends that companies focus on core competencies
25 and outsource only non-core activities to outside providers. This strategy allows for
26 consolidation of the market position by reducing costs, improving the quality of operational
27 activity (Gottfredson et al., 2005; Gilbert et al., 2006), and avoiding intense competition (Lin et
28 al., 2014). Others claim that a company's ownership of capabilities and resources is no longer
29 important; it is rather *"its ability to control and make the most of critical capabilities"*
30 (Gottfredson et al., 2005) which can be achieved through the SCM practice of managing supplier
31 relationships. Thus, in essence, supply chain integration (Mentzer et al., 2001; Vickery et al.,
32 2003; Jüttner et al., 2010; Lin et al., 2014), can be established by close relationships with other
33 supply chain members, customers and/or suppliers (Vickery et al., 2003). Supply chains are,
34 according to this theory, expected to be as disintegrated as the protection of core competences
35 allows and hence coordinated by supplier relationships (Halldorsson et al, 2007). Others,
36 however, have pointed to disintegration and outsourcing as risking a loss of control over critical
37 functions and the entire supply chain, as well as making companies dependent on suppliers'
38 quality of work (Schniederjans and Zuckweiler, 2004; Lin et al., 2014). This is a transaction cost
39 issue where potential opportunism and incomplete market information will lead to vertical
40 integration of the supply chain. Where these elements do not play an overwhelming role, longer
41 term contracts with trusted suppliers may be preferred.

42 The limitation of TCE and RBV is, however, that little attention is paid to the potential influence
43 of contextual factors such as firm traditions, network ties, regulatory norms, and all other taken-
44 for-granted values (Oliver, 1997). At the same time, strategy formulation and implementation
45 define the nature of interaction between the supply chain and context understood as the external
46 environment in which strategies are developed and implemented. Some research has identified
47 that local contexts and the adoption of new supply strategies, are able to affect supply chain
48 practices (Bello et al., 2004; Yaibuathet et al., 2008; Cai et al., 2010). Changes in context may
49 also make it necessary to change strategy formulation and the set of resources deployed in order
50 to align the existing strategy to new conditions (Borgström and Hertz, 2011). De Wit and Meyer
51

(2004) have suggested viewing strategy implementation simultaneously through three dimensions: process, context and content. They emphasise that these three dimensions are not separate parts of strategy but interrelated and should be examined together (De Wit and Meyer, 2004; Knemeyer and Murphy, 2004). Further, Lawrence and Suddaby (2006) assert that research often disregards that, in certain cases, companies are able to react to contextual pressures through implementing strategies and own behavioural norms on practice.

To investigate supply chain strategy implementation processes, this study goes beyond the theories most often used in the SCM field. This is done by looking at the impact of contextual and institutional factors on supply chain strategy development; applying Scandinavian institutional theory as outlined in the section below.

The theoretical framework: strategy implementation through translation and editing effects

SCM literature applying institutional theory has so far focused on what effects the context has on strategic decision-making (Kinra and Kotzab, 2008; Tate et al., 2010; Doha et al., 2013), as well as on the implementation of new SCM strategies and technologies in existing or new contexts, when companies seek to expand their markets and activities internationally (Bello et al., 2004; Rogers et al., 2007; Williams et al., 2009; Zhang and Dhaliwal, 2009; Liu et al., 2010; Kauppi, 2013; Doha et al., 2013; Lee et al., 2013; Hoejmose et al., 2014). This literature stream, however, does not touch upon the processes of how meanings and actions change when companies face a choice of supply chain strategy. The Scandinavian institutional approach, as applied to this study, in particular discusses processes and change in organisational actions. It stresses the change of strategies and practices from their time and place of origin to their objectification in ever-new localities (Czarniawska and Joerges, 1996). Scandinavian institutionalism further makes it possible to consider a company's strategic actions in response to contextual pressures, as well as revealing the reverse effects of supply chain strategies on the contexts in which they are developed. In this way application of this institutional approach provides unique insight into dynamic supply chain strategy processes.

In the Scandinavian institutional approach, new strategies and practices to be adopted in a new or existing context/external environment with new conditions, take the form of *ideas*. The notion of 'translation' is used to describe the process of implementing a new strategy. Translation implies a process, which "*occurs when an idea that seems promising for alleviating an organisational problem is selected and then objectified and materialized*" (Boxenbaum and Pedersen, 2009, p. 191). We employ this definition to focus on how an idea is turned into a supply chain strategy with real objects and organisational actions. Thus strategy implementation processes in the interplay between a strategy's content and the contextual influence may be revealed.

The process of translation is animated by reproducing and altering existing institutions, as well as guided by a *legitimacy* order of the institutional environment (Sahlin and Wedlin, 2008). Legitimacy means that organisational actions are "*desirable, proper, or appropriate within some socially constructed systems of norms, values, beliefs, and definitions*" (Suchman, 1995, p. 574). It affects not only how organisations act, but also how they understand themselves to be legitimate (ibid). To remain legitimate, organisations use external evaluation criteria. For example, organisations often rely on industrial templates and duplicate supply strategies proven to be successful in practice (Ketchen and Hult, 2007). In this way, legitimacy helps organisations to survive and to achieve success in the opinion of their social culture (Meyer and Rowan, 1977). Therefore, the appropriateness of an idea for a certain context does not lie in its inherent properties or attributes, but in the success of its presentation (Czarniawska and Joerges, 1996).

