



# The regional migration system as a lens for studying migration and development

Transition or transformation in the case of Finland's Seinäjoki city region

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## Abstract

*The paper revisits the migration-system approach, offering a more nuanced conceptual device for focused study of migration and, especially, region-level development. The paper outlines the main approaches to migration systems and links the conceptual framework to system-based discussion of regional development. The tentative conceptual lens formulated for studying the role of migration in regional development, and vice versa, is the regional migration system, or RMS. This conceptual focusing device is developed and tentatively tested in the specific case of Finland's Seinäjoki city-region. The shape of a regional migration system is recognised by means of statistical data, while qualitative data aid in exploring the system drivers, helping explain their shape and magnitude. Also, the paper discusses the contributions of the multilevel perspective and transition-based approach entailed for applying the RMS concept. The conclusions point to several further applications for the conceptual framework introduced.*

**Keywords:** migration system, regional migration system, regional development, transition

## 1. Introduction

This paper offers adjustments to the migration-system approach in aims of providing a more nuanced conceptual device for well-focused study of migration and, especially, region-level development. Characterised more precisely, the objective is to introduce a framework that assists in recognising both a region's migration system(s) and those elements and mechanisms of broader societal systems touching that region that influence the size and nature of the migration flows of systems. I argue that those elements and sys-

tems, rather than migrants only, should form the focus of study if one wishes to explain the migration patterns, especially if the ultimate aim is to develop policies that change the flows of a migration system. The approach adds a regional perspective, allows for the role of other elements than migrants, and enriches discussion of migration systems with more detailed dynamics of development (e.g., Bakewell 2014; Bakewell et al. 2016), by introducing the concept of a regional migration system (RMS).

In migration and development studies, it is widely agreed that migration is socially embedded and embedded also in processes of social transformation (Castles 2010). Therefore, this paper focuses on those elements that are crucial for both regional development and its migration flows. By examining the processes of change in these elements where migration and development collide, I strive to explain their impact on each other. The fundamental quality of the system is that it aims to maintain itself, so the question is this: what kind of development changes migration flows, and vice versa, and to what extent? The secondary objective is to enable more accurate policy formulations for regional development related to governance of regional migration systems.

Scholars of migration studies are keenly aware that all-inclusive grand theories are unlikely to provide plausible explanations or increase our understanding of such a broad and multifaceted issue as migration (de Haas 2008, 3; also de Haas 2010). The RMS approach anchors analysis of migration in its web of social transformation and regional development by applying a multilevel perspective and systems thinking (Geels 2004). While agreeing that middle-range theories that narrow the focus to certain aspects of migration (e.g., labour, family, integration, and transnationalism) are more appropriate than all-encompassing grand theories for dealing with complex issues, I advocate balance. I suggest that analysis drawing together the bundle of interdependent social mechanisms (e.g., Faist 2014) with intersections of specific social systems that drive migration can deepen and broaden the scope of interpretation. A multilevel perspective and transition-based framework (e.g., Geels 2004) as applied in studies of regional development (e.g., Boschma et al. 2017) may contribute to this. However, one must first understand what an RMS is, along with its flows and drivers.

The migration-system approach has been applied to analysis of both domestic and international migration. With this paper, I focus on the former, through the case of a regionally delimited migration system of young working-age people in a mid-sized region of Finland. The case study serves as a social laboratory for conceptual development and tentative testing of the RMS framework. Its spatial context is Finland's Seinäjoki 'city-region', comprising eight municipalities in South Ostrobothnia.

Understanding and coming to terms with migration is increasingly important for many regions and localities in advanced economies. Both growing international migration directed toward tackling the problem of declining populations and the dynamics of domestic migration that produce patterns of concentration cause challenges especially for small- and mid-sized towns, along with nearby rural areas. For decades, domestic migration patterns have entailed working-age populations' increasing concentration in a few major cities/regions in all the Nordic countries, being cause and effect of mounting spatial inequalities and lack of development in many less central regions (Qvist Eliassen et al. 2020; Sanchez Gassen & Heleniak 2019). Now migration itself, in tandem with declining

birth rates, has become the key challenge for development in many regions with mid-sized central cities, far beyond the problem visible in the past for the individual remote municipalities concerned. Recently, the SARS-CoV-2 pandemic has had its own tremendous impact, with many implications of the 2020s experience of remote-work practices yet to unfold (Haslag & Weagley 2021). Therefore, increasingly worse and complex development paths are likely to emerge in the immediate future, so tools to interpret these changes are in demand. The RMS approach introduced here provides a framework to study various relationships between migration and regional development, though I limit the focus in this paper to a perspective on how development could affect migration itself, as the lack of a core (working age) population is increasingly the root cause of eroding development in various regions.

The paper is divided into five sections, including this brief introduction. Section 2 outlines the main approaches to migration systems and links the conceptual framework to system-based discussion of regional development. It is from these premises that a tentative conceptual lens for studying the role of migration in regional development, in terms of regional migration systems, is formulated. That portion of the paper also introduces the case region and the data used. In the third section, I focus on testing the conceptual lens for focusing in the specific case of the Seinäjoki city-region. The shape of a regional migration system can be recognised by means of statistical data, while qualitative data aid in exploring the drivers of the system(s), helping explain their shape and magnitude. The final major section discusses the contributions of the multilevel perspective and transition-based approach for applying the RMS concept, and I round out the paper with a brief presentation of conclusions.

## 2. The migration system and regional development

### 2.1. Migration systems

‘Migration system’ is not a clearly defined concept enjoying shared understanding and widespread consensus among scholars. Its roots reach back to the 1960s and 1970s, and scholars have provided various definitions for a migration system over the decades. Therefore, my first task is to introduce the rationale behind the migration-system approach applied in this paper.

This sort of perspective on migration was the dominant one in Mabogunje’s (1970) widely cited work. He applied a systems approach to analyse rural-to-urban migration in Africa, stating that

*within the systems framework, the explanation of why people migrate must be in terms of differential individual responses to the stimuli both from the environment and from within the system. It differs from the pull-and-push hypothesis in putting the emphasis at the individual level, not on why people migrate from particular areas but why any person from any village would want to migrate to the city (ibid., 11).*

He emphasised the role of feedback mechanisms within the system and their impact on the formation of migration patterns. According to Bakewell (2014), Mabogunje's specific contribution to the concept of a migration system was to clarify how the feedback mechanisms operate in evolution of a migration system as they emerge, sustain, or wane. Though he applied the notion of feedback for referring mostly to communication between the migrants and those who stayed in the home villages, it was still an important aspect of his work. Further, he highlighted that certain central places are linked by two-way flows of people, goods, services, and information, along with how these continue shaping the interactions among the places within the system. While his view of the system includes various types of flows, they all are interpreted from the migrant's point of view and in terms of how migration initiated or shaped them. Portes and Böröcz (1989) did similarly in situating the German guest-worker system in the context of a global system. They broadened the horizon, though, to immigrants' adaptation to larger international processes including mobility of capital and technology, institutional and cultural change, and interaction between refugees and established members of the workforce interaction with each other. The resulting picture portrays a complex socio-economic context whose emerging migration-related trends migration studies should be able to examine in the future (*ibid.*, 626).

Myrdal's (1957) generic approach to concentration of economic activities, cumulative causation theory, is analogous to Mabogunje's migration-systems theory. Cumulative causation is commonly used to frame migration and development studies so as to link the migration to broader development at both the sending and the receiving end. Since the negative effects on development are more explicit in poorer sending societies than the positive impact on more affluent receiving regions, the overall effect is deleterious. The theory postulates that, propelled by economies of scale, unequal development leads to a vicious circle of poverty at the periphery once the process is launched (de Haas 2008, 27). Myrdal's approach, focusing also on other actors than migrants, builds on non-equilibrium economics and an institutional-change perspective in its interpretation of development. In this, it resembles the evolutionary approach to economic development taken in economic geography (e.g., Nelson & Winter 1982; Boschma 2004), which supplies its own basis for the multilevel, transition-focused approach (Geels & Scoth 2007) applied in this paper. To inform empirical study, more detailed examination of at least three aspects of the migration-system literature is useful.

