

The Role of International Development Strategies in the Making of the Regional Development Policy: Hokkaido as a Case Study

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Abstract

During the past decades, both national governments and international institutions have searched for ways to equalise disparities and revitalise lagging regions. While the ideas and examples concerning the most effective ways of achieving these goals have originated from various places, they have also been inclined to spread. Therefore, the processes involved in policy transfers are highly relevant from the perspective of regional development. This study approaches these processes through the case study of post-war Hokkaido and pays special attention to the role of three international development strategies: the Tennessee Valley Authority model, the growth pole theory and the industrial cluster theory. As a result, this research shows the wide variety of actors involved in policy transfer, analyses the processes of incorporating exogenous ideas into regional development policies, and demonstrates the variety of origins from which different actors can draw lessons.

Keywords

Policy transfer, regional development, development strategy, Hokkaido

1 Introduction

As some regions benefit more or cope better with changes in the global redistribution of work and production than others, both national governments and international institutions have continued to search for ways to equalise disparities or revitalise lagging regions in other parts of the world. The aims of these policy measures have usually been the creation and redistribution of economic growth and the elimination of chronic regional disparities that prevent the attainment of national policy objectives (Armstrong & Taylor, 2000; Pike et al., 2007). While ideas concerning the most effective means of achieving these goals have originated from various places, they have also been inclined to spread. Therefore, the processes involved in policy transfer—i.e. processes in which knowledge about policies, administrative arrangements, institutions, and ideas in one political setting are used in the development of policies, administrative arrangements, institutions, and ideas in another political setting—are also highly significant in the context of regional development policy (Dolowitz & Marsh, 2000; Benson & Jordan, 2011).

Research concerning policy transfers has increased greatly since the late 1990s, and it has been shown that occurrences of policy transfer have increased during the past decades—due to technological advances and occasional pressure originating from various international organisations, for example (Dolowitz and Marsh, 2000). However, this is neither a new nor geographically restricted phenomenon. In fact, the motivation to study Hokkaido is drawn from an observation that the majority of policy transfer studies concentrate on the empirical context of Europe and the United States. Huck-ju Kwon (2009) has argued that policy learning and transfer can be considered as a missing component in the study of East Asian developmental states.

Hokkaido can be described as a peripheral region whether its position within Japan or its location in the northeastern part of Asia is used as a yardstick. However, international models and actors have played an important role in the 150 year process during which the island, formerly known as Ezochi, has been incorporated into and developed as a part of modern Japan. This process can be and has been described with vocabulary ranging from colonisation and subordination to civilisation, modernisation, and revitalisation depending on whose standpoint

is emphasised (Mason, 2012; Sasaki, 2015). Nevertheless, the many years that Hokkaido has been the subject of continuous state-led development activities and the scope of these activities make it an interesting case for studies concentrating on regional development policies.

In this paper, the regional development policies implemented in Hokkaido during the post-war period are approached with a two-fold objective. First, the article contributes to the study of policy transfer phenomenon through a case that focuses on human agency and on a geographical entity that is relatively poorly known especially for those who cannot read Japanese. Second, the study adds to research explaining the content of and processes through which the post-war regional development policies in Hokkaido came into being by elaborating the role of international development strategies. The Tennessee Valley Authority (TVA) model, the growth pole theory and industrial cluster theories are identified as meaningful examples through which different aspects of policy transfer can be elaborated. The analysis of the role of these strategies in three policy-making processes form the main body of this article, preceded by a brief introduction of the conceptual foundations and followed by conclusive remarks. While being based on the analysis of publicly available written documents, this study utilises other methods to gather data as well. Besides conducting interviews and studying archival sources, the author participated in some of the cluster-related events in the mid-2000s as an observer.

In order to increase the understanding of the policy choices made in relation to the development of Hokkaido, references are made to the local adaptations of the same strategies in northern parts of the Nordic countries. These regions are all peripheral parts of relatively wealthy and politically stable democratic countries which have simultaneously followed market-oriented capitalism and accepted state interventions. Distinctive differences between these northern regions and the central or capital regions of individual states are common to all of them.

2 Policy Transfer: Who, why, From where

While recognising the existence of a wide array of inter-connected or overlapping concepts, such as lesson-drawing, policy convergence and policy diffusion, this study is anchored to policy transfer and borrows from the attempts by David P. Dolowitz and David Marsh (2000) to place this process in a conceptual framework. Their model is organised around questions, three of which are a special focus in this study. These are questions concerning the identification of key actors involved in the policy transfer, their reasons for engaging in policy transfer, and the origin from which they are drawing lessons. The conscious decision to emphasise actors and agency—understood as the capacity to act and an experience of acting, the ability to bring about effects and exert or exercising power—is based on assumptions concerning the nature of decision-making processes. Despite the existence of structural factors, such as organisational culture or standard patterns of behaviour, it is expected that the inability to achieve the stipulations of the classical rational decision model, strategic thinking, bargaining and compromises and beliefs and values, all of which are typical for humans making decisions, play an even a more remarkable role in the decision-making processes (for an overview, see Lindblom, 1968 and Allison & Zelikow, 1999).

The changing context of the Hokkaido development makes the question concerning the nature of the transfer highly relevant—i.e. whether it is voluntary (motivated, for example, by dissatisfaction with the status quo and/or by the presumption of the existence of a model that is even better than the currently applied model) or coercive (introduction of new policies based,

for example, on the demands or pressure from external actors, international competition, or public opinion). One should remember that while Japan has for decades been recognised as a fully-sovereign state with membership in all important international governing organisations, it was a defeated country that was under foreign occupation between 1945 and 1952. Secondly, it is important to pay attention to the shifts in dependence on and relations between Hokkaido development policies and national policies. After all, policy-makers do not only search for lessons from foreign countries, but policy transfers also happen at sub-national levels.

During the early phase of the theory development, previous policy successes and failures within the domestic context and foreign political systems were recognised as sources where policy-makers sought innovation for new policies. However, as studies accumulated, alternative learning venues were identified. Thus, the role of NGOs, think tanks, and intergovernmental bodies was acknowledged alongside peer-to-peer transfer between national governments (Benson and Jordan, 2011). This study shows that while these conclusions have often been based on research concentrating on recent developments, the role of alternative learning venues can also be seen in historically-oriented cases. Although already introduced in literature concerning policy transfers, it is worthwhile pointing out two important elaborations. While the process of policy transfer is emphasised, it is not described as the sole explanation for any policy development. Furthermore, the search and application of ideas and practices across different types of boundaries is not necessarily deliberate, conscious or goal-oriented. It can rather be unsystematic, unstructured, or based on random contact with information (Dolowitz & Marsh, 2000; Dolowitz & Medearis, 2009).

3 TVA: Public Debate on the Ideal Model of Regional Development

The TVA was part of the New Deal program. Its original purpose in 1933 was to address the Tennessee Valley's most important issues in energy, environmental stewardship, and economic development. The TVA was supposed to be a new kind of corporation equipped with governmental powers and balancing between the interests of industry, agriculture, transportation, resource development conservationist, and social planners. Ideally, the TVA was also there to promote grass-roots participation in the planning and execution of development projects. The TVA was known in pre-war Japan and the wartime comprehensive perspectives on resource planning prepared the soil for the popularity of the model during the immediate post-war period (Dinmore, 2013; TVA).