Czarniawska and Sevón (2005) further argue that the translation of ideas, objects and practices affects not only "*what is translated*", but also "*those who translate*" (p.10). Here, it is worth noting that companies that disregard environmentally legitimate procedures and routines, or

1 create unique structures and practices, can become “*vulnerable to claims that they are negligent,*
2 *irrational, or unnecessary*” (Meyer and Rowan, 1977, p. 156).

3 At the same time, organisations traditionally introduce changes through the application of new
4 ideas to gain strategic advantage. According to Holliger (1980, p. 87 in Czarniawska and Sevón,
5 2005), “*Ideas [...] are instruments that not only can become true by doing their job [...], but can*
6 *also transform the environment to which they are applied*”. In this way, the translation process
7 can cause *editing effects* in the local environment by creating and ascribing new meanings,
8 visions and logics to earlier practices and activities. When new actions are taken to implement
9 new strategies, the contextual circumstances change and the history of earlier experiences
10 becomes reformulated in the light of new visions and present needs (Sahlin and Wedlin, 2008).
11 However, the consequences that arise during and/or after the materialization of a new idea may
12 not only be unplanned, but also undesirable (Czarniawska and Joerges, 1996).
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16 **Method**

17 *Research design*

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19 A qualitative single-case was chosen to explore the implementation of the *idea of transport*
20 *independence* in Russian Arctic shipping. This supply chain strategy was developed by a Russian
21 mining and metallurgic company, whose core activities are extraction and processing of mineral
22 resources, as well as production, marketing, and sales of non-ferrous and precious metals
23 (hereafter, the focal company). This company was a main actor in the elaboration and
24 implementation of the supply chain strategy.

25 The case study research method was applied to capture the contextual settings of the Russian
26 Arctic where the idea of transport independence as a supply chain strategy evolved and was
27 translated into supply chain practice. It helped reveal the potential influence of the context on
28 strategy formulation and editing effects after the strategy was developed. One of the
29 misunderstandings about the single case study is that one cannot generalize and, therefore, the
30 findings obtained from specific contextual factors cannot contribute to theoretical knowledge
31 (Flyvbjerg, 2006). However, a single-case is useful for understanding “*the processes by which*
32 *phenomena take place*” (Maxwell, 1996) from bounded real-world settings (Barratt et al., 2011)
33 and interpreting them “*in terms of the meanings people bring to them*” (Denzin and Lincoln,
34 2005). In addition, this embedded single case study approach enabled the collection of rich data
35 from multiple organisations within a supply chain and one related to Russian Arctic shipping.
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39 *Data collection*

40 We used multiple data sources, including 18 semi-structured and in-depth face-to-face interviews
41 with the representatives of 11 organisations, observations in the port of Murmansk as well as
42 archival materials. The interviewees were selected on the basis of their involvement in the focal
43 company’s supply chain operations as well as accessibility. The interviews focused on tracing
44 events and actions associated with the idea of transport independence in the Russian Arctic, in
45 addition to identifying the role of the focal company, state regulation and other actors in these
46 events and actions. This helped to reveal the conditions under which the focal company had to
47 reconsider its core competencies, what kind of the organisational actions were applied to make
48 the strategic implementation of changes to the existing SCM practice feasible and the meanings
49 ascribed to those actions. The interviews took place in Murmansk, St. Petersburg and Moscow
50 during four periods: May 2014, November 2014, October 2015 and December 2015. All the
51 interviews (done by the first author) were hand-written and recorded with the consent of each
52 interviewee to be transcribed later. Each interviewee received drafts of interview protocols and
53 transcripts via e-mail to ensure validity of descriptions and interpretations. The interviews were
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1 conducted in Russian and then translated into English. When necessary, follow-up interviews
2 with additional questions were conducted via email, telephone or in person.

3 Our findings were supported by personal observations by the first author of how maritime
4 transportation is carried out under severe Arctic conditions. A certain amount of the empirical
5 data was collected during a trip on board the container vessel, ice-class Arc7, owned by the focal
6 company, on its regular voyage from Murmansk to Dudinka between April 28 and May 6, 2016.
7 Personal observations were also made during several full-day visits by the first author to the
8 focal company's port terminal and the interviewees' own offices at the focal company's site.
9 These data sources and several periods of interviewing permitted observation of the process of
10 how the idea of transport independence was implemented into the focal company's SCM practice
11 by the operational activities of different employees such as senior managers, the master and chief
12 mate on board the ships, and fleet operators.