The first is an emphasis on the migration system's stability: it consists of stable flows between the sending and receiving regions. 'Migration system' has been used to describe both domestic and international migration flows that are substantial and stable. Stability emerges from feedback mechanisms of goods, capital, and knowledge. Economies at international level (e.g., Fawcett 1989; Gurak & Caces 1992) or places at inter-region level (Plane & Mulligan 1997) are tied together by migration and stabilised through several feedback mechanisms. However, the associated approaches focus mostly on migration networks as the unit of analysis, alongside their role in system formation.

Stable and cluster-producing flows provide the form and spatial structure to migration systems (Bakewell et al. 2012, 418). Scholars have applied cluster analysis of European countries (the EU-27 and Norway) that was based on migration flows from 2003 to 2007

to generate a taxonomy of migration systems. The analysis paired sending and receiving countries into classes in line with the magnitude of flows: core systems (large EU countries), intermediate ones (eight Northern European states), and periphery systems (14 less advanced countries) (DeWaard et al. 2012, 1322). At base, the categories were based on the size of the flows.

The second aspect of a migration system is embeddedness in the prevailing societal systems of the sending and/or receiving regions. Comparison centred on migration systems involving the Persian Gulf and Europe highlights the impact of history, economy, politics, and demography for the system's formulation. These are among the largest migration systems in the world in terms of people moving between the sending and receiving regions. The core of each system consists of wealthy regions within the European Union's liberal democracies and rich oil-exporting monarchies and autocracies in the Gulf region. Profound differences in the political systems contributing to the migration systems shape the latter and represent vast differences for the migrants themselves. Characterised bluntly, Gulf systems establish a much more restrictive frame for people's movement, engagement, and remaining within society than European systems (Valenta 2017). The corresponding approaches focus on fairly high levels of abstraction of social structures rather than conducting middle-range studies empirically examining the mechanisms and institutions in the regions. In my interpretation too, the stable shape and substantial size of the flows provide a starting point for the definition of an RMS, but one cannot stop there – the goal here is to pursue a more empirically useful definition of drivers instead of differences between macro-level societal systems (such as economic, political, and social networks).

The third aspect that is useful to note is the studies' general focus on migrants themselves, or their relations with other societal elements. In contrast, the RMS approach additionally encompasses non-migrant actors, those actors and institutions enabling and fostering (or hindering and thwarting) migration without being migrants themselves, or clearly migration-based institutions. For work reaching beyond migration networks and their relations with various aspects of the receiving and sending regions, the migration infrastructure approach offers an illustrative framework. In the latter approach, other actors than migrants are given attention for significantly changing, or initiating and sustaining, systems of migration (Xiang & Lindquist 2014). This approach does not utilise the concept of the system directly but focuses on organised routines and stabilising institutions that maintain flows of migrants – that is, elements of the system and how they emerge. The migration infrastructure approach takes a more agency-oriented tack too, thanks to its focus on mediating actors and processes instead of structures and flows. At the core of the analysis here are not migrants but 'infrastructures' that enable or foster migration. Under this lens, migrants do not migrate; rather, 'constellations consisting of migrants and non-migrants, of human and non human actors' (Xiang & Lindquist 2014, 125) make migration flows. The quantity and variety of mediating actors, especially in the field of labour migrants, are growing although migration itself has not really increased. As for the definition of migration infrastructure, the concept refers to spaces of mediation composed of systematically interlinked technologies, institutions, and actors that facilitate migrations. For analysis purposes, Xiang and Lindquist (2014) identified five distinct migration infrastructures on the basis of earlier literature:

- the commercial (recruitment intermediaries),
- the regulatory (state apparatus and procedures for documentation, licensing, training and other purposes),
- the technological (communication and transport),
- the humanitarian (NGOs and international organisations), and
- the social (migrant networks).

Each dimension has its own logic of operation but not clear discrete domains of the sort identified above. For instance, the commercial infrastructure functions by interacting with regulatory, humanitarian, social, and technological infrastructures. Still, the leading actors, the driving forces, the central strategies and rationalities, and the defining *modus operandi* differ from one domain to the next (Xiang & Lindquist 2014, 126). Thus, the infrastructure approach is embedded in the various domains of society and components imposed by external forces.

Other institutions and practices too may operate as migration infrastructure and, thereby, emphasise the role of external actors for the migration processes. For example, in the context of regional development, students and the workforce are in a central role. Ackers and Gill (2008), who explored these premises extensively in their analysis of academics migrating in the EU, note that the human capital (students, researchers, etc.) and science infrastructure (higher-education institutions, research organisations, etc.) in science and research do not emerge randomly but ‘cluster’ in certain locations. The resultant clusters further steer more scholars and students to the region via channels distinct to students, scholars, and other highly skilled people. Alongside these influences are several national and international policies and programmes deliberately designed to facilitate these flows (*ibid.*, 6–8). Similar clustering of ‘talent magnets’ has been recognised in general literature discussing the ‘creative class’ (e.g., Florida 2002; 2005) and its agglomerations of talent and technology agglomerations in a few locations nationally and globally. Saxenian (1994; 2006) has introduced the active role of business-oriented communities and associations in the context of California’s Silicon Valley both in attracting these flows to certain geographical locations and their business and innovation environments and in their integration into these. In sum, while networks of migrants play a role in migration systems, from a regional-development point of view there are many other actors and institutions that may play a much greater role in the form of migration flows and in the ways they integrate the local business and innovation activities and communities (or do not do so). I follow this line of thought in the discussion here; key actors and elements in migration systems may be migrants, non-migrant-based, or both.

Various societal systems (political, economic, social, etc.) may encourage or discourage mobility or even prevent people from moving from or to particular location. They operate simultaneously and interdependently, giving sustaining form to the flows of people and a base to the migration system. The question of whether to focus research on the migrants themselves or, alternatively, non-migrant actors, elements, and practices is left to each empirical study. Also noteworthy are some study-specific differences in frameworks between domestic and international studies. For example, the political systems examined in an international context encompass immigration policy and related regulations

and permits, while the political system's role in the case of domestic migration is usually much more implicit, though still significant. At domestic level, political systems directly influence many policies that make a strong impact on (domestic) migration, such as education or regional development policies. Consequently, immigration policy is a significant unit of analysis at international level, while regional-development-related political decisions should receive the focus in examination of domestic migration.

Bakewell's (2014) recent contributions add important aspects to the literature. He proposes revisiting the concept by informing it with new thinking on causality, emergence, and agency. Bakewell took Mabogunje's (1970) formulation as a point of departure because it offers a clear distinction between the systems' elements and their attributes and relationships. His interpretation divides a migration system into interactive elements and the dynamics of how those elements interact within the system and with the external, surrounding environment. The elements are 1) flows of people, ideas, and goods; 2) institutions such as discourses, practices, and habits or cultures of the migration system; and 3) strategies as actors' intentional plans (e.g., strategies of individuals, households, governments, businesses, or NGOs). The dynamics of governing factors that dictate how the elements change are feedback mechanisms within the system and those factors in relation to the wider environment. Some system elements emerge from the system (e.g., migration policy and migration culture) in response to relations between other elements or by way of feedback mechanisms internal to the system, where elements represent 'real social entities that can cause change' (ibid., 309). Bakewell argues that the stability is to be found primarily in the dynamics, where certain relationships (or isomorphic ones) between particular elements persist over time. In other words, it is the 'rules of the game that govern the emergence of new elements in the system' that form the centre of the study, rather than just the flows between places. Also, there is no assumption of a constant search for equilibrium in the system; instead, the rules of the game refer to 'dynamic reproduction and change in system elements, even allowing for its dissipation' (ibid., 309–310).