The TVA was often mentioned in discussions concerning the development of Hokkaido in the late 1940s and early 1950s. However, the existing research contains conflicting interpretations concerning the role, importance, and objectives of different actors. According to the study by Eric Dinmore (2013), the TVA served as a policy model for post-war intellectuals and policymakers seeking to manage and harness Japan's hydrosphere as a strategic resource for socioeconomic development. The TVA also served as a key inspiration for the 1950 Law on Comprehensive National Land Development that laid the foundations for the post-war comprehensive development, emphasising large-scale hydrologic projects and other public works.

In Dinmore's analysis, progressive Japanese economic thinkers, such as Tsuru Shigeto, who held positions or had contacts with the Economic Stabilization Board (ESB) and certain occupation authorities, such as Edward A. Ackerman, are recognised as actors promoting the TVA in Japan. Tsuru led the TVA Studies Discussion Group that kept contact with the TVA's

headquarters in Knoxville and published a monthly bulletin on TVA studies in Japanese. Some of the Japanese experts could even visit the TVA sites in the early 1950s with funding from the United States. These Tokyo-centered resource commentators provided post-war Japanese with an authoritative language not only about dams, but also on development. Furthermore, Dinmore emphasises the important role of the New Deal thought in post-war Japanese state-centered developmentalism. What his article does not mention, however, is Hokkaido; it introduces neither the Hokkaido Development Law enacted in 1950, nor the Hokkaido Development Agency (HDA) established in 1950 and the Hokkaido Development Bureau (HDB) founded in 1951.

The birth of a Hokkaido development system that differed from the rest of Japan is at the very nucleus of a study by Koiso Shūji (2003). According to Koiso's analysis, the New Dealers—who occupied central positions within the Government Section (GS), which holds significant authority inside the General Headquarters Supreme Commander for Allied Powers (GHQ/SCAP)—did not promote but, against all the expectations, opposed the comprehensive development philosophy of the TVA when the negotiations concerning the post-war Hokkaido development structure took place. The Hokkaido-based actors were enthusiastically referring to the TVA as a model that could be utilised when reconstructing the Hokkaido development system. Nevertheless, they faced opposition from the side of the occupation authorities and central government.

There are two points worth noting when explaining these contradictory arguments. It is necessary to realise that these studies refer to different discussions. Dinmore analyses a process where the TVA was debated as a model for the building of hydroelectric infrastructure and the utilisation of Japan's water resources. Koiso's focus is on a process of establishing an institution that could lead different types of publicly-funded development projects in Hokkaido. The recognition of separate discussions helps to understand different actors' attitudes toward the idea of using the TVA as a model. While the New Dealers inside the GHQ/SCAP could welcome the TVA as a model for the utilisation of water resources, they could simultaneously reject the TVA as a model for Hokkaido development. The GHQ/SCAP persistently opposed the idea that Hokkaido's peculiar characteristics would necessitate the establishment of a special development organisation, the authority of which would not be limited to a branch of administration, but to the borders of one territorial entity within the country. Eventually, the occupation authorities' permission for the formation of the HDA and the HDB at the end of the occupation reflected the GHQ/SCAP's readiness to allow the Japanese Government to review existing laws and ordinances as far as they did not violate occupiers' ordinances (Banno, 2003; Saunavaara, 2014).

The progressive or left-wing side of the political spectrum is well represented when the promoters of the TVA in Japan are listed. For example, besides the ESB, which gained its power under the premiership of socialist Katayama Tetsu, the socialist governor of Hokkaido, Tanaka Toshifumi, also eagerly talked about the TVA. The politically inexperienced Tanaka was elected in 1947 when the electorate, for the first time, could vote in gubernatorial elections. Tanaka familiarised himself with the ideas of TVA in the autumn of 1949, and the philosophy of comprehensive development—where the eventual objective was not in resource development, but in the improvement of people's everyday life in Hokkaido—became an inseparable part of his political argumentation (Okuda, 1956; Takahashi, 1982, Banno, 2003). Based on his optimism concerning the TVA, a parallel can be drawn between Tanaka and those experts in Tokyo who were either unconcerned with or unaware of some of the actual features of the TVA such as electric power generation toward the interests of industrial giants or

problems with the inclusion of local authorities in decision-making (Dinmore, 2013). The links between Tanaka administration and the ESB seem to have been established through the director of the Hokkaido Forest Office whose friends in the ESB assisted the Tanaka administration when it negotiated with the central government on the establishment of the electric power development programme in Hokkaido (Takahashi, 1982). But was it inevitable, that the TVA model was promoted by the Hokkaido-based left-wing?

If one looks at Finland, which was in many ways lagging Norway and Sweden in the early 1950s, one can also find demands for a publicly funded national comprehensive program for the benefit of the northern part of the country. The main features of the program consisted of the building of hydroelectric power, industrialisation, and utilisation of local natural and mineral resources. Industrialisation was considered to be a process that could proceed simultaneously with the development of local agriculture. The most prominent figure promoting these ideas was Urho Kekkonen, then a prime minister representing the Agrarian League (The Centre Party [of Finland]) since 1965) and later a long-serving president of Finland. While the TVA as a model did not receive similar public recognition in Finland as it did in Japan, American examples of developing hydroelectric power were mentioned during political debates. The persons involved in the development of northern Finland also visited TVA sites in the late 1940s. Ideas resembling the TVA were promoted by the Agrarian Party in cooperation with the Social Democrats (Salo & Lackman, 1998; Sippola, 2010; Mäntylä, 2016). Therefore, it is worth paying attention to the agrarian party movement that was strong in Hokkaido during the first post-war decade.

The various farmers' parties that emphasised cooperative principles in their political agenda and relied heavily on the support of agricultural interest groups did not rise as major power holders in national politics. However, they polled exceptionally well in Hokkaido. Eventually, after almost a decade of continuous organisational flux, the Hokkaido-based agricultural parties deceased and most of their traditional supporters began to vote for Socialist Party candidates. Despite the early signs of cooperation between the socialists and the farmers' parties, they were also competing against each other. The most visible contest took place in 1951 when Governor Tanaka ran successfully for re-election against Kurosawa Torizō, who was one of the father figures of the cooperative party movement and dairy industry in Hokkaido (Saunavaara, 2015). Kurosawa referred to the TVA during his campaign as one of the inspiring foreign models for regional development and Prime Minister Yoshida Shigeru envisioned a plan for Hokkaido that would not lose even to the TVA when he spoke on behalf of Kurosawa, the candidate who was also supported by the conservative parties (Okuda, 1956; Hiraku, 2011). However, other signs of interest in the TVA on behalf of the farmers' parties have not been found.

The results of the TVA boom in the late 1940s and early 1950s can be approached from various angles. The name of the model, which was described even in children's books and school textbooks, was well recognised. David E. Lilienthal, one of the leaders appointed to the three-person board overseeing the TVA, became a minor celebrity, and the Japanese translation of his book *TVA: Democracy on the March* sold well. Borrowing Dinmore's words, the TVA became a buzzword in Japanese discourse for socioeconomic progress through state-guided, comprehensive hydrologic management. Furthermore, the TVA functioned as a model for public corporation like the Nippon Telegraph and Telephone Company (NTT), a state-owned monopoly of the telecommunication sector, in the early 1950s. However, comprehensive national land development essentially became shorthand for large dam construction in the actual implementation of TVA ideas. When Dinmore describes the defeat of the principles of the TVA to the large dam projects, which overlooked the needs of local farmers for the sake of

supplying electricity and water to urban industrial areas and industry, he does not pay attention to the only part of Japan where comprehensive development plans had already drafted and implemented in the early 1950s (Anchordoguy, 2005; Dinmore, 2013). While the Cabinet only decided on the first National Comprehensive Development Plan in 1962, the first Hokkaido Comprehensive Development Plan covered the period of 1952–61. The Tokyo-based TVA experts also lacked an interest in or knowledge about Hokkaido. When, for example, Arisawa Hiromi (1951) wrote a lengthy article about comprehensive regional development and the TVA in November 1951, he did not mention the ongoing process concerning the northernmost island of Japan.