13 In addition, secondary data was collected, mostly from the focal company's annual reports,
14 internal archival materials, press releases and its official website, as well as the legislation on
15 navigating in Russian Arctic waters.
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19 *Data analysis*

20
21 The combination of interview transcripts, secondary materials, and a number of informal
22 discussions, documented by a logbook, with experienced experts and personal observations in
23 Murmansk port ensured data consistency and sound overall understanding of the case. To
24 support our interpretation of data, the interviewees were repeatedly asked questions for cross-
25 checking and in order to grasp the true meaning of their words behind emotions, voice tone,
26 repetitions and different rhetorical forms of the spoken Russian language. Data from many
27 sources appeared as fragments of a whole story that had to be put together in order to understand
28 how this particular supply chain strategy evolved in this particular context.

29 The data analysis was constructed through the translation stages suggested by the Scandinavian
30 institutional approach. It allowed for the disclosure of the editing processes of existing supply
31 chain practices due to the influence of strategy implementation, as well as revealing the interplay
32 between the focal company's actions and state regulatory pressures. When constructing the case
33 story, the meaning of interview contents played an essential role in the interpretation of
34 organisational actions. The case presentation is based on the many qualitative pieces of data
35 including the individual perceptions and experiences of the focal company's managers. Interview
36 citations are used to support the claims made in the coherent description of strategy formulation
37 and implementation. The theoretical analysis of the empirical data is presented as a descriptive
38 composition – a case story– recounted chronologically with a focus on how its episodes were
39 sequenced.
40

41 The case story starts with the description of contextual settings and the external environment in
42 which the idea of transport independence was developed by the focal company. Then the process
43 of implementation of the new strategy into the existing supply chain is presented. This is done by
44 revealing the focal company's organisational actions as strategic responses to the constraints
45 imposed by the state regulation and identifying the repertoire of “*unexpected results*” and
46 “*unintended consequences*” which followed those actions.
47
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49 **Case presentation**

50 *Contextual settings of the Russian Arctic*

51
52 The focal company's manufacturing takes place in an extremely remote northern Russian area
53 close to natural resource deposits and extraction and, from there, processed components and
54 materials are distributed to international markets (Plaizier et al., 2012). The focal company's
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1 customers are steel producers, hydropower utilities, and machine-building plants in Europe, Asia
2 and North America, which use the focal company's metal products as inputs for their industrial
3 processes. There has been only one transport connection through the Arctic waters, namely
4 the sea segment between the ports of Dudinka, Murmansk and Arkhangelsk. The focal
5 company's main operational concern was that its supply chain should ensure regular year-round
6 deliveries of products to customers as well as of cargoes from suppliers to meet its
7 manufacturing needs. It is worth noting that the focal company took social responsibility for the
8 people living in the quite large mono-industry town around the focal company's business
9 activities. Thus, the regular cargo deliveries matter not only to the focal company's
10 manufacturing operations and infrastructure but also to the survival of local people.
11
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13 *Contextual and regulatory challenges as prerequisites for strategy origination*

14 Localisation in the Russian Arctic implies contextual challenges like remoteness, long distances,
15 severe Arctic climate, sparse transportation networks and lack of transport infrastructure. There
16 was an extremely limited choice of suppliers and transport links with other regions, which
17 mostly occurs via sea routes, requiring complicated navigation through ever-changing ice
18 conditions. These challenges made the focal company's cargo deliveries vulnerable to disruption
19 and increased delivery time, isolating the focal company from its customers and global markets
20 as a whole.
21

22 Another type of challenge is related to state regulation and state involvement in cargo shipping in
23 Russian Arctic waters. The focal company's manufacturing activity is a major component of the
24 state and regional economic development due to the large-scale exploitation of natural resources.
25 Its cargo flows make up the bulk of the total cargo shipped on that sea segment. The state as a
26 stakeholder of the focal company's activities used to play two roles – first as the regulator of
27 cargo shipping in the Russian Arctic waters and second as the sole supplier of transportation
28 infrastructure, including ice-strengthened vessels and icebreaker assistance.
29

30 Over several decades up to the beginning of the 2000s, a state owned shipping company based in
31 Murmansk was the only sea carrier providing ice-class vessels and nuclear icebreaker assistance
32 during winter navigation from October to May. The focal company was the largest cargo owner
33 in the region, and its freight traffic between the ports of Dudinka and Murmansk comprised
34 about 45% of the profits of this sole carrier. However, the focal company experienced a strong
35 influence and even domination from this state shipping company due to dependence on its
36 actions and behaviour.
37

38 The economic crisis and decline in production by many industrial enterprises during the 1990s
39 caused a significant decrease in shipping activities within Russian Arctic waters. Freight traffic
40 often became interrupted and irregular. To compensate for the economic losses, the state
41 changed the regulatory policy by constantly increasing tariffs on icebreaker services. At the
42 beginning of the 2000s, cargo deliveries became unprofitable due to this continuous increase in
43 transportation costs. The policy of constantly increasing tariffs led only to an even greater
44 decline in freight traffic and uncertainty of providing icebreaker services in a timely manner. The
45 situation was further complicated by the fact that the state fleet of ice-strengthened vessels and
46 nuclear icebreakers became obsolete due to technical innovation and necessary renovation.
47
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49 *“An idea whose time has come”: formulating the idea of transport independence*