Bakewell et al. (2012) illustrated system dynamics in his empirical study of the role of pioneer migrants; however, migration systems' emergent qualities in the context of (regional) development have not been analysed empirically in other work. Hence, emergence within the migration system remains in the realm of conceptual exercises, not empirically tested theory. Also, this interpretation focuses on migrants and their impact on the system's formation and emergence as it evolves, not so much on regional development or region-based elements of the system (institutions, practices, etc.).

To link the migration system to regional development, and to clarify the complex set of multi-layer societal-system phenomena without losing too many nuances, one can adapt the model Geels (2002; 2004) developed for his historical socio-technical system analysis. This model recognises the boundaries and dynamics of the system, its environment (landscape), and the role of micro-level changes or social innovations that may emerge in the system or elsewhere. The associated approach provides for interpretation of the dynamics between the regime, landscape, and niches and also within the prevailing system or regime. The bottom line is that the system changes moderately over time but resists disruptive impetus for change from any one system. However, in response to long-

term parallel changes, it may experience profound transition, thus becoming a completely different system, with a new primary logic and new main actors. While the change may be gradual, more rapid transition may occur if niche innovation and capacities to adjust the regime's existing societal systems in response to pressures from the environment support this (Geels 2004; Geels & Schot 2007).

## 2.2. The research task and questions

The research task set for this paper is to describe the framework and the associated lens for regional analysis of migration systems and development. The framework encompasses the relevant actors, elements, and processes while also accounting for the depth of the change. From these premises, I suggest that analysis of a regional migration system should progress through three phases.

- What is the regional migration system? Ascertain the **shape of the regional migration system** by describing the magnitude and content of the major flows of the target group in question to and from the region.
- What dynamics drive the mobility and maintain the migration system? Identify and recognise **the major societal systems' drivers (individual strategies and elements) for the migration flows and how they are interlinked**. Which spatially defined 'chunks' of wider societal systems make up the regional migration system?
- **What are the change dynamics of the regional migration system? What are the key societal sub-systems' changes** over time, and what role does pressure from outside the system play? How is the broader socio-economic landscape beyond the system changing and producing threats or 'windows of opportunity', and how can regional actors respond to these changes? Or how do external actors answer these challenges and change the system from outside?

Without empirical testing, devising a theoretical framework is futile. Therefore, I tackled a concrete research question: **What is the regional migration system of the Seinäjoki city-region?** I answered it more precisely via subsidiary questions formed in terms of the three phases described above:

- What is the shape of the domestic regional migration system for the young working-age population (those 18–44 years of age) for this region?
- What are the main drivers – and, hence, the major societal sub-systems and the relations thereof – that maintain the system or its main flows in the Seinäjoki city-region?
- How is the system changing, both from within and through external actors (and macro-level changes) coupled with the consequent pressures on the system to change?



The empirically oriented sections below focus mostly on the first two sub-questions, while I reflect on the third in the discussion portion. This organisation, by opening up the matter of innovations (with internal or external origins) and, especially, pressure emanating from the wider socio-economic environment, with potential opportunities – yet without offering a clear answer to the third question – affords exploring migration and development's integration in the context of the approach developed.

## 2.3. The case of the Seinäjoki city-region and the data

### 2.3.1. *The city-region*

The Seinäjoki city-region is part of the Region of South Ostrobothnia, a province that is haemorrhaging its population at a rising pace: This province's total loss from 2000 to 2012 came to approx. 500 persons, but the total for 2012–2020 reached 10 times that figure. The region's economy shares the nationally high employment rate (73% in 2019), partly because of the dwindling of its labour force and a high proportion of entrepreneurs. However, its economy is characterised also by low productivity and low internationalisation. The municipalities here represent small towns (with populations below 20,000) and rural settings, excluding the Seinäjoki municipal area (the regional centre) and the city-region's second-largest town (Kurikka), which barely exceeds the threshold for being considered a small town (see Figure 1).

My study focused on the Seinäjoki city-region and its eight municipalities, which on some occasions refer to themselves as the 'K8' municipalities. These are not an official statistical unit but, rather, a functional sub-region in terms of co-operation and to some extent a coherent labour-market area. While the official sub-region of Seinäjoki includes only five of these municipalities, the entity I examined is an extended one, referred to here as the Seinäjoki city-region for convenience. While South Ostrobothnia is witnessing a clear decline in population, the regional centre, the municipality of Seinäjoki, has experienced continuous population growth for more than 70 years now, an exceptionally long span of time for Finland. The neighbouring towns of Ilmajoki and Lapua too have enjoyed positive net migration, not every year but in most. Other municipalities in the area have mostly lost population, some at an increasing pace (e.g., Kurikka and Kauhava). The migration flows in 2000–2019 can be summarised as differing but tending to be more positive close to the regional centre and worse as the distance from it grows (see Table 1).

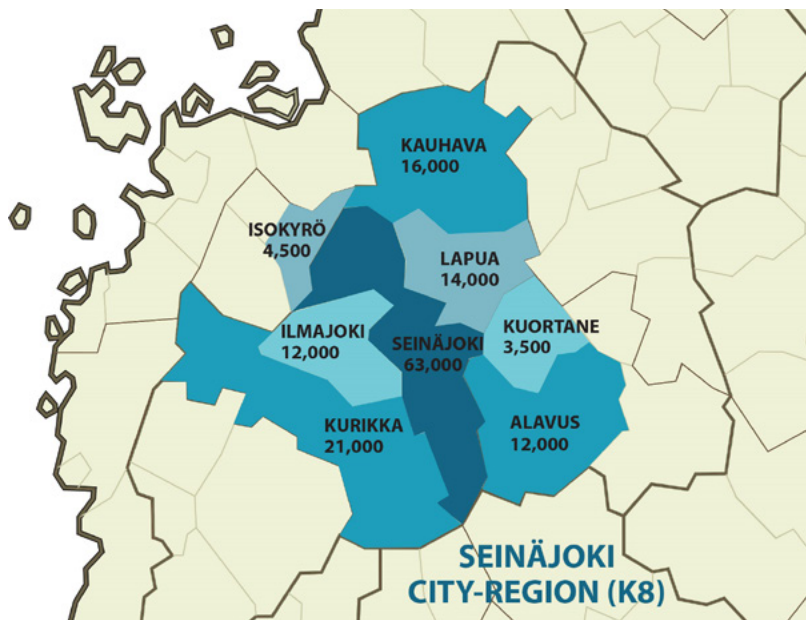
**Table 1:** Annual population change in the Seinäjoki city-region (K8 municipalities), 2000–2019, from Statistics Finland data (2022).

(Greater declines are in red cells, and a green font highlights larger increases)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Alavus	-0,3	-0,7	-0,9	-0,2	-0,1	-0,1	-0,6	0	-0,6	-0,9
Ilmajoki	0,3	-0,7	-0,1	-0,2	-1,7	-0,2	0,3	0,9	0,4	0,5
Isokyrö	-1,1	-1	-0,2	-0,4	0,2	-0,6	-0,1	-0,5	-0,5	-0,8
Kauhava	-1,3	-0,9	-1	-0,6	-0,2	-1,1	-0,9	-0,6	-1,1	-1,3
Kuortane	-1,7	-1	-1,1	-1,9	-1,2	-1,1	-0,4	-2,3	-1,3	-0,9
Kurikka	-1,2	-1	-0,4	-0,3	-0,8	-0,7	-0,7	-0,2	-1,4	-0,8
Lapua	-1	-0,7	0,3	0	0,1	0,5	0,1	0,6	0,4	0,6
Seinäjoki	0,6	1	1,1	1,3	1,7	1,3	1,2	1,4	1,5	1,4