Takahashi Akio (1982) called the Takadomari dam (completed in November 1953) as the TVA of the Tanaka administration. This was the first multipurpose dam in Hokkaido that was designed from the perspective of both electric power generation and agricultural water management. Nevertheless, the first Hokkaido Comprehensive Development Plan (divided in two consecutive five-year phases covering the years 1952–1956 and 1957–1961) is the most important source when searching for traces of the TVA in the early post-war Hokkaido. The plan—a relatively short document listing projects paving the way for the development of industry and agriculture and increase in population—does not mention the TVA. However, it places a great importance on electric power development, mainly the development of hydroelectric power (Hokkaidō Development Agency, 1951). While the enthusiasm to build dams in Hokkaido from the 1950s onward may reflect a growing awareness concerning their role in regional development, it was also motivated by the lack of electricity that complicated everyday life and the construction of new industry. Furthermore, the passing of the Electric Power Development Law in 1952 enabled the establishment of a government-financed organ, the Electric Power Development Corporation, which also began to construct dams in Hokkaido (Jones, 1958; Hokkaidō Doboku Gijyutsukai, 2007).

The results of the comprehensive Hokkaido development were critically discussed during the second half of the 1950s. This discussion reflected both the overly optimistic expectations based on plans that often lacked realistic funding schemes and pent-up dissatisfaction toward the structures of Hokkaido development (Yamazaki, 2006; Koiso & Yamazaki, 2007; Kobayashi, 2010). One of the main stimulants behind this discussion was an essay by Nakaya Ukichirō, a professor of Hokkaido University, which was published in the *Bungei Shunjū* journal in April 1957. While criticising the conduct of the policy and suggesting more appropriate ways to proceed, Nakaya referred to the TVA, which had once been popular in Japan. For Nakaya, the TVA was a model of successful regional development where the questions of leadership and responsibility were clear. In the case of the TVA, the leaders understood the local circumstances, lived in the region, and devoted themselves to the work (Nakaya, 2001 (republished); Imamatsu, 2006).

4 Absorbing the Growth Pole Model as a Part of the National Comprehensive Development Policy

The theories of regional economic divergence or unbalanced regional growth began to challenge the ideas of convergence and long-term constant per capita income growth in the 1950s. These arguments gained power from empirical evidence showing that not all regions were conforming to the predictions of the neoclassical growth models. When Gunnar Myrdal wrote about cumulative causation, he paid attention to the advantageous position of the first industrialised regions. He argued that while the underdeveloped regions might benefit from

growth in the developed regions through the diffusion of innovations and growing export markets, their position would be challenged by the flow of capital and labor into the developed region. François Perroux's ideas highlighting the stimulating role of the centres to the development of the entire economic system formed the basis for most growth pole theories. Although Perroux originally denied that abstract economic space could correspond to a geographic area such as city or region, his ideas were further developed and placed in geographic space. When Albert O. Hirschman discussed polarised development, he emphasised the benefits of both the growing region and the surrounding less-developed region. He agreed that the developed region could buy the products of the lagging region and offer employment. At the same time, he did not close his eyes to the possibility of unfavourable developments from the perspective of the lagging-region caused by growing competition. Hirschman believed that the favourable effects trickling down from the growing centre would outweigh negative polarisation effects, which could be controlled and reduced through the enactment of new economic policies (Parr, 1999; Dawkins, 2003; Zarycki, 2007).

Japan was as one of the countries that adopted the growth pole strategy as the guiding principle for regional planning in the 1960s and the 1970s. The National Comprehensive Development Plan that was approved by the cabinet in 5 October 1962, was a major instrument incorporating the growth pole model into the Japanese regional development scheme. The plan emphasised the development of certain selected key regions that were considered to be the potential engines of economic growth. The New Industrial City Construction Promotion Law enacted in 1962 and the Law on the Promotion of the Development of Special Regions for Industrial Development enacted in 1964 furnished the legal foundation for the implementation of these policy measures (Yamazaki, 2006; Koiso & Yamazaki, 2007).

The drafting of the National Comprehensive Development Plan was a major component, but not the only driver behind the evolution of the policy-making process in the late 1950s and early 1960s. The Socialist Governor Tanaka was replaced by Machimura Kingo, representing the ruling Liberal Democratic Party (LDP), in 1959 gubernatorial election. This change had a great influence on the cooperative relations between the Hokkaido Government, the HDA, the HDB, and the central government. At the same time, various regional development laws that concentrated on other regions lagging behind, were enacted. Within this kind of situation, the Hokkaido Government and the HDA, which worked to preserve the existing Hokkaido development system, agreed that industrialisation formed the basis for Hokkaido's future contribution to the national economy. The second five-year term of the First Comprehensive Plan already aimed at the promotion of industries utilising Hokkaido's natural resources and raw materials. The Second Hokkaido Comprehensive Development Plan, approved in a cabinet meeting in July 1962 and implemented from 1963, emphasised Hokkaido's ability to attract heavy chemical industry in particular from metropolitan areas, which were crowded and lacked the space needed for industrial facilities (Yamazaki, 2006; Sasaki, 2015).

The Central Hokkaido, consisting of the greater Sapporo area and reaching the city of Tomakomai, was designated as one of the new industrial cities in April 1964—the total number of which rose to fifteen in 1966. Namely, prefectures competed severely against each other and eventually six special regions for industrial development were designated to diminish the disappointment of those prefectures that were not hosting any of the designated new industrial cities (Gu, 1997; Masuda, 2006). The construction of the Tomakomai coastal industrial zone was the most visible project initiated in Central Hokkaido. It was expected to have national significance, and it was also a natural continuation to the construction of a new harbour in Tomakomai, which had been taken into use in 1963 (Imamatsu, 2016).

The drafting of the Third Comprehensive Hokkaido Development Plan (approved by the cabinet in 1970 and covering the period of 1971–1981) began in 1967 and was strongly connected with the making of the New National Comprehensive Development Plan that was approved by the Cabinet in 1969. These parallel processes sparked debates concerning the role of a Hokkaido-specific development scheme vis-à-vis new national comprehensive planning. The Economic Planning Agency, for example, promoted a consistent national policy with three factors in mind. Besides a desire to unify the administrative and legislative framework for development policies in all parts of Japan, it found the united model important also from the standpoint of the large-scale development projects described in the new national plan. Finally, the unified national policy was also found necessary to secure the international competitiveness of the Japanese economy. These ideas caused anxiety in Hokkaido. Therefore, the HDA, supported by the Hokkaido Government and Hokkaido Assembly, insisted that the Hokkaido development had its own legal basis differing from the national comprehensive development. Similarly, it argued that the Hokkaido Comprehensive Development Plan, not the New National Comprehensive Plan, was the appropriate forum to describe the concrete plans for the development of Hokkaido (Yamazaki, 2006).