50 The limited choice of suppliers/sea carriers, a shortage of nuclear icebreakers and ice-class
51 vessels requiring renovation, as well as constantly increasing tariffs for icebreaker assistance
52 caused uncertainty about the reliability of cargo delivery. Any disruption of cargo delivery could
53 interrupt the manufacturing process and result in significant economic losses for the focal
54 company.
55
56

1 So the focal company chose to search for alternatives including collaboration with the state but
2 decided to reconstruct its own supply chain. As emphasised by one of the focal company's
3 managers: *"Ensuring regular cargo transportation was one of the most important strategic tasks
4 to survive under the strict state enforcement and coercive pressure at that time"*.

5
6 Among the transportation alternatives which suited the needs of the focal company, the strategic
7 initiative of the firm building its own Arctic fleet looked most attractive. Initial discussions about
8 building an Arctic fleet began as early as 1996 and continued for a few years, sometimes flaring
9 up and then fading away.

10 However, in 2004, the focal company formulated a new supply chain strategy based on this
11 initiative; it was stated in a special document, 'The concept of logistics optimisation'. The
12 strategy aimed at ensuring the company's control over its supply chain activities, primarily by
13 avoiding the state tariff regulation on icebreaker assistance and the domination of the state sea
14 carrier in Russian Arctic waters. It implied partial release from the state regulatory order on
15 cargo deliveries and thereby entrenched itself as the *idea of transport independence* among all
16 players involved. A top manager of the focal company phrased it this way: *"It was an idea
17 whose time came in a certain period when new technologies made it possible to build ships of
18 'dual action' capable of breaking 1.5m-thick ice shields and thus creating an ice free sea area
19 around them"*.

22 *Translating the idea into actions and objects*

23
24 Next, the idea of transport independence was objectified through the following steps:

- 25
26 - Establishing the company's own logistics provider in the Port of Murmansk:

27 The strategy implementation started with establishing a new subsidiary in Murmansk as the focal
28 company's own logistics provider to coordinate and streamline all its transport needs. Cargo
29 revenues of the subsidiary averaged 2.5 million tons per year.

- 30
31 - Commissioning the company's own Arctic fleet:

32 Between 2006 and 2008, the focal company launched five ice-class (Arc-7) container vessels
33 with a freight-carrying capacity of 16,000 tons. A senior manager of the focal company pointed
34 to this action as the most important step towards transport independence: *"Having our own fleet
35 ensured cargo transportation without icebreaker assistance all year round. Its availability
36 solved one of our most urgent strategic objectives: to ensure transport independence from the
37 constant use of icebreaker assistance and government policies in Arctic shipping, in order not to
38 pay the obligatory icebreaker fees when sailing along the Northern Sea Route"*.

39 The building and subsequent commissioning of its own fleet demanded heavy investment in
40 what were considered non-core assets. However, the significant investment was soon repaid.
41 Icebreaker fees were so high that the commissioning of its own fleet made up for the focal
42 company's costs related to icebreaker assistance and freight by third-party vessels.

43 Gaining control through ownership of the fleet enabled the focal company to improve the
44 efficiency of its supply chain considerably. In 2009 and 2010, the focal company undertook
45 several voyages directly from Dudinka to the European ports of Rotterdam and Hamburg without
46 any trans-shipment in Murmansk. The delivery time was shortened by an average of ten days and
47 now required 10-12 days under favourable weather conditions. In 2010 and 2011, finished metal
48 products were even carried along the eastern part of the Northern Sea Route (the most difficult
49 sea segment of the Russian Arctic for navigation) without icebreaker assistance and third-party
50 suppliers to the port of Shanghai. The transit time was shortened from 84 to 57 days in
51 comparison with shipping via the Suez Canal by third party carriers. The impact on the supply
52 chain was substantial. As noted by a senior manager of the focal company: *"These new solutions
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1 *for Arctic navigation to sail without icebreaker assistance along the whole length of the*
2 *Northern Sea Route shortened delivery time and cut transportation costs”.*
3

4
5 - Constructing the company’s own trans-shipment terminal in Port of Murmansk:

6 The construction of own trans-shipment terminal in Murmansk port was finished by 2014. The
7 terminal can process all kinds of own cargoes: nickel matte from Norilsk to the Murmansk
8 region; metal finished products from the port of Dudinka and Murmansk region for export to
9 European ports; and commercial cargoes from Europe to be supplied to myriad manufacturing
10 locations. Up to 700,000 tons of cargo is trans-shipped through Murmansk port annually.