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Alavus	-1,2	-0,4	-0,4	-0,9	-1	-0,5	-1,1	-1,6	-1,4	-0,7
Ilmajoki	0,8	0,5	1	0,6	0,7	-0,2	0,1	0,3	-0,1	0,7
Isokyrö	0,2	-0,6	-1	-0,7	-0,2	-1,2	-1,5	-0,8	-1,5	-1,7
Kauhava	-1,4	-0,2	-0,4	-0,8	-0,9	-0,7	-1,1	-1,9	-1,6	-1,8
Kuortane	-1	-0,9	-1,5	-0,8	-2,4	-0,3	-0,7	-1,4	-1,8	-0,6
Kurikka	-0,4	-0,8	-0,7	-0,7	-1,1	-1,5	-1,1	-1,4	-1,2	-1,3
Lapua	0,7	0,7	0,8	0,3	0,3	-0,8	-0,2	-0,6	-0,5	-1
Seinäjoki	1,4	1,5	1,5	1,3	0,9	1,1	0,8	1	1	0,8

**Figure 1:** The Seinäjoki city-region's municipalities and their populations in 2020.



### **2.3.2. The source data**

To examine the form of regional migration system most closely related to economic development, I analysed the mobility pattern of young working-age people. Statistics can assist in visualising the geographical structure of the RMS. With qualitative data, it is possible to identify the drivers of the system behind the migrations: what impels South Ostrobothnian motion?

To focus on the young working-age population and permanent (or long-term) migration, I used a dataset covering those who moved into or who left Seinäjoki city-region municipalities between 2012 and 2018. The unit was households with at least one member aged 18–44, so the counts are of these, not individuals (one household contains approx. two individuals on average). A more specific inclusion criterion was that the migration was not temporary; it had to extend over the study's full time span, with those who had moved to the study area still living there at the time of data collection and those who had left remaining outside it then. Further movements within the study area were not considered, only moves across the border of the Seinäjoki city-region.

I chose a seven-year span for examining migration flows because migration development is generally slow and a good overall picture can be obtained only over a longer time. The age limit of 18–44 years at the time of moving was based on the study's focus on people of active working and family-raising age. The minimum age of 18 for migrants was chosen for inclusion of only those who had made an independent decision to move: children and adolescents typically move because of a decision to move by their parents. At the other extreme of the age band, for a migration event taking place at age 44 at the very beginning of the time range considered, the respondent was already over 50 at the time of the survey. Few respondents were in this category, however. The address register of the Population Register Centre was consulted on 1 April 2019, and the mergers of municipalities that took place in 2012–2018 have been taken into account. Although only one person from each migrant household was selected via the address list, the data reflect the region's overall migration situation fairly well. For those who moved to the region, the list contained 8,970 households, while the address-list entries for those who moved out of the region included 10,840. These numbers characterise the magnitude of the flows of the migration system in question.

Secondly, to uncover the dynamics of the system, the questionnaires and interviews were specific to sub-sample groups. To identify and reach the overall target group, I compiled addresses from the data received from the Population Register Centre, on the basis of which these groups and statistical samples were formed. In light of the major outflows and inflows, the questionnaires and interviews were targeted at those who moved to or returned from the Helsinki or the Tampere sub-region and a smaller sample of those who moved from other places (sub-regions). The reasoning was that the region's small towns and surrounding rural areas do not constitute a potential source for efforts to attract more people to it in the long run, because they have (and will continue to have) very few working age residents relative to the major cities' regions, which attract the most young people. Another factor, one already evident, is that net migration to the region comes mostly from nearby regions. The empirical data for the qualitative component of the study are presented in Table 2.

**Table 2:** *The questionnaires – target groups and response rates*

Target group	Number of invitation letters	Region surveyed	Response-set count
In-migration	450	Helsinki and Tampere	
	300	Suupohja, Kuusiokunnat, Saarijärvi-Viitasaari, Pohjois-Satakunta, and Ylä-Pirkanmaa	n =175 / 14.6%
Return migration	450	Helsinki and Tampere	
Out-migration	1,000	Helsinki and Tampere	n =219 / 21.9%
In-migration and return migration	Open	Open	n =207
Total			n = 601

In addition, 19 thematic interviews were conducted with return migrants, in the form of in-person meetings, and I arranged 20 interviews with out-migrants who had not returned, using a telephone protocol for those interviewees still residing in the Tampere or Helsinki region. Each of these qualitatively oriented interviews lasted from 45 minutes to over an hour. A further source of data was a project on migration as an engine for municipal growth in 2019–2021, funded by the region’s eight municipalities (Seinäjoki, Lapua, Ilmajoki, Kuortane, Kurikka, Kauhava, Isokyrö, and Alavus). Most interviews were conducted by researcher Toni Ahvenainen.

### 3. The migration system of the Seinäjoki city-region

#### 3.1. The shape of the region’s migration system

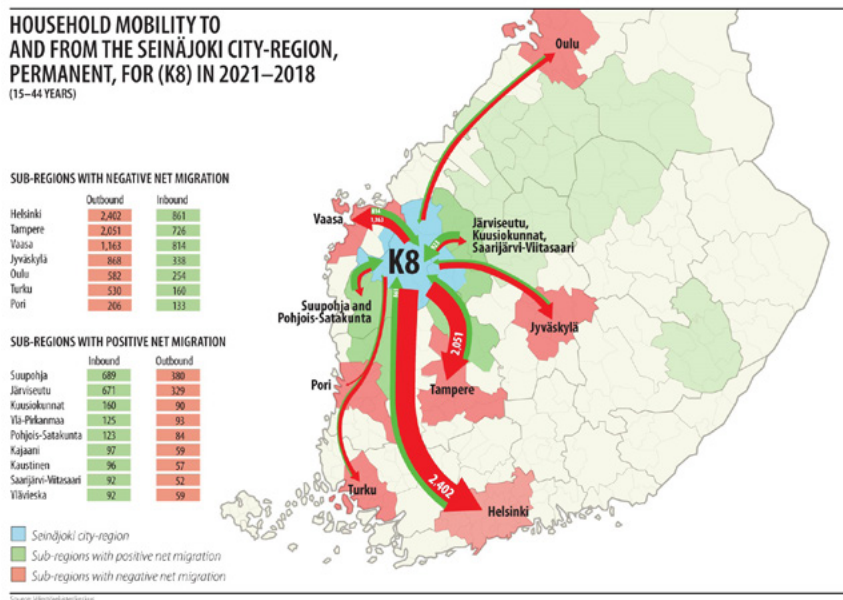
The figure below illustrates the shape of the regional migration system of the Seinäjoki city-region with regard to permanent domestic in-migration of young working-age people between 2012 and 2018 (with no return during the study period, for households with at least one member between 18 and 44 years old). From these data, one may distinguish among primary, secondary, and tertiary systems that together constitute the totality of the regional migration system for the population defined above. I define these three levels of system simply in accordance with the size of their flows and their impact on net migration to or from the Seinäjoki city-region.

- The flows of the primary system are of significant size and have a great impact on net migration. In the Seinäjoki city-region's case, the primary system includes slightly more than 50% of all out-migrating households. Their movement was to three city-centred regions: Helsinki, Tampere, and (to a lesser extent) Vaasa, with the first two also being the largest source of K8 negative net-migration, while flows between the Vaasa and Seinäjoki areas were nearly balanced between the two directions. Of all in-migrants, almost 30% arrived from these three cities' regions, with most being from Helsinki and Tampere, to which the negative net migration and total out-migration flows were the highest. The cities of Helsinki and Tampere are the centres of Finland's two highest-population regions, while the Vaasa and the Seinäjoki area are roughly equal in size and have only 70 km between their respective central cities. All three are science-university cities.
- A secondary system consists of less extensive but still significant and geographically recognisable flows of migrants. In the Seinäjoki case, there is a secondary system that includes four regions that are among Finland's biggest city-centred ones (Turku, the third largest; Oulu, fourth; Jyväskylä, fifth; and Pori, in eighth place) and all clearly larger than the Seinäjoki city-region. The flows are clearly smaller than at primary-system level. In all, they account for about 20% of the Seinäjoki city-region's total out-migration and about 10% of its in-migrants. Therefore, the secondary system too displayed high negative net migration. All of the regions involved except Pori are centred on (science) universities, and all of them host universities of applied sciences.
- A tertiary system is composed of geographically less clearly recognisable flows of people that still are important. The tertiary system in this case consists of those small towns and rural regions targeted by only about 10% of all out-migration but from which the most important positive net migration was received. About 20% of all in-migration came from these more rural and peripheral areas. These sub-regions do not include any regions with major cities; rather, they feature mid-sized or small towns and rural areas (see Figure 2).