When the planning of the Third Comprehensive Hokkaido Development Plan started, the Hokkaido Government expressed its satisfaction with the achievements of the second plan. The various municipalities' lessening interest in attempts to attract new industries did not change this view. The representatives of the Socialist Party argued in the Hokkaido Assembly that the growth pole strategy had led to the concentration of population and industry into cities, to the depopulation of agricultural villages, and to disparity between regions. The representative of the Hokkaido Government contradicted these claims and argued that the utilisation of the growth pole system had decreased the regional disparity and the migration to cities in Hokkaido had prevented outflow to other regions. Furthermore, it had helped in the building of relations between primary and secondary industries. The documents prepared by the Hokkaido Government to evaluate the achievements of the second plan also showed that central Hokkaido performed well among the new industrial cities where population growth, the attraction of new companies, and the development of factory sites were concerned. An important concession was made when the Hokkaido Comprehensive Development Committee stated that the improvement of people's everyday life lagged industrial promotion, which had had an over-emphasised role in previous plans (Yamazaki, 2006).

The New National Comprehensive Development Plan kept emphasising the importance of large-scale development projects that would secure the international competitiveness of Japan. Furthermore, a clear division of labor between regions that had possibilities for development was considered important. The plan also designated a small number of areas which were expected to host huge new industrial areas. In the case of Hokkaido, special emphasis was laid on the east and on the shores of the Pacific Ocean. In practice, this designation led to the development of the Yūfutsu plain east of Tomakomai. Eventually, attempts aiming at the transfer of heavy chemical industry from overpopulated industrial regions to Hokkaido and the development of Tomakomai East industry area came to occupy a central position in the 1970s Hokkaido development policy (Yamazaki, 2006; Imamatsu, 2006; Masuda, 2006; Koiso & Yamazaki, 2007).

The presence of the growth pole model in Hokkaido was obvious. However, discussions concerning its foreignness are less visible. When Yokoi Tamotsu (1965), the Deputy Chief Secretary of the HDB, wrote about the growth poles and Hokkaido comprehensive development,

he made no reference to the foreign origin of the model. He demystified the new concept by describing it simply as a policy instrument aiming at the development of cities and surrounding areas. Therefore, it was not a major deviation from the already one-hundred-year long tradition. The lack of references to exogenous origins is most likely because the growth pole was added to the Hokkaido development scheme as an instrument originating from the National Comprehensive Development Plan. The 'nationalisation' or 'domestication' of the concept was part of the drafting of the national plan. Sano Hiroyoshi (2012) offers a description on how a small group of people drafted the plan in a short period of time and under a significant political pressure.

Kitamura Masao, a regional development specialist who worked for the Economic Planning Agency, abandoned his ongoing visit to the John Hopkins University in the spring of 1961 and played a crucial role in this process. The great hurry was due to the linkage between the National Comprehensive Development Plan and the famous Income Doubling Plan of the Ikeda Hayato Cabinet. The drafting of the latter was not progressing smoothly because of the criticism expressed by the Diet members of the less-developed regions of Japan, who usually represented the governing LDP. Thus, the former needed to be accepted swiftly to calm down the critical voices. A rough draft of the National Comprehensive Development Plan that introduced the growth pole strategy was ready in July 1961, just three months after Kitamura's return and the beginning of the actual drafting. During the process, Kitamura introduced the ideas of Perroux and Hirschman to regional development bureaucrats. While pondering how the growth poles could be set up, Kitamura leaned on ideas put forth by L. H. Klaassen, a Dutch scholar of urban demography. The hurry led to a situation where the growth pole strategy became accepted when it was still in a very abstract form. Kitamura, who was transferred from the leading position vis-à-vis the plan already within a year, and a group of policy-makers and scholars continued their study. When they finally agreed that the growth pole strategy was more about the creation of cities than the disposition of industry, they already lacked capability to impact on the content of the policy.

Discussions regarding the growth poles began in the Nordic countries during the 1960s. The rapid change in the economic structure, and the shift in the demand for labour from primary production to industry and services had caused great challenges especially to the northern regions of Norway, Sweden, and Finland. These regions had smaller population centres than the urbanised areas in the southern parts of the countries, they lacked industry and a developed financial sector, and they suffered from a significant outflow of population. When policy-makers sought a spatial policy that could stimulate the economic development of the backward regions, the growth centre policies emerged. This was not least because similar kinds of policies had already been introduced in other parts of Europe (Erikson & Westin, 2013).

As Erikson and Westin (2013) pointed out, the two reports (published in 1968 and 1970) produced by the officials, experts, and scholars within the European Free Trade Association (EFTA) presented the Nordic countries with a set of ideas regarding the growth centre policy. Although the decision of the EFTA working group to concentrate specifically on the growth centre policy had been proposed by the Norwegian government and parts of the reports were written by Norwegian experts, the process of integrating this exogenous concept into national institutions and regional development policies turned out to be a complex one. Eventually, Norway did not follow the recommendations of these reports. Many of the selected growth centres were far below the threshold of 30,000 inhabitants introduced in the first report, and the places of identified growth centres differed from the designated locations of the industrial estates against the recommendations of the second report. The policy-makers in Sweden and

Finland were equally inclined to formulate growth centre policies that fitted into local political realms even if they went against the EFTA working group's recommendations.

Both in Japan and in the Nordic Countries it was easier to accept the growth pole as an abstract model for regional development than to reach a political consensus concerning the number, size, and location of the designated growth poles. As the designations were outcomes of political debates and compromises, it can be doubted whether the designated regions consisted of the characteristics attached to the so-called natural or spontaneous growth poles (see Parr, 1999). Furthermore, when the policy-making processes in the Nordic context are compared with Hokkaido, the relatively early incorporation of the growth poles into Japanese regional development policies and the rapidity of the process become clear. The processes through which the growth pole policies came into being in Norway and Finland demonstrate the relations between regional policies and political competition and compromises between the Social Democratic Parties and Centre Parties, which had their backgrounds as agricultural parties (Sippola, 2010; Erikson & Westin, 2013). Meanwhile, the continuous LDP rule¹ in Japan made this almost an intra-party affair, although the position of the Socialist Party was peculiarly strong in Hokkaido. Interestingly, the Hokkaido-based socialists seem to have been critical toward the policy that was promoted by social democrats in the Nordic countries where the urban population was expected to be more likely to vote for the social democratic parties than the agricultural population. This difference may reflect the socialists' wide support-base among the Hokkaido farmers or the party's role in the opposition. Finally, the role which the EFTA reports played in the Nordic countries emphasises the lack of participation on behalf of the international governmental organisations in the case of Hokkaido.

The actors who struggled to secure the continuance of the peculiar Hokkaido development system had limited possibilities to prevent the incorporation of the growth pole model into the Hokkaido development policy. Yet, this process cannot be described as a forced policy transfer as it seems that they did not have compelling reasons to oppose this kind of change. The application of growth pole strategy goes, however, hand-in-hand with Kwon's (2009) argument that the policy transfers in developmental states were rarely a response to social demand and often introduced from the top as a part of an effort to modernise in general and industrialise in particular.

5 Introducing Industrial Clusters based on the Demands from Below

While the circumstances affecting the development of Hokkaido changed, the objectives and content of the policies also gradually evolved. It can be argued that the policy-makers could have been faster to react, for example, to the collapse of the Bretton Woods system in 1971², the two oil crisis in the 1970s, or the evaluation of yen based on the Plaza Accord agreement in 1985—all of which caused changes in Japan's overall industrial structure and made the possibility of attracting heavy chemical industry into Hokkaido less likely. Yet, the fourth Hokkaido Comprehensive Development Plan (1978–1987) had already introduced new approaches and put emphasis on the natural environment, human welfare, and local

¹ The LDP was the ruling party between 1955 and 1993 when it was ousted by a coalition cabinet. The LDP returned to the cabinet in 1994 and regained the premiership in 1996. The LDP was in the opposition also between 2009 and 2012.