11 Before, there was only one provider of stevedore services – the state organisation “Murmansk
12 Sea Trading Port”. This provider increased tariffs for its services by almost 50% during the three
13 years between 2010 and 2013. In addition, only one berth was available for handling the cargoes
14 of different clients, including the focal company. The risk of cargo delays was considerable. The
15 construction of its own trans-shipment terminal released the focal company from heavy
16 dependence on the state organization’s actions and behaviour. The focal company’s own trans-
17 shipment terminal was an important step further on the road to transport independence. A senior
18 manager framed the new situation in this way: *“Now all our cargoes transported through*
19 *Murmansk port are processed at our own terminal. It has made it possible to turn our logistics*
20 *subsidiary into a full-rate stevedoring company by now. This has reduced our costs and*
21 *improved the company’s stability”.*
22
23

24 - New supply chain practices:

25 The new strategy of transport independence encouraged the focal company to implement new
26 supply chain practices, which had hardly ever been used before in Arctic navigation. These new
27 practices – such as containerisation, the “open water” principle, and the cargo circulation
28 principle to avoid empty vessel voyages – constituted specific operations, focused on ensuring
29 maritime safety and improving the performance of cargo transportation.
30

31 Containerisation assured the safety and security of products at all the stages of transportation as
32 well as reducing product delivery periods by decreasing the time of cargo trans-shipment and
33 handling operations at ports. But even before the construction of the company’s own trans-
34 shipment terminal, containerisation reduced transportation costs on average by 15% through
35 eliminating the costs of bulk cargo handling at ports. The “open water” principle meant that, by
36 monitoring ice conditions, the master chose the best route to navigate the vessel through open-
37 water channels or light ice, using a sophisticated online information system. It allowed adherence
38 to the tight schedule of vessel traffic, avoiding any disruption and reducing delivery time and
39 fuel consumption. When sailing in Arctic waters, shipping companies often encounter a cost
40 issue: vessels might have to travel empty in one direction due to insufficient cargo accumulation
41 in the northern regions. In order to avoid empty vessel voyages from the port of Murmansk to
42 Dudinka, the focal company introduced the principle of cargo circulation by taking onboard
43 commercial cargoes. Avoiding empty vessel voyages secured additional income.
44
45

46 - Consequences of strategy implementation:

47 Implementation of the new strategy allowed the focal company to improve its cargo
48 transportation efficiency and ensure the efficiency and reliability of its supply chain between the
49 ports of Dudinka, Murmansk and Arkhangelsk. It transpired that the strategy of transport
50 independence altered the way of making logistics decisions on the planning and management of
51 cargo flows. Its implementation mitigated the drawbacks of the company’s remote location in the
52 Russian Arctic and decreased the probability of supply chain disruption, a significant risk due to
53 the sparse transportation network and a highly limited choice of suppliers and carriers.
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1
2 *Editing the SCM practices, context, and strategy content*

3 - SCM practices:

4 The focal company's fleet with the application of new technologies made it possible to sail
5 without icebreaker assistance between the ports of Dudinka, Murmansk and Arkhangelsk.
6 Thereby it changed the historically established of cargo transportation in the Arctic waters. New
7 supply chain strategic practices affected multiple aspects of existing SCM principles and marked
8 a new development of Russian Arctic shipping in general.
9

10 - Context:

11 The focal company's new SCM practices caused discontent among its former suppliers – the
12 state sea carrier and the state provider of icebreaker services – because they lost their major
13 customer. As this customer was the largest cargo owner in the Russian Arctic, their profits
14 suffered considerably. The discontent manifested itself through claims, complaints and even
15 legal proceedings due to conflicting economic interests between the focal company and other
16 main actors, represented mainly by the state.

17 As noted by one of the interviewees: *“These [focal company's] ice-class vessels became a new
18 phenomenon in Arctic maritime transportation. The previous regulatory framework did not
19 determine procedures for them as they are incompatible with the new technologies adopted by
20 the [focal company]”*. Consequently, the government had to make significant changes in the
21 Russian legislation on sailing in Arctic waters and tariff regulation of icebreaker assistance in
22 2012-2013. The obligatory use of icebreaker assistance was abolished: ship-owners could now
23 decide for themselves whether they needed icebreaker services or not. The legislation became
24 more flexible and less coercive for actors in the Russian Arctic waters.

25 In addition, the focal company's ice-class vessels were recognised as legally capable of
26 providing icebreaker services. These regulatory updates stopped any claims and legal
27 proceedings against the focal company's maritime activity. Thus, strategy implementation
28 allowed the focal company to control its supply chain activities, but also, to some extent,
29 released other actors from dependence on state constraints concerning Arctic navigation,
30 especially from the tariff policy for icebreaker assistance. Due to its new SCM practices,
31 capabilities and resources, the focal company became the largest sea carrier on the sea segment
32 between the ports of Dudinka, Murmansk and Arkhangelsk.
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36 - Strategy content:

37 The strategy of transport independence initially intended to promote the focal company as an
38 independent player in Arctic sea cargo transportation. However, after the strategy was
39 implemented in practice, the focal company continued to maintain its relationships with other
40 actors. For instance, it chartered two icebreakers for the winter period for creating and
41 maintaining the channel in the ice at the mouth of the Yenisei River, despite the fact that the
42 focal company's vessels were able to navigate it by their own efforts. Those third-party services
43 allowed the focal company to ensure transportation efficiency by increasing commercial delivery
44 speed, reducing delivery time and saving fuel. The natural Arctic conditions encouraged the
45 focal company to introduce supply chain collaboration as an additional strategic tool to increase
46 effectiveness in delivery time and maintain, for most of the time, the vessels' circulation between
47 the ports in spite of the icy conditions. This editing effect revealed a discrepancy between what
48 the focal company formulated as an initial strategy and the SCM practices that actually
49 developed as an outcome of strategy implementation due to the contextual conditions. An
50 interviewee commented on the focal company's behaviour: *“The idea of transport independence
51 already occurred in the Arctic waters, when an oil company (in 1999-2002) and a ship-owner (in
52 2010) purchased ice-class tankers for sailing the Arctic waters without icebreaker support but
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1 *both failed in this strategy implementation. Harsh Arctic climatic conditions made the [focal*
2 *company] collaborate with other players”.*

3
4 Interestingly, the state-owned provider of nuclear-powered icebreaker assistance announced that,
5 due to the increased demand for its services, it did not intend to renew contracts in the future
6 with those who once refused its services. This resentful reaction to competition indicates a
7 redistribution of dominance among the major actors in Arctic maritime transportation, including
8 the state. Also, the focal company faced a number of negative reactions from other major actors.
9 Its actions were even considered illegitimate, although the previous legislation did not prohibit
10 sailing without icebreaker assistance as without new technologies in shipbuilding it was not
11 possible. However, because of severe Arctic conditions challenging navigation, the pursuit of
12 economic interests motivated the focal company to interact with other actors in the Arctic supply
13 chains. The strategic idea of transport independence itself underwent a change from the intention
14 of full vertical control to volunteered collaboration with other actors due, not least, to the harsh
15 weather conditions. The strategy of transport independence underwent a change of content from
16 the strategic initiative to actual implementation in practice.
17

18 19 *Summary*

20
21 The development and translation of the *idea of transport independence* as a supply chain strategy
22 in the Russian Arctic roughly encompassed three periods, each propelled by specific processes
23 and their consequences (See Table #1 below).
24

25
26 Table #1. The translation of the idea of transport independence as a supply chain strategy

27 #####About here####
28

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30
31 The translation process illustrates a movement from the situation of uncertainty and risk of
32 supply chain disruption towards ensuring regular cargo deliveries by vertical control of resources
33 through supply chain integration and collaboration.
34

35 **Discussion**

36
37 The *idea of transport independence* emerged in the Russian Arctic as a consequence of several
38 contextual challenges that became critical for economic activities in the area. Through its
39 translation into actions and objects the idea manifested itself as a strategic response by the focal
40 company to state pressures and constraints causing both organisational and institutional change.
41 At the same time, the focal company's new SCM practice of sailing without icebreaker
42 assistance violated the historically established principles of cargo transportation in the Arctic
43 waters. The 'idea' initially shook the major actors and officials because they did not expect it to
44 be effective or powerful enough to produce a number of editing and unintended effects on the
45 external environment, including legislation, supply chain relationships and Russian Arctic SCM
46 in general. Therefore, the findings support the supposition that institutional factors may play a
47 role in how supply chain strategies evolve and that such strategies are not (only) objective,
48 rational processes of goal setting and activity planning. In order to understand how supply chain
49 strategies emerge and evolve, a process perspective is necessary.
50

51 We have suggested the Scandinavian institutional approach by focusing on an idea as a supply
52 chain strategy that seems to be illusive but, nevertheless, under the certain circumstances, can
53 change existing SCM practices through actions and objects. Through the process towards
54 implementation, the strategy met resistance from other actors in the Russian Arctic who
55 problematised the legitimacy of the new supply chain strategy which did not imply icebreaker
56

1 assistance. The idea of transport independence from state regulations and state-owned actors of
2 maritime transport changed over time. The harsh weather conditions in the Arctic, as well as the
3 limited population, changed the original strategy of securing the company's own control to one
4 of control supplemented by collaboration with other actors in Russian Arctic supply chains. The
5 illusive 'idea' vanished as the focal company's Arctic fleet sailing without icebreaker assistance
6 became accepted as 'legitimate' due to new legislation. In this way, the focal company's supply
7 chain strategy and practices became re-embedded in the Russian Arctic institutional
8 environment. Although the theoretical and practical focus of supply chain strategy is efficiency
9 and responsiveness, this study shows there are more sides to it. A lean or agile supply chain
10 strategy is not just a concept which can be plucked from the "theoretical shelf" and employed
11 anywhere and at any time. Contextual circumstances – for example geography, climate, culture
12 and regulations – should be taken into consideration when goal setting and planning and the
13 whole strategy should be prepared for changes.