Finally, significant amounts of movement, about 20% of out-migration and about 30% of in-migration, were dispersed across other sub-regions, around the country, with modest and random-seeming flows.

In Figure 2, the regions with positive net migration to the Seinäjoki city-region are marked with green, and red denotes the main destinations representing the region's negative net migration. The thickness of the arrow reflects the absolute figure for net migration during the study period, 2012–2018.

**Figure 2:** *The shape of the Seinäjoki K8 migration system with regard to the young working-age population (18–44 years) (data source: Statistics Finland 2019b).*



The shape of the system and the content of its flows could be analysed in much greater detail. For example, one could probe historical or socio-economic explanations for the two major regions' dominance, on one hand, and other regions' surprisingly weak role, on the other. For this paper, however the key observations presented above are sufficient to illustrate the RMS approach and the possibilities provided by its first phase of analysis. These fundamental observations about the shape of regional migration systems provide the foundation for further analysis of key drivers of particular systems. Before moving on to the analysis of system drivers, I should pinpoint two factors identified in the first phase that hold importance for the second. Firstly, the net-migration flows emphasise the consolidating nature of the systems, from smaller sub-regions toward the regional centre and from there toward even larger cities' regions. Such centralising dynamics are among the key challenges for regional development. Secondly, return migrants who were born in the region account for more than 40% of all migrants who arrived in the Seinäjoki city-region. The high share of return migration is another important factor in relation to drivers.

### 3.2. The key system drivers

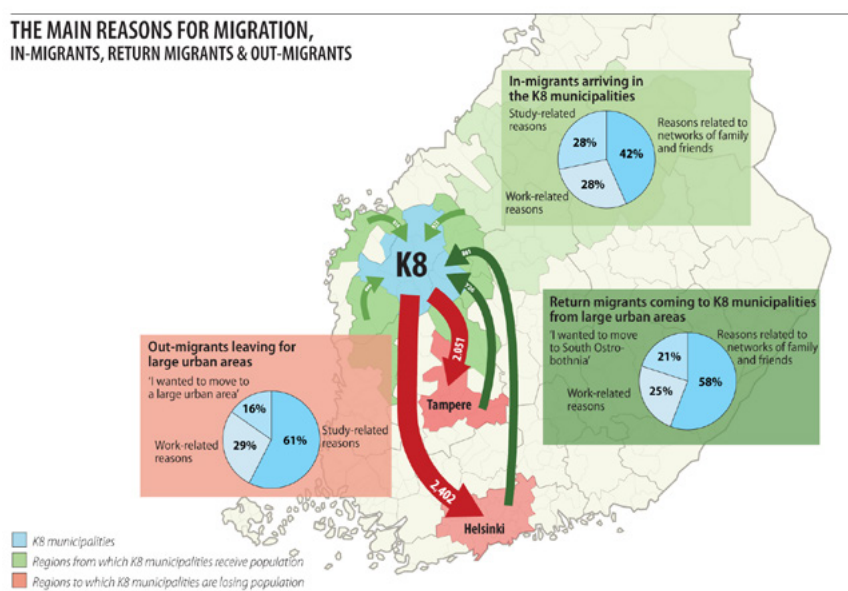
Bakewell (2014) notes that too high a level of abstraction makes the notion of a migration system unusable. He suggests a parsimonious approach of listing the elements of the system and breaking them down only as required by the empirical analysis (ibid., 310). I follow this advice in my analysis. The simplified system defined above is the starting point for the second stage of analysis, exploring the key drivers behind those elements.

What explains the magnitude and shape of the flows? I split drivers here into strategies or motives of migrants and the elements and mechanisms of discrete social systems in the region that in tandem condition the mobility of people within certain societal systems. The case of inter-region migration of young adults provides very illustrative and clear evidence illuminating the important role of the elements and mechanisms of social systems as key drivers of inter-regional migration flows, in addition to motives and preferences of individuals.

Here, I focus on two systems and three distinct set of flows: 1) both the primary system that causes the greatest out-migration and net losses and the tertiary system that causes the bulk of the region's net gain in the migration and 2) three flows connected with these. With regard to the primary system, I confine my attention to those leaving for the Tampere or Helsinki city-region and those who return from there. When looking at the tertiary system, I consider those who arrive in the Seinäjoki city-region from any other region.

Among the key drivers are both individuals' goals for moving and regional elements that led them to choose this specific location for reaching that goal. To pinpoint the key drivers, I reduced the qualitative analysis here to one question only: what was the most important reason for you to move to this specific location? Questionnaire respondents were able to choose multiple 'most important' reasons from among the seven reasons presented: studies, work, family or friends, local or urban culture, living environment, social atmosphere, and buying a house/apartment. Figure 3 provides a breakdown of the reasons identified (because participants could choose multiple responses, percentages may sum to more than 100%).

**Figure 3:** Dynamics and key drivers of migration in the system for young working-age people (aged 18–44 years) in the Seinäjoki city-region (the K8 municipalities).



According to this simple analysis, the major flows of the primary and tertiary system clearly differed in driver profile, as the figure attests. When considering the results from all the empirical data sources in combination, one may conclude that the three sets of flows differ from each other in the following ways.

In the primary migration system, flows from the Seinäjoki to the Helsinki and Tampere city-regions were driven most often by pursuit of studies. Work-related reasons were cited second most often, and in this context there was clearly a goal of finding better or more job opportunities than offered by one's home region or more prominent career paths. Also, the lure of the big city and traits of an urban environment were the main reasons indicated by some respondents, often alongside other 'most important' reasons, such as studies or work.

Flows of returnees from Helsinki and Tampere to the Seinäjoki city-region constituted the other important flow of the primary system. Most often, the key driver cited was social networks in the respondent's home region. For these participants too, the second most common reason to return was work; however, in their stories the work expectations were for a 'sufficiently good' job that enables return. This marks quite a stark contrast against the stories of those who left for bigger cities. Third most commonly listed among the reasons was the culture of one's home region.

In the tertiary migration system, flows of migrants moving for the first time to the Seinäjoki city region, from any other region, were likewise driven mainly by social relations, but not as clearly as in the case of returnees. The social reasons referred to in these cases involved the respondent's spouse who was from the Seinäjoki area more often than one's own kin or other relatives. The next most common reasons were work and studies, which attracted people especially from nearby sub-regions, as the municipality of Seinäjoki is the centre of the province. It is home to a university of applied sciences and most jobs in the region.

Characterised in simple terms, the main drivers of the RMS that guide people out of the region are education and career opportunities, while the main drivers for entering the region are based on social relations. Typically, small towns offer young people no viable option of staying; the choice is of where to go, and even then only a very narrow field of choices is likely to await them, due to the paucity of education programmes to pursue, especially in the case of higher-education institutions (HEIs). Especially in the smaller municipalities neighbouring that of Seinäjoki, this question becomes concrete early on for young people, since the educational opportunities end with vocational education or, in some municipalities, even before that. In these areas, adolescents must contemplate at a young age who plans to stay in the region and who plans to move elsewhere to study.