² The Bretton Woods system was based on the U.S. dollar's fixed value against gold and on fixed exchange rates. The system was gradually broken after the dollar's convertibility into gold was suspended in 1971. As a result, the major currencies began to float against each other by March 1973.

participation. This kind of change in Hokkaido was again bound to the drafting of the new National Comprehensive Development Plan (Yamazaki, 2006; Koiso & Yamazaki, 2007). The deep post-bubble recession of the 1990s left its marks on Hokkaido development policy as well. At the time when there was a great worry about the future funding of development projects and many household names in the Hokkaido enterprise world faced serious problems or bankruptcy (for example, the Hokkaido Takushoku Ginko, the largest bank in Hokkaido collapsed in the autumn of 1997), ‘industrial cluster’ emerged as a new catchphrase.

There are various interpretations of what a cluster is. In general, clustering refers to the concentration of industries and companies in a specific geographic area and to the patterns of interrelationships between them. The theoretical foundations of clustering suggest that domestic, regional or local rivalry and discriminating local demand foster innovation and prepares enterprises for global markets. Meanwhile, the great number of firms in close proximity, the high proportion of small and very small firms, dense social and economic networks, a blend of competition and co-operation between firms, the rapid and mainly informal diffusion of information and ideas, and adaptability and flexibility, have been identified as typical features for industrial clusters (Dawkins, 2003; Piperopolous, 2012; Lundmark & Petterson, 2012; Swords, 2013). Although the theoretical discussion concerning industrial clusters owes to various contributors, Michael Porter (1990) and his book *The Competitive Advantage of Nations* published has been credited with introducing the terminology to the wider audience. The name of an American business economist at Harvard Business School was also known in Hokkaido, and the Silicon Valley was an example of a successful industrial clustering process known worldwide. Jon Swords (2013) offers a fascinating analysis that explains the popularity of Porter’s ideas among policy makers, describes the role of regional development experts in the spreading of these ideas and notices the legitimisation that clusters gained, for example, when incorporated into the OECD and the European Union policies. However, the new input into the regional development debate was neither imported from the United States nor imposed by international organizations. Rather, the Hokkaido-based initiatives gained speed from lessons drawn from the Nordic countries.

While the temporal correlation between the developments in Hokkaido and the nationwide shift from the so-called technopolis policy of the 1980s implemented by the Ministry of Trade and Industry to the cluster policies with a stronger local colour at the end of 1990s is clear (Kitagawa, 2008), the cluster initiatives have been described as an extraordinary bottom-up contribution to Hokkaido development. Besides national policy instruments, such as the passing of the Science and Technology Basic Law in 1955 and the consecutive Science and Technology Basic Plans, the emergence of these initiatives owed much to the activities of the local interest groups and influential individuals. The Hokkaido Electric Power Company (HEPCO) and its chairman, Toda Kazuo, who was also the chairman of the Hokkaido Economic Federation, played an important role. In fact, Toda personified the various cluster initiatives in Hokkaido to the extent that they become dependent on his presence and contribution (Mäki, 1997; Iguchi, 1998; Koiso, 2016). The HDA’s readiness to draw lessons from regional development policies executed in other countries should not be forgotten either. In 1993, the agency organised a conference that placed special emphasis on the development of Scotland. A second conference in 1995 focused on in Sweden. When the background information was prepared, attention was also paid to regional development and industrial policies in Finland. This was due to the interest of the Hokkaido business community toward Finnish industrial cluster strategies (Koiso, 1995; Koiso & Yamazaki, 2007).

The Oulu region in northern Finland soon emerged as a benchmarking case that was considered to be worth of study. The HEPCO delegations visited various sites in the Oulu region during the first half of the 1990s and the first delegation from Oulu representing the city and regional actors visited Hokkaido in February 1995. The interest felt by Hokkaido-based actors was not unique as the so-called Oulu phenomenon was attracting international attention in the 1990s. The Oulu region had witnessed remarkable growth in information and communication technology (ICT) industries. The development that culminated in a situation where Oulu was considered to be one of the largest wireless telecommunication technology research and development centers worldwide had its roots in the 1980s. Nokia, the ‘engine company’ behind the growth, started its mobile and wireless communication product development towards the end of the decade (Oinas-Kukkonen et.al., 2009; Arokylä, 2012; Salo, 2014; Simonen et al., 2016).

Although the Oulu ICT cluster in general and Technopolis (the first Technology Park in Nordic countries established in 1982) in particular were soon to emerge as the main objects of interest—for example, district heating systems drew attention in the early and mid-1990s. Furthermore, Toda Kazuo mentions the Finnish forest industry cluster as an early model for the creation of industrial clusters in Hokkaido (Mäki, 1997; Koiso, 1999). The emphasised role of the ICT may reflect the field of interest of the visitors, but also the development that took place in Oulu. Namely, when Technopolis was founded, the founding members were the City of Oulu, the University of Oulu, the National Development Funding Foundation and 28 private companies. Different industries were broadly represented among these enterprises covering fields from the paper and pulp, and basic and product-based metal industries to construction, energy, infrastructure, and media industries. Only one firm represented telecommunications. This broad footing soon became thinner. The driver was the rapid development of wireless mobile technologies (Simonen et al., 2016).

The relations between Hokkaido and Nordic countries deepened from 1996 onwards, and delegations representing HEPCO and other companies, the HDA, Hokkaido Prefecture and different municipalities, local universities, and various newspapers kept flowing to Oulu in particular, which was described as the Silicon Valley of the North (Yasunaga, 1997a; Yasunaga, 1997b; Koizumi, 1997a; Koizumi, 1997b; Koizumi 1997c; Yamagoshi 1999; Kawasaki, 1997; Kawasaki, 1998). These efforts led to two types of initiative in Hokkaido. In addition to the different programmes in the main urban areas, the idea of industrial clusters and local cooperation was put into practice in various rural or remote communities. In 2000, a year before the Ministry of Economy, Trade and Industry (METI) initiated its Industrial Cluster Program under the Super Cluster Promotion Strategy (Woolgar, 2008), 20 regional cluster investigation and promotion organisations had already been established in different parts of Hokkaido. The operations of these organisations often aimed at increased efficiency in the production and marketing of products utilising the regional natural resources and outputs of the primary sector. (Koiso, 1999; Ōhashi, 2000). This kind of rural or non-metropolitan approach to clusters can be emphasised as a peculiar character of Hokkaido-based initiatives as cluster theory and policy were usually oriented towards urban areas and ‘new’ industries as in the case of Sweden, for example (Lundmark & Petterson, 2012). However, the high-tech companies that were expected to gain from a closer cooperation between academia, industry, and government also had a crucial role to play.

The roots of technology park initiatives in Hokkaido go beyond the late 1990s as the regional and city policies reflecting the national trends aiming at the promotion and concentration of knowledge-intensive high-tech companies in peripheral regions had already emerged in the

1980s (Yamada, 2004; Kitagawa 2008). However, the discussion on industrial clusters significantly contributed to the growing interest and belief in ICT-centered regional development that took institutional forms in various organisations and strategies. When Ōhashi Yūji (2000) analysed the Hokkaido-based cluster creation activities, he dated the beginning of the movement to the establishment of the Hokkaido Industrial Cluster Creation Research Group in 1996. As Table 1 shows, this was followed by the announcement of an action plan that set the direction and objectives and the establishment of the Cluster Project Department within the Hokkaido Regional Technology Promotion Center as a unit to implement the plan.

Table 1: Major institutions supporting the creation of industrial clusters in Hokkaido.