14 After evoking a number of changes and modifying itself into integrated supply chains, the 'idea'
15 ceased its journey in the Russian Arctic. It did not become institutionalised in its new
16 environment as a strategy widely practiced and taken-for-granted among other players, mainly
17 due to the severity of the Arctic natural conditions and big investments. The study showed that
18 the idea of transport independence was destined to appear at a certain time and place to play a
19 'revolutionary' role in the strategic response to contextual pressures, and then to disappear or
20 hibernate in order to manifest itself anew at another time and place when it is needed again. This
21 was also how the inspiration to the idea of transport independence first came into the Russian
22 Arctic from other countries.

23 It is often found among major extractive companies who experience government restraints in the
24 guise of regulatory norms and tax pressures and so decide to invest in the development of
25 transport infrastructure for their own needs and cargo deliveries to markets. It mostly happens
26 due to governmental fears that major companies become able to block access to other actors
27 (Gromakova, 2007; IBM report, 2009; Volkov et al., 2014; Ismar, 2014; Willis, 2014).
28 According to theoretical assumptions by Czarniawska and Joerges (1996), an "idea" (or a
29 strategy) travels in time and space, being imitated from originators that have successfully
30 implemented the "idea" in their specific contexts. In our case, however, the idea of transport
31 independence was already introduced by some other actors in the Russian Arctic, but was not
32 successfully implemented. Nevertheless, this "idea" re-emerged and received renewed promotion
33 in the Russian Arctic, being imitated by the focal company as a new adaptor. This finding is
34 inconsistent with Ketchen and Hult's (2007) observations that organisations choose strategies
35 and behavioral templates already successfully implemented by others. By contrast, this case
36 presents the capacity of an organisation to resist the influence of the external environment and
37 was caused by the pursuit of the organisation's need to survive. The same effect of resistance
38 strategies has been asserted before by several institutionalists who claim that resistance makes
39 organisations more efficient – due to increasing their ability to mobilise resources – than when
40 they yield to institutional pressures (Meyer and Rowan, 1977; DiMaggio and Powell, 1983;
41 Oliver, 1991). The findings of this study support this claim by illustrating this effect in SCM
42 practices.

43 Organisations often confront multiple conflicting pressures of the external environment (Scott,
44 2014), especially when the state acts as a "*jungle of conflicting requirements at the local level*"
45 (Scott, 1983, p. 105). In this case, the idea of transport independence not only played the role of
46 a resistance strategy to institutional pressures and expectations of the old legislation. It also
47 became a purposive action on the part of the focal company by affecting the contextual rules,
48 rather than inducing strategic non-compliance or passive conformity. The context change
49 referred to introducing new legislation and regulatory norms for navigating in the Russian Arctic
50 waters, as well as affecting the behaviour of other actors.

1
2 Illustrating strategy implementation as a process, we have also revealed change in the strategy
3 content. Initially intended to lead to integrated SCM of the focal company, the idea of transport
4 independence transformed itself into a new substance that grew into strategic collaboration with
5 suppliers despite the focal company's new ability to fulfill its cargo transportation on its own.
6 The Arctic natural conditions encouraged the focal company to introduce collaborative SCM
7 practices as an additional strategic tool to be more effective in delivery time and keep a high
8 degree of the vessel circulation between the ports despite the ice conditions. Vijayasarathy
9 (2010) argues that mutual dependence between supply chain participants has a significant and
10 positive influence on the integration and development of long-term relationships with partners.
11 This case, however, reveals that there was a change of behavior so that supply chain
12 collaboration in the Russian Arctic is possible even when there is a low degree of external
13 dependency on suppliers. Therefore, our study has demonstrated that, despite a loosening of
14 mutual dependence between major actors in cargo transportation in the Russian Arctic,
15 collaboration and operational integration is possible and even generally accepted among other
16 supply chain members.

17
18 The case studied here can, to a great extent, be understood through the lenses of transaction cost
19 economics – where transaction costs are so high that it is efficient for a company to *make* its own
20 supply chains rather than *buy* supply chain services on the market. Also, application of the
21 resource-based view could, to some extent, be used to understand that maritime transportation is
22 a core competence for a large company as in the case of the focal company studied here.
23 However, this case challenges the concept of core competence as the investment in transport
24 infrastructure and a fleet of ships was rather a question of gaining control and securing the
25 reliability of supply chains. Again, none of these theories take a process perspective in
26 understanding the impact of contextual factors in supply chain strategy. Our case emphasises the
27 interconnectedness of the context, process and content for a better understanding of strategy
28 implementation that is coherent with assumptions by Knemeyer and Murphy (2004), and De
29 Witt and Meyer (2004). Thus, knowledge of how a supply chain strategy emerges under
30 institutional constraints, is translated into existing SCM practices, and then causes the editing
31 effects on the context, practice and even its content after the implementation, contributes to a
32 new understanding of supply chain strategy.
33
34