*'If you now think about what pushes you away from the Kauhava area, it's the educational opportunities that end after high school. If you hope to continue your studies, you will have to leave.'* Out-migrant A, in a big city

*'I have nothing against living in Kauhava, but life unfolds in such a way that you end up in a certain school, then you arrive at a summer job after which you get a job. Higher education has a central role in why either my*



*brother or I have left – or stayed. All have remained in the region where they went to study.’ Out-migrant B, in a big city*

Bluntly, it seems that people do not really choose whether to stay or go so much as where to go. Furthermore, there are only a few phases in life during which people are likely to move inter-regionally to reach their goals, or for some other pressing reason. This makes the major migration systems fairly stable and predictable in the long term. For example, a view that career opportunities are concentrated in the regions of Finland’s biggest cities has remained stable and consistent over the decades.

*‘In Helsinki, it is easier to specialise in something; different tasks that require specialisation are more widely available. For instance, there is often a receptionist, receptionist manager, and an industry director in the hotel trade. In Helsinki, however, there is a “Head of Marketing”, a “Head of Sales”, “Revenue Managers”. The chain direction comes from there. Maybe the difference is that you can proceed to operations management here, and over there you can move to a specialist role. The opportunities for career development are better with specialisation opportunities, and if you don’t want to pursue a manager’s role, specialisation is something more achievable there.’ Return migrant 12*

*‘I thought that in a way – and it still applies today – that for a recent graduate, it is easiest to find a job in Southern Finland, where they have jobs for those with a higher education. When I moved [...] I had no ambition whatsoever about moving to Helsinki. The reality just was that Helsinki is where you need to go.’ Return migrant 5*

The employment market rarely encourages one to return, but return may be appealing because of social networks and a familiar cultural environment. Many plan their return, and they have aspiration and motivation to do so. However, finding a suitable job, one that is also sufficiently good, in their former home region is a challenge. Because of its dissatisfying socio-cultural environment, the big city does not give them the quality of life they sought, but they cannot return either, since (sufficiently good) job opportunities are lacking in their home region.

*‘It’s the work, solely. It’s the only reason for me to be here. I can’t come up with anything else.’ Out-migrant 01, in a big-city-centred region*

In sum, key drivers rooted in individuals’ aspirations to move and the corresponding elements of the regions contribute to the migration flows and the regional migration systems. Consequently, for a city-region with a mid-sized central town in a small country, such as the Seinäjoki city-region in Finland, the geographical shape of the main migration systems is bound to be quite limited. The elements the region offers are especially limited in the case of universities, but the same is true for all HEIs and, likewise, in the case of

thick job markets, especially for highly educated people. The size of HEIs and thick job markets for people with an advanced education are frequently interlinked. Also, social and cultural drivers create systems that are quite limited geographically, in that the social relations mostly lead people back to their home region or, to a lesser extent, those regions where friends go to study or work. Even the selection of ‘big cities and urban culture’ is highly limited, and any other regional culture strong enough to inspire aspirations for moving is the culture of the home region. Furthermore, when people do return to that region for social or cultural reasons, they require sufficiently good job opportunities before they can do so. This proved to be a major challenge for many. In contrast, someone who wants to head to the big city, whether to follow friends there or because of some other longing to move to an urban environment, encounters the largest study and job markets in the country. The very uneven geographical spread of regional elements of drivers creates limited and uneven migration systems.

Finally, it is noteworthy that evolution and deliberate development activities fostering the elements of a solid migration system have sustained a long and constant process in the Seinäjoki city-region. I present brief reflections on some key developments targeted at the most important drivers of the system: education, job markets, and their interface. Higher education and research institutions took an important step forward in Seinäjoki when the University of Applied Sciences (UAS) was established in 1994 with the integration of several of the region’s smaller educational institutions into a new HEI. It survived a consolidation process in which several applied-science HEIs ceased to exist, and in 2020 it was selected as the nation’s best. While the UAS represents high quality, the region has one of Finland’s lowest numbers of study places in higher education (per capita). The region is home also to a strong university centre – a hub for affiliates or activities of the universities of Helsinki, Tampere, Turku, and Vaasa. This has received constant support from the local municipalities and businesses, and new study programmes have recently been launched on the top of research activities, although numbers are still small. Research at the centre is aimed at supporting the region’s development, so it is obviously an important element of the RMS, alongside the UAS.

Long-term development paths are evident also in relation to more direct attempts to renew local businesses and, consequently, labour markets.

In the early years of knowledge-economy development, Jussila and Toivanen (1994) concluded that active regional development and the innovation-driven centre-of-expertise policy launched in the 1990s would lead to large inequalities in regional development, an outcome seen as quite a divergence from the prior Finnish (or Nordic) regional-policy ethos (*ibid.*, 61). In Seinäjoki the centre of expertise (CoE) for food (Foodwest) was established in 1998. Both it and the UAS were fruit of national programmes, and Seinäjoki’s proposal, with amendments by the central government, proved successful in the national competition for nominations. Activities based on the CoE operations continue to this day, in addition to which new development programmes (e.g., for an innovation ecosystem) and agencies have been established for Seinäjoki to enhance the development of local businesses. Overall, the region’s innovation and development capabilities have been developed in aims of enhancing and upgrading the local business opportunities. However, the regional migration system tends to function in such a way as to produce a

situation wherein only one municipality (Seinäjoki) will continue to grow. This pattern is going to persist for at least a while: according to Statistics Finland (2019a) estimations, until 2040. Therefore, we may ask what could be done, beyond the traditional (successful) regional-development actions, if one wishes to influence also the basic trends in population-growth and migration-system patterns. It is my hope that the RMS concept could aid in finding answers, when adjusted in finer granularity to serve regional-development purposes. The adjustments that this entails are discussed next.

## 4. Discussion: A regional migration system in transition

Above, I have drawn a simplified picture of a regional migration system representing some domestic inter-region migration flows of the Seinäjoki city-region in 2012–2018, with the main focus being on migration flows and their drivers. We can now turn our attention toward some conceptual and theoretical observations that could inform use of this system-based approach in both research and practice related to regional-development processes. The analysis is designed to follow the ideal of middle-range theories that avoid excessive abstractions and that favour building on empirical evidence.

With regard to empirical evidence, the concept of the migration system is still in its infancy. In the recent project THEMIS (‘Theorizing the Evolution of European Migration Systems’), a group of eminent scholars focusing specifically on evaluating the emergence of migrations systems by means of solid empirical data were not able to find consensus on how to define a migration system: how to know one when you see one. Even the notion’s value for analysis was not clear for the group. Therefore, the project’s focus shifted somewhat toward feedback mechanisms and narrower migration ‘corridors’, along with how these emerge (or do not emerge) and how they wane (Bakewell et al. 2016, 2–4). Notwithstanding the discouraging outcome, the project produced many insightful observations that played their part in giving me further impetus to put forth my RMS concept. With the mechanism of a regional migration system, I aim to avoid some of the most obvious pitfalls noted in earlier literature. A contextualising summary of the endeavour is in order at this juncture. It also serves to situate where we stand before completion of my demonstration.

Firstly, in the manner presented above, I introduced the regional migration system (a sub national construct); specified its primary, secondary, and tertiary systems in more detail in line with their significance for regional development; and further characterised each of the latter in depth by means of the drivers, by looking at their generic purpose (economic, cultural, social, etc.). The analysis benefited from dividing the drivers into aspirations of individuals and the respective elements (of the system) in the region. A spatial perspective situates the migration system in the context of a certain spatial entity; in other words, the totality of migration flows to and from the region makes up the regional migration system. Moreover, with this method, migration is analysed from the perspective of development: how migration is embedded in the development of the region. By

limiting the definition of the system in accordance with the space (region) and purpose (development), one can narrow the conceptualisation from a generic system concept that might represent too abstract a frame for analysis, with too many facets and elements to be useful.