Jun. 1986	Hokkaido Regional Technology Promotion Center (HOKTAC)
Jul. 1993	Hokkaido Science Industry Technology Promotion Foundation
Feb. 1996	Regional Industry Policy Research Group (founded in February 1995) renamed as Hokkaido Industrial Cluster Creation Research Group
Aug. 1996	Toward Self-Supporting Hokkaido Economy vision by Hokkaido Industrial Cluster Creation Research Group
1996	High-Technology Research Center established within Hokkaido University
May 1997	Toward Creation of Hokkaido Industrial Clusters (mid-term report)
Dec. 1997	Hokkaido Industrial Cluster Creation Action plan
Apr. 1998	Cluster Project Department established within HOKTAC
Feb. 2000	Hokkaido Industry-Academia-Government Collaboration Center established within Hokkaido University (Korabo Hokkaido)
Jul. 2001	HOKTAC and Hokkaido Science Industry Technology Promotion Foundation merge as Hokkaido Technology Comprehensive Promotion Center (NOASTEC Foundation)
2002	Establishment of Creative Research Initiative “Sousei” (CRIS)
Apr. 2003	Hokkaido University Research and Business Park Promotion Committee
Apr. 2007	Hokkaido University Research and Business Park Promotion Committee secretariat switched from the Hokkaido Economic Federation to NOASTEC

Source: Ōhashi, 2000; Internet 1; Internet 2.

The promotion of cooperation between business, science and government was furthered through the establishment of the Hokkaido University Research and Business Park Promotion Committee in 2003. Eventually, the study of the Oulu ICT cluster culminated in two joint symposiums organised in Sapporo and Oulu in March 2004 and September 2005. The Sapporo event carried a title of *Regional Cooperation for Technology-Based Economic Development*. The background of the speakers—representing, for example, Hokkaido University, the city of Sapporo, the Hokkaido Government, the Japan Science and Technology Agency, the Hokkaido Industrial Research Institute, the Northern Advancement Center for Science and Technology, and the Hokkaido Economic Federation—describes well the nature of actors involved in Hokkaido-based ICT cluster initiatives.³ The absence of the HDA is explained by the fact that it was amalgamated into the Ministry of Land, Infrastructure, Transport and Tourism in January 2001.

The content of the 6th Hokkaido Comprehensive Development Plan (1998–2007) demonstrates the institutionalisation of industrial clusters into government-approved policy. The Project for the Creation of Hokkaido Industry Clusters is introduced as one of the methods of accomplishing the overall aims of the plan, which also includes ‘both sides’ of the cluster initiatives introduced above. It makes references to clusters that bring together the local primary sector and industries in rural Hokkaido and emphasises the cooperation between universities and private enterprises bound to the ICT-related development in central Hokkaido. At the same

³ The programmes of these events can be found in the archives of University of Oulu: Oulun yliopiston rehtorin arkisto. Kansainväliset yhteydet – Japani, Kiina, Korea 1993–2014. Hi: 10.

time, the Hokkaido-based cluster projects received significant funding from the national Industrial and Knowledge Cluster Programmes implemented by the METI and the Ministry of Education, Culture, Sports, Science and Technology (Woolgar, 2008). Yet, the 7th Hokkaido Comprehensive Development Plan promoted 2008 onwards shows a waning enthusiasm for industrial clusters. The concept is mentioned only twice when referring to the achievements of the previous Plan (Hokkaido Development Agency, 1998; Ministry of Land, Infrastructure, Transport and Tourism, 2008). While endogenous reasons such as the disappearance of Toda Kazuo's influence can explain this kind of change, it can also be pointed out that the mid-2000s has been recognised as the peak of cluster policies in other spatial contexts as well (Swords, 2013).

6 Conclusion

When thinking about the take-home messages for current policy-makers, one can begin by stating that this study has not revealed any institutional or cultural filters that would have predisposed Japanese policy-makers against using information and experience from abroad. Rather than possessing the kind of features observed by Dolowitz and Dale Medearis (2009) in US policy-makers at the beginning of the 21st century, the readiness to incorporate exogenous models has remained throughout the post-war period. It should, however, be pointed out that the observed preparedness is not exceptional. On the contrary, many of the previous studies have concluded that regional development actors in different parts of the world have frequently ended up designing similar kinds of development strategies (Barca, McCann and Rodriguez-Pose, 2012). While the continuation of this kind of open-mindedness can be hoped for, it is worth remembering the point made by Linda Lundmark and Örjan Pettersson (2012) concerning the importance of recognising suitable examples for the development of sparsely populated areas.

This research also shows the great variety of actors involved in the policy transfer processes. Through the three cases representing different post-war decades, it has been possible to witness that not only politicians and bureaucrats at the national and regional levels, but also representatives of various interest groups and scholars have participated in these processes. Hence, this study may encourage current actors who wish to express their opinions concerning existing issues or who attempt to get new topics on the political agenda.

Table 2: Incorporation of international development strategies into the Hokkaido development policy.

Development strategy (timing)	TVA (late 1940s and early 1950s)	Growth Poles (1960s and 1970s)	Clusters (1990s and early 2000s)
Source or origin of inspiration	The United States, TVA, David E. Lilienthal	The National Comprehensive Development Plan	Oulu region, Nordic Countries
National context	Allied Occupation, postwar reconstruction	Beginning of the national comprehensive planning	Shift from the technopolis policy, the burst of the bubble economy
Hokkaido context	Reconstruction, 1 st Hokkaido Plan	2 nd and 3 rd Hokkaido Comprehensive Plan	Worry about the funding of development projects, bankruptcies
Local promoters of new development strategies	Governor Tanaka Toshifumi (left-wing of the political spectrum)	–	Toda Kazuo (HEPCO, Hokkaido Economic Federation)

Short-term outcome	Public recognition, not a part of the 1 st Comprehensive Hokkaido Development Plan but resembling infrastructure projects	Growth Poles incorporated into the Hokkaido Comprehensive Development Plans	Organizational development, clusters became part of the 6 th Comprehensive Hokkaido Development Plan
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Although the most optimistic objectives of the industrial cluster initiatives, for example, may not have been achieved, the 1990s and early 2000s can still be considered as an example of a successful bottom-up type of policy initiative. Clusters were put onto the agenda, but, as also learned from other case studies, their incubation turned out to be difficult (Bresnahan and Gambardella, 2005; Yamamoto, 2017). The direct involvement of foreign voices in policy-making has been extremely limited with the exception of the late 1940s and early 1950s when Japan was still under the foreign occupation. Yet, it can be concluded that whatever was transferred concerning the TVA, it was not a forced transfer under the pressure of foreign occupation.

This research also provides further empirical evidence backing the existing notion that policy transfers, attempted or completed, do not differ from other policy-making processes and are often based upon incomplete or mistaken information. Theoretical literature also emphasises that policy transfer is not an all-or-nothing process. The degree of transfer varies from copying and emulation to mixtures of different policies and inspiration, where policy can simply inspire change without following the content of the original policy. It has also been hinted that different kinds of actors might be inclined towards different degrees of transfers (Dolowitz and Marsh 2000). The current study does not, however, support assumptions according to which politicians would be looking for a quick-fix through copying whereas bureaucrats would be more interested in mixtures. While the TVA seems to have appeared to its most ardent supporters as an ideal model that should be copied in great detail, these hopes did not materialise. The interpretation of the original model and the adaptation to local circumstances plays a significant role in all the processes analysed.