35 **Conclusion and implications for theory and practice**

36
37 Through the lenses of the Scandinavian institutional approach, the study presents the journey of a
38 supply chain strategy, conceptualised as the *idea of transport independence* in the Russian
39 Arctic. Strategy implementation is viewed through how the strategy emerges under certain
40 circumstances, evolves through translating strategic initiatives into actions and objects, as well as
41 produces the editing effects on the supply chain practices, context, and its content after this
42 strategy is translated. Through the analysis of the translation process of the idea into practice, we
43 have found that not only does the environment and institutional context influence supply chain
44 strategy but this strategy may, in turn, impact the context, both in terms of government
45 regulations and reactions of other actors in the supply chains.
46

47 Responding to calls for conducting more case study-based research within the SCM field
48 (Näslund, 2002; Seuring, 2005; Stock et al., 2010), our findings provide in-depth understanding
49 of strategy implementation in particular empirical settings. The single case study illustrates the
50 supply chain strategy processes where various contextual factors converge, thereby making
51 resistance to state coercive pressures and constraints a viable option. This could happen more
52 often than normally anticipated by the literature. Further, the interactions between context and
53 strategy content, as well as the editing effects, uncover "*unexpected results*" and "*unintended*
54 *consequences*" of the deployment of particular strategies.
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56

Reflection on the contextual challenges and circumstances before deploying a supply chain strategy may be crucial in choosing a set of subsequent strategic actions. This is because there are institutional forces which, though not always visible, may nonetheless exert considerable influence on strategy implementation. By considering the interaction of context, strategy content and the potential impacts of strategy implementation, managers will gain a better understanding of how to manage the strategy implementation. This is particularly relevant when extending business to countries or regions where local regulations present contextual challenges.

Finally, as companies are also, in many cases, already committed to ensuring their own transport infrastructure in different parts of the world (IBM report, 2009; Volkov et al., 2014), the findings may be valuable for managers responsible for developing supply chain strategies in other localities.

Limitations and further research

The findings provide deep insights into the real-life situation of the translation of an idea into supply chain practices. However, the Russian Arctic is obviously a highly specific context, not least due because of its harsh natural conditions. Further research should include case studies on the implementation and adaptation of supply chain strategies in other contexts to learn more about the processes that we found not to be solely a result of rational goal-setting and planning. Even though our choice of a single case approach points to the importance of case uniqueness, we still suggest that more investigations should be made into strategy implementation in both emerging and developed economies.

Further, we suggest that to understand supply chain strategy implementation even better, it should be viewed and studied not as something that a company has (Jarzabkowski, 2004), but rather as “an activity undertaken by people” (Carter et. al., 2008, p. 101) who deal with everyday challenges and construct strategic actions at specific localities. Therefore, further research may extend knowledge about the implementation of supply chain strategies from the perspective of the people involved, by developing links between practices and companies’ strategic initiatives. This “strategy-as-practice” perspective will shed light on what/how strategic actors actually do and what kinds of activities and routines they carry out when strategizing (Jarzabkowski, 2004). Studying practices even closer to reality on the ground may deliver more accurate descriptions and deeper understandings of supply chain strategy implementation (Carter et al., 2008).

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Period:	#1: 2000-2004 'An idea whose time has come': formulating the idea of transport independence	#2: 2004-2012 Translating the idea of transport independence into actions and objects	#3: 2013-onwards Editing the SCM practices, context, and strategy content
Supply chain position of the focal company:	Largest cargo owner in Russian Arctic	Owner of cargo, vessels and logistics infrastructure; maritime carrier	Owner of cargo, vessels and logistics infrastructure; dominant maritime carrier
Process:	<p><i>Emergence. Contextual challenges made the 'idea' appealing:</i></p> <ul style="list-style-type: none"> - Remoteness, the only transport link; - Domination of the state sea carrier; - Lack of icebreakers, obsolescence of ice-strengthened vessels; - Regulatory constraints: constantly increasing tariffs; unstable, coercive state policy 	<p><i>New actions and objects:</i></p> <ul style="list-style-type: none"> - Establishing own logistics provider; - Commissioning own Arctic fleet with new technologies to overcome ice; - Constructing own trans-shipment terminal in Murmansk port; - New supply chain practices (containerisation, the 'open water' principle, cargo circulation principle) 	<p><i>New meanings and logics:</i></p> <p>SCM practices:</p> <ul style="list-style-type: none"> - Navigation without obligatory ice-breaker assistance (depending on vessel type); - Supply chain efficiency through new supply chain practices <p>Context:</p> <ul style="list-style-type: none"> - Conflicts lead to new legislation; - Substantial release ('independence') from regulatory constraints
Consequences:	<ul style="list-style-type: none"> - Uncertainty over regular deliveries, high risks of disruption; - Decision to build own Arctic fleet and develop own transport infrastructure; - Strategy content: 'The concept of logistics optimisation' to ensure regular deliveries, more own control and less state constraints 	<ul style="list-style-type: none"> - Improving cargo transportation efficiency; - Ensuring reliability of the supply chain; - Decreasing risks of disruption; - Mitigating drawbacks of the remote location 	<p>Strategy content:</p> <ul style="list-style-type: none"> - From intention of full vertical control of supply chain to strategic collaboration with other supply chain actors