Via these constraints, the definition of an RMS meshes with a generic research question pertaining to the relation between the migration flows and regional development, and from here one may chop the problem into more precise, narrower empirical questions (about growth of the labour force and development of certain business sectors, certain skills and new migration flows, or any similar combinations). My argument is that this tentative framework could inform a framing that aids in clarifying how a complex evolutionary process unfolds over time, inclusive of the dynamics and feedback loops discussed in recent literature (e.g., Bakewell 2014; Bakewell et al. 2016; Faist 2014).

First, however, it is appropriate to specify some fundamentals of the system in this context. The system itself may be defined in various ways. The problem we face in working with an RMS is the fundamental definition of the system itself, if we apply the definition of Ackoff and Emery (1972) according to which purposeful systems have their goals and purposes. These goals and purposes condition what elements of the system do and how they are connected with each other in pursuit of the central purpose. In the context of a migration system, mobility cannot be deemed a valid purpose; people do not move in order to be mobile, and the system is not created purely for people to move from one place to another. Rather, people move because some other societal systems require or pressure them to do so in aims of reaching the assumed goal. For example, geographical division of a cultural system may create a situation wherein a feeling of belonging requires mobility, a social system requires mobility if one is to maintain important social relations, the education system requires mobility of anyone hoping to earn a degree, or it is suggested by the economic system in connection with finding a job or other means to survive or succeed. All these systems have their elements and associated institutions with a presence in the region, and these elements and their dynamics together form the regional migration system.

Therefore, activities designed to change the RMS should focus on these elements in the region and improve their ability to respond to the goals of (potential) migrants. Each social system always has its own key actors who should be mobilised in efforts to promote change in regional elements, among them institutions interwoven with more intricate social mechanisms. Changing the related migration system or even just some of its flows demands nuanced analysis. The tools of a multilevel perspective (MLP) and transition studies (e.g., Geels & Schot 2007) facilitate this kind of multifaceted and multi-layered examination of change. They are theoretically rigorous and also widely used by policy-makers. These tools also dovetail with my aim of applying a well-tested framework for RMS analysis that is not overly abstract. As Nelson and Winter's (1982) seminal work on socio-technological change reminds us, the utility of theories of development may be judged by their ability to afford clarification and guidance on policy issues or even on key criterion for judging their own worth (*ibid.*, 372).

This step forward supports more profound interpretation of migration systems in the context of regional development, and it permits detail-level examination of the in-

terdependence of various systems. Evolutionary economic geography and institutional economic geography seek to understand the actors and mechanisms in creation of new development paths in regions (e.g., Boschma et al. 2017) by applying a transition-studies approach and multilevel perspective (e.g., Geels & Schot 2007). As discussed above, these aid in contextualising and operationalising the complex evolutionary change process in system context. While early studies employing these tools were oriented more toward historical analysis of (international) socio technical change, a regional dimension and policy context were added to the framework fairly soon (e.g., Loorbach & Lindt 2007; Rotmans & Loorbach 2009). Analysis of socio-technical regimes was developed to enrich understanding of broad-based processes of technological change and transition (such as today's shift from carbon-based to other technologies), but the approach may be adjusted to serve various levels of analysis and provides useful frame also for looking at an RMS as interpreted here. The sort of technological change that is at the heart of transition studies comprises broad societal transformation and collective learning processes wherein actors learn to produce and utilise new knowledge. This context meshes well with the 'collective economic learning' in which regional institutions and other actors provide context for migrants' arrival or departure informed by conditions in the region. The main contribution of the MLP framework for my purposes lies in its three levels of analysis (niche, regimes, and landscape), which grew out of the evolutionary tradition, and the roles of actors and agency in the process. The three-level framing helps us operationalise the study of complex evolutionary change of the system, for the more advanced phase of analysis.

Each element provides tools for concrete analysis. **The regime** is based on 'shared cognitive routines' of stakeholders (e.g., policymakers, businesses, and interest groups) who constitute a wider community of social groups contributing to the overall development as they align their activities in a co-evolutionary process. The regime, the prevailing system, extends beyond cognitive routines to regulations and values, lifestyles, infrastructures, and competencies that get produced and utilised. There are interdependent sub-systems within the prevailing regime, with their own internal logics and their key actors who stabilise the regime (industry, policy, culture, and other entities). **Niches**, in turn, are micro-level environments where novel components are developed from tentative, low-performance concepts that must be protected from the prevailing regime and 'incubated' because they do not directly fit the logics, values, and practices of existing systems. New solutions are often developed by a small group of actors outside the mainstream regime. The regime always changes to some extent on its own, but niche innovations may include solutions that could bring change to the key logics and actors of the prevailing regime. This would herald transition from one system to another, with new key actors and logics – and beneficiaries – so resistance by the existing system is often highly persistent. The final aspect adapted from the work by Geels and Schot (2007, 400) is the **landscape**, the external macro-environment that niche and regime actors cannot directly affect and that possesses some 'hardness' in terms of stability and imperviousness to change (e.g., macro-economics, deeply held cultural beliefs, macro-political developments, and natural phenomena).

The second tool affording further analysis is distinguishing the depth of change There

are several mechanisms in change processes, according to Geels and Kemp (2007, 445): reproduction, transformation, and transition, each with distinct depth. **Reproduction** is the incremental change in which established-regime actors reshape the dynamics within the regime. The notion of **transformation** refers to pressures from the landscape to which the regime's actors find ways to adapt by reorienting the regime with some new, innovative trajectories. Finally, **transition** occurs when pressure from the landscape creates increasing problems for the regime that attempts at reorientation do not solve. With established actors having failed to solve the problems, it falls to actors outside the regime to develop innovations in niches and provide solutions.

The notion of change here refers to change to the existing regime and its elements in the region. For this change, the pressure at the landscape level is crucial. The MLP approach assumes that change – especially potential transition from one regime form to another – emerges through interactions across three levels, from 'niche-innovations that build up internal momentum, through learning, improvements in performance by introducing a new concept or solutions with support from dedicated groups. Changes at the landscape level create pressure on the regime and consequently pressured regime creates windows of opportunity for niche innovations. The alignment of these processes enables the breakthrough of novelties and serious competition with the existing regime' (Geels & Schot 2007, 400).

To illustrate the use of the framework, a simple example related to interpreting the case of the Seinäjoki city-region is provided next. The prevailing spatial centralisation trend identified in the empirical part of this paper is producing serious regional inequalities and other challenges for development in the long term, with one example being the above-mentioned situation in which only one municipality in South Ostrobothnia is growing. From a regional-development point of view, this RMS is in a state of 'stable evolution' where the central city in the region growing represents reproduction of the concentration trend. Regional development encouraging the growth of HEIs and innovation activities clearly formed part of this development and could not bring clear transformation to the development path of the RMS over the years. Importantly, transformation or even transition may take place, influencing some aspect(s) of development (e.g., in transition from an industrial economy to a service-based one), but this does not necessarily get reflected in either transformation or transition of the migration system. Transformation of that system could emerge, with these vanishing flows ending up replaced by international migration flows. While this process should create some new migration flows to the region, where new kinds of actors and institutions would be expected to emerge, the actors, dynamics, and 'regime' with a prevailing presence would maintain their existing positions. Some seeds of transformation in line with this scenario may already be recognized in the region examined (e.g., new strategies, services, and development networks pushing the change forward).

Transition, instead would involve moving away from the prevailing regime and its actors. A timely example of this is potential increase in remote work. Traditionally, the geographical location of educational institutions and of employers have influenced, if not dictated, the location of the working-age population. In conditions of an extensive shift to remote work, though, the dynamics of the prevailing system would change profoundly;

employers and educational institutions in the region would not determine the location of workers and students, and the role of other societal systems and their drivers in migration systems would grow.

Landscape-level pressures due to populations ebbing and a worsening dependency ratio exacerbate the pressures that long-term urbanisation and agglomeration of labour markets have brought to bear for the small- and mid-sized towns outside labour-market areas of major-city-centred regions. Steps toward sustainable socio-economic development have not suggested that clustering of business and innovation ecosystems – and, consequently, people – would see a significant decline. However, the pandemic has created a situation among the impacts of which has been increased net migration to many more municipalities, covering a much broader profile, than over the preceding decade (Statistics Finland 2021). Although the span of time involved is far too short for anticipation of any significant change in the national migration system, short-term changes in its migration pattern are evident. In any case, perhaps a more relevant change at landscape level has been wrought by remote work having become the norm for a significant percentage of (office-based) employees and employers.

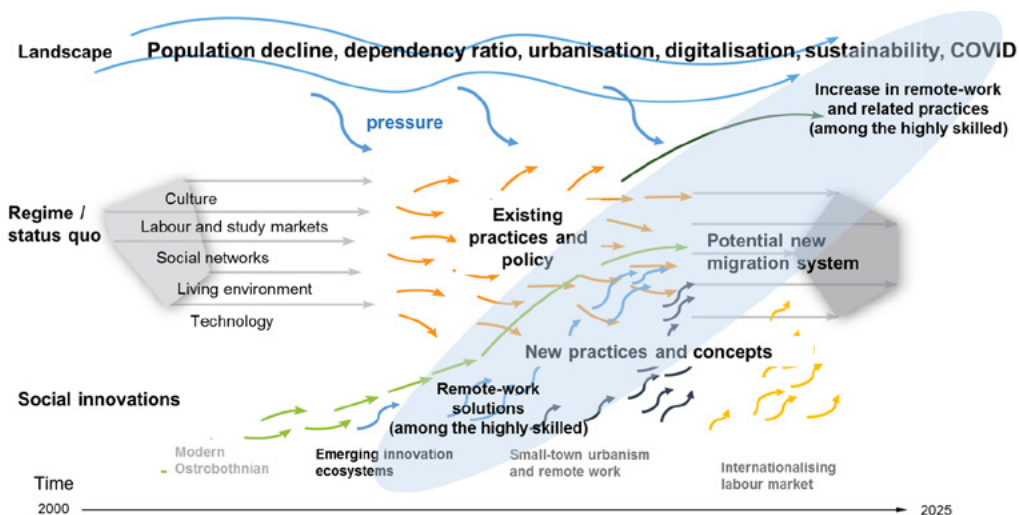
With regard to domestic migration at any level, the landscape at national scale is relevant. In Finland, the percentage of employees working remotely has been exceptionally high relative to that in the rest of Europe. At the phenomenon's peak, about 50% of all employed people in Finland were working remotely, and 42% still were in spring 2021. The change has been very rapid: nearly half of those people worked remotely for the first time during the pandemic (Sutela 2021). Furthermore, 90% of those who were engaged in remote work during the spring of 2021 stated that they were willing to do so also in the future (for at least 25% of their work time) (Statistics Finland 2021). Remote work has been seen as a window of opportunity for regional and local policymakers outside regions with major cities, since it could bring change to a spatial structure wherein employer and worker have been located in the same labour-market area. The window of opportunity is clearly open. However, whether transition from concentration of migration to more enabling and decentralising movement is actually going to occur depends on local niche innovations. What practical solutions will be provided for employees, employers, and policymakers, and how will these be adopted and utilised in the various regions? It is unlikely for office work to return to how it used to be, but the magnitude of the impact on migration patterns and regional-development paths is for the future to decide.

To summarise the foregoing discussion and my tentative attempt to synthesise regional development and migration dynamics into a single approach, I present a diagram of all the topics and change processes discussed. The visualisation, in Figure 4, takes a form that is widely used to illustrate the MLP in transition studies.

It presents both the landscape pressures and the existing regime's key sub-systems defining the shape and content of the RMS. At the bottom, the regional social niche innovations that could answer the pressures from the landscape level are illustrated in line with the range of topics identified in my study. Beyond the scenario of remote-work-driven transition, many other processes of change (or social innovations) are emerging locally or regionally that hold potential to transform the RMS through various societal institutions in the Seinäjoki city-region. 'Modern Ostrobothnian' in the diagram refers

to values that represent a more urban lifestyle in terms of openness to different thoughts and people. Many respondents, especially return migrants, considered openness a key element that should be part of a new culture for South Ostrobothnia aimed at rendering the area appealing to a broader spectrum of potential arrivals. The notion of the innovation ecosystems refers to adaptation to new technologies and business models in the local economy, so as to make the region more suitable for highly educated and/or career-oriented people. ‘Small-town urbanism’ refers to the quality of the city and living environment, including its cultural events and opportunities for social encounters, in addition to a higher-quality physical environment. The notion of internationalisation of labour markets refers to policies and practices that local employers and policymakers alike should adopt in order to move beyond mere recruitment of labour from international markets for short-term purposes. From these generic development paths, it is possible to move toward finer-granularity units of analysis in research and policy design. One of the obvious development paths to explore is the changing role of remote work and studies, which may enable new dynamics or even transition in the migration system – if adequate solutions at the local level can be found for enhancing its development in the region. This potential field for closer study, whose in-depth discussion is beyond the scope of the present paper, is marked in blue. Future work could ask what social and technological innovations responding to macro-level changes and the landscape pressures could truly change the migration system. Thus, the framework provides settings for various studies – or research programme – approaching the RMS and development from multiple perspectives so as to cultivate more comprehensive understanding of a highly complex phenomenon.

**Figure 4:** *Combining the migration-system and multilevel-perspective framework for seizing the window of opportunity for transition (with remote work as an example).*





## 5. Conclusion

This paper represents an attempt to introduce an approach that combines attention to regional development with migration by defining the concept of the regional migrations system. The focus, therefore, was on some elements and dynamics that are crucial from this perspective, and the work culminated in a tentative framework that allows one to consider various societal systems and mechanisms in the same analysis of development. The case of the Seinäjoki city-region demonstrates the model's utility nicely, with tentative results from its testing presenting this regional migration system and its drivers for young working-age people well. The core aim with this approach is an application that avoids overly simple or biased interpretations of regional migration and development relations yet still provides a manageable and theory-grounded approach to studying the phenomenon. I believe that my tentative attempt has contributed to reaching this goal.

I conclude also that an MLP and a transition-based approach may bring some new aspects to migration and development discussion. In the immediate future, COVID-19, an accelerated trend toward remote work, and a 'fourth industrial revolution' stressing digital technology and sustainability are among the landscape-level transformations in progress. The pressure that they generate for the existing national and regional 'migration regimes' should be interpreted as accurately and holistically as possible – especially now, with migration itself having become an increasingly important element of development. To equip ourselves to tackle the related questions, we strive to learn from approaches applied in evolutionary-economic-geography-oriented regional studies, in which multi-level governance, locale-based development trajectories (e.g., Rodriguez Pose 2017), the evolutionary dynamics of change (e.g., Boschma & Frenken 2018), and adaptation by regions are often subject to study, with attempts to provide support to policymaking as well. There are several emerging questions I hope to explore by using the tentative framework: What possible solutions for the regions could respond to landscape pressures? What regional agency is driving the change in development? How might regional migration systems interwoven with development change if the spatial link between the place of work and of residence vanishes? Which mechanisms convey solutions from niche to prevailing system? Do we see intentional transitions of migration systems?

The crucial empirical testing ground here, alongside the potential impact of remote work, is composed of the shift from national toward (more) international labour markets at the regional level, in selected sectors. In migration and development-related studies, or in analysis of migration's impact, other actors than migrants should be part of the analysis too. Migration affects both sending and receiving regions as a whole. Clearly, the development context needs to be part of the analysis. Regional-development research examining causes and effects of migration does not limit its scope to migrants and migration; it considers various external actors and institutions that play a crucial role. To improve the picture produced by all such work, empirical evidence from solid case studies and attention to key actors should be obtained on solid foundations, so that important work does not proceed from a biased understanding (