As shown in Table 2, this research demonstrates the versatility of origins from which the actors involved in policy transfers can draw lessons. In the case of the TVA, the policy model was taken directly from the ‘place of origin’, and the discussion at every level paid attention to the foreign nature of the model. The incorporation of the growth pole strategy into the Hokkaido development scheme was a totally different process that concentrated on the regionalisation of the national policy model, which just happened to have exogenous origins. In the case of industrial clusters, the origins of the model were elsewhere, but the drafting of policy measures gained momentum only after the initiatives taken by local actors who were interested in benchmarking a peripheral region that was assumed to correspond well with the conditions existing in Hokkaido.

Finally, the case of post-war Hokkaido development policy can be used as an example reminding one to be cautious when labelling states or regions as borrowers or lenders. While the Hokkaido development policy borrowed elements from various sources (which had often borrowed these ideas from somewhere else), it has also acted as a model for other regions. The case of Hokkaido was studied, for example, in the mid-1980s when the development policies concerning southern Italy were re-evaluated and redirected. Furthermore, the Hokkaido development policy has also served as a model for Japanese development aid policies (Koiso, 2005; Koiso & Yamazaki, 2007).

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References:

- Allison, G. & Zelikow, P. (1999) *Essence of decision. Explaining the Cuban missile crisis, 2nd Edition*. New York, Addison Wesley Longman.
- Anchordoguy, M. (2005) *Reprogramming Japan: The high tech crisis under communitarian capitalism*. Ithaca and London, Cornell University Press.
- Arisawa, H. (1951) Kokudo sōgō kaihatsu to ha nanika. *Sekai*, November 1951, pp. 112–124.
- Armstrong, H. & Taylor, J. (2000) *Regional economics and policy, third edition*. Oxford, Blackwell Publishers.
- Arokylä, K. (2012) *Technopolis – kertomus kasvusta*. Technopolis Oyj.
- Banno A. (2003) *Hokkaidō kaihatsu kyoku to ha nanika. GHQ senryōka ni okeru nijū gyōsei no hajimari*. Sapporo, Yūgen Kaisha Jurōsha.
- Barca, F., McCann, P. and Rodriguez-Pose, A. (2012) The case for regional development intervention: place-based versus place-neutral approaches. *Journal of Regional Science*, 52(1), pp. 134–152.
- Benson, D. & Jordan, A. (2011) What have we learned from policy transfer research? Dolowitz and Marsh revisited. *Political Studies Review*, 2011 vol. 9, pp. 366–378.
- Bresnahan, T. & Gambardella, A. (2005) Old-economy inputs for new-economy outcomes. What have we learned. In: Bresnahan, T. & Gambardella, A. (eds.) *Building high-tech clusters – Silicon Valley and beyond*, pp. 331–358. Cambridge University Press.
- Dawkins, C.J. (2003) Regional development theory: Conceptual foundations, classic works, and recent developments. *Journal of Planning Literature* 18(2), pp. 131–172.
- Dinmore, E. (2013) Concrete results?: The TVA and the appeal of large dams in occupation-era Japan. *The Journal of Japanese Studies* 39(1), pp. 1–38.
- Dolowitz, D. P. & Marsh, D. (2000) Learning from abroad: The role of policy transfer in contemporary policy-making. *Governance*, 13(1), pp. 5–23.
- Dolowitz, D. P. & Medearis, D. (2009) Considerations about the obstacles and opportunities for formalizing cross-national policy transfer to the United States: a case study about the transfer of urban environmental and planning policies from Germany. *Environment and Planning C: Government and Policy*, 2009 vol. 27, pp. 684–697.
- Erikson, M. & Westin, L. (2013) Regional policy as interaction between national institutions and regional science. The Nordic growth centre policies, 1965–1980. *Scandinavian Journal of History* 38(3), pp. 367–386.
- Gu, L. (1997) Chiiki kyoten kaihatsuron to chūgoku no keizai kaihatsu ku – chūgoku to nihon to no hikaku bunseki. *Kokusai Kaihatsu Kenkyū Fōramu* 7, pp. 75–105.
- Hiraku, T. (2011) *Sengo no hokkaidō kaihatsu – taisei no seiritsu keika to chiiki kadai he no torikumi*. Sapporo, Hokkaidō Shuppan Kikaku Sentaa.
- Hokkaidō Doboku Gijutsukai Konkuriito Kenkyū Iinkai (2007) *Hokkaidō ni okeru konkuriito damu no rekishi*. Sapporo, Hokkaidō Doboku Gijutsukai Konkuriito Kenkyū Iinkai Damu Gakukai Hokkaidō Chiku Renrakukai.
- Hokkaidō Development Agency (1951). *Hokkaidō sōgō kaihatsu keikaku (An)*.
- Hokkaidō Development Agency (1998) *Dai 6 ki hokkaidō sōgō kaihatsu keikaku, asu no nihon wo tsukuru hokkaidō*. Available at: <http://www.mlit.go.jp/hkb/plan.html> (accessed 18 Apr. 2017).

- Iguchi, M. (1998) Economic situation of Japan and Hokkaido in 1990s. An analysis of the opaque situation and some future prospects of the 21st century. *Hokkaido – Lapland News* 1998(3), pp. 1–3.
- Imamatsu E. (2006) Tomakomaikō kaihatsu (gen toma) no rekishi. In: Masuda, T., Imamatsu, E. and Koda, K. (eds.) *Naze kyojin kaihatsu ha hatan shitaka. Tomakomai higashibu kaihatsu no kenshō*, pp. 17–38. Tokyo, Nihon Keizai Hyōronsha.
- Internet 1: <https://www.noastec.jp/web/about/outline.html> (accessed 1 Sept. 2017).
- Internet 2: <http://www.cris.hokudai.ac.jp/cris/rbp/en/sousei/brief03.html> (accessed 1 Sept. 2017).
- Jones, F. C. (1958) *Hokkaido – its present state of development and future prospects*. London, Oxford University Press.
- Kawasaki, K. (1997) Hokuō to hokkaidō no sangyō kurasutaa. *Jetro Sensaa* 6/1997, pp. 39–42.
- Kawasaki, K. (1998) ”Hokuō to hokkaidō no sangyō kurasutaa to kyōdō no Igi. *NIRA Seisaku Kenkyū* 11(7), pp. 40–43.
- Kitagawa, F. (2008) From technopolis, cluster to regional science policy?: Japanese regional development policy 1980s-2000s. In: Koh, Y. & Chung, W. (eds.) *International experiences of regional policy and policy implications for Korea*, pp. 201–231. 2008 KDI International Conference.
- Kobayashi, Y. (2010) *Hokkaidō no keizai to kaihatsu – ronten to kadai*. Sapporo, Hokkaidō Daigaku Shuppankai.
- Koiso, S. (1995) *Hokuō no chiiki kaihatsu seisaku – suweedden, finrando no torikumi*. Manuscript, Hokkaido Development Agency, pp. 1–169.
- Koiso, S. (1999) Sangyō kurasutaa sōzō he no michinori. *Marujunorudo – Kaihatsu kōhō* 1, pp. 7–11.
- Koiso, S. (2003) *Sengo hokkaidō kaihatsu gyōsei shisutemu no keisei katei. Hokkaidō kaihatsu no kiseki*. Sapporo, Hokkaidō Kaihatsu Kyōkai.
- Koiso, S. (2005) Shirukurōdo no kohan ni hanasake hokkaidō no keiken – ishikukuri chiiki sōgō kaihatsu keikaku chōsa jigyō. *HOPPOKEN* 132, pp. 16–19.
- Koiso, S. & Yamazaki, M. (2007) *Sengo hokkaidō kaihatsu no kiseki – taidan to nenpyō de furikaeru kaihatsu seisaku 1945–2006*. Sapporo, Hokkaidō Kaihatsu Kyōkai.
- Koiso, S. (2016) (interview, 20 Jul. 2016).
- Koizumi, M. (1997a) Daigaku-kigyō missetsu renkei ni odoroki – ‘hokuō no shirikonbaree’ de shisatsudan. *Yomiuri Shimbun* (Hokkaido edition), 6 Sep. 1997.
- Koizumi, M. (1997b) [Jiritsu shinkō, dō no shishin ni]– Hokuō Shisatsudan Ouru Shiyakusho nado Hōmon. *Yomiuri Shimbun* (Hokkaido edition), 7 Sep. 1997.
- Koizumi, M. (1997c) Ouru shisatsu wo iken kōkan. *Yomiuri Shimbun* (Hokkaido edition), 8 Sept. 1997.
- Kwon, H. (2009) Policy learning and transfer: The experience of the developmental state in East Asia. *Policy and Politics*, 37(3), pp. 409–421.
- Lindblom, C. E. (1968) *The policy-making process*. Englewood Cliffs, Foundations of Modern Political Science Series, Prentice-Hall.
- Lundmark, L. & Petterson, Ö. (2012) The relevance of cluster initiatives in rural areas: Regional policy in Sweden. *Urbani izziv* 23(1), pp. 42–52.
- Mason, M. M. (2012) *Dominant narratives of colonial Hokkaido and imperial Japan: Envisioning the periphery and the modern nation-state*. New York, Palgrave Macmillan.
- Masuda, T. (2006) 21 Seiki no chiiki keizai seisaku to ha – tomakomai higashibu kaihatsu wo jirei toshite. In: Masuda, T., Imamatsu, E. and Koda, K. (eds.) *Naze kyojin kaihatsu ha hatan shitaka. Tomakomai higashibu kaihatsu no kenshō*, pp. 213–240. Tokyo, Nihon Keizai Hyōronsha.

- Ministry of Land, Infrastructure, Transport and Tourism (2008) *Chikyū kankyō jidai wo sendō suru shin hokkaidō sōgō kaihatsu keikaku*. Available at: <http://www.mlit.go.jp/hkb/plan.html> (accessed 18 Apr. 2017).
- Mäki, S. (1997) Oulun ja Hokkaidon välinen alueyhteistyö 1990-luvulla, 22.10.1997. Manuscript, pp. 1–13.
- Mäntylä, M. (2016) *Pohjois-Suomea kehittämässä: Periferia Urho Kekkosen politiikan kohteena ja vallankäytön välineenä vuosina 1950–1981*. Rovaniemi, Pohjois-Suomen Historiallinen Yhdistys.
- Nakaya, U. (2001) *Nakaya Ukichirō shū, Dai 8 kan*. Tokyo, Iwanami Shoten.
- Oinas-Kukkonen, H., Similä, J. and Pulli, P. (2009) Main threads of ICT innovation in Oulu 1960–1990. *Faravid* 33, pp. 247–272.
- Ōhashi, Y. (2000) Sangyō kurasutaa sōzō katsudō no genjō to kadai – hokkaidō keizai no jiritsu wo jitsugen suru tame ni. *Chiiki kaihatsu*, 432(9), pp. 14–20.
- Okuda, J. (1956) *Dōsei fūunroku - sengo 10 nen*. Sapporo, Sōjusha.
- Parr, J. B. (1999) Growth-pole strategies in regional economic planning: A retrospective view. Part 1. Origins and advocacy. *Urban Studies* 36(7), pp. 1195–1215.
- Pike, A., Rodriguez-Pose, A. and Tomaney, J. (2007) What kind of local and regional development and for whom. *Regional Studies*, 41,9, pp. 1253–1269.
- Piperopolous, P. G. (2012) *Entrepreneurship, innovation and business clusters*. Farnham, Gower Publishing Limited.
- Porter, M. E. (1990) *The competitive advantage of nations*. New York, Free Press.
- Salo, M. & Lackman, M. (1998) *Oulun yliopiston historia 1958–1993*. Oulu, Oulun Yliopisto.
- Salo, M. (2014) High-tech centre in the periphery: The political, economic and cultural factors behind the emergence and development of the Oulu ICT phenomenon in northern Finland. *Acta Borealia: A Nordic Journal of Circumpolar Societies* 2014, pp. 83–107.
- Sano, H. (2012) Zenkoku sōgō kaihatsu keikaku ni okeru kyoten kaihatsu kōsō ni kan suru kenkyū. *Kōeki Zaidan Hōjin Nihon Toshi Keikaku Gakkai Toshi Keikaku Bunshū* 47(3), pp. 403–408.
- Sasaki, T. (2015) *Japan's postwar military and civil society*. London, Bloomsbury.
- Saunavaara, J. (2014) Postwar development of Hokkaido: The U.S. occupation authorities' local government reform in Japan. *Journal of American-East Asian Relations* 21, pp. 134–155.
- Saunavaara, J. (2015) Multilevel relations in Japanese political parties at the beginning of the post-war period: Hokkaido as a case study. *Contemporary Japan* 27(2), pp. 149–168.
- Simonen, J., Koivumäki, T., Seppänen, V., Sohlo, S. and Svento, R. (2016) What happened to the growth? – The case of the ICT industry in Oulu, Finland. *International Journal of Entrepreneurship and Small Business* 29, pp. 287–308.
- Sippola, M. (2010) *Kehitysalueista aluekehitykseen. Suomen virallisen aluepolitiikan 30 ensimmäistä vuotta 1966–1995*. Työ- ja elinkeinoministeriön julkaisuja. Alueiden kehittäminen 31/2010.
- Takahashi, A. (1982) *Shōgen: hokkaidō sengoshi – Tanaka dōsei to sono jidai*. Sapporo, Hokkaidō Shimbunsha.
- Swords, J. (2013) Michael Porter's cluster theory as a local and regional development tool: The rise and fall of cluster policy in the UK. *Local Economy* 28(4), pp. 369–383.
- TVA. (2016) Available at: <https://www.tva.gov/About-TVA/Our-History> (accessed 27 Dec. 2016).
- Woolgar, L. (2008) Hokkaido new industrial cluster policy (Japan). In: *A review of local economic and employment development policy approaches in OECD countries, Part I: Policy audits*, pp. 236–258. OECD.
- Yamada, S. (2004) Jōhō – sofutowea sangyō, In: Ōnuma, M. (ed). *Hokkaidō sangyō shi*, pp. 307–321. Sapporo, Hokkaidō Daigaku Toshō Kankōkai.

- Yamagoshi, K. (1999) Kankyō seibi de kigyō wo shien. *Nihon Keizai Shimbun*, 21 Jan. 1999.
- Yamamoto, T. (2017) (interview, 27 Jan. 2017)
- Yamazaki, M. (2006) *Kokudo kaihatsu no jidai – sengo hokkaidō wo meguru jichi to tōchi*. Tokyo, Tōkyō Daigaku Shuppankai.
- Yasunaga, M. (1997a) Hokuō ni sagaru dōkeizai no saisei – [tekunoporisu] chihō de kinō. *Yomiuri Shimbun*, 10 Jun. 1997
- Yasunaga, M. (1997b) Shōshotai, aidea soku seihin. *Yomiuri Shimbun*, 12 Jun. 1997.
- Yokoi, T. (1965) Hokkaidō sōgō kaihatsu to kyoten kaihatsu. *Shin Toshi* 19(7), pp. 20–23.
- Zarycki, T. (2007) An interdisciplinary model of centre-periphery relations: A theoretical proposition. *Regional and Local Studies Special Issue*, pp. 110–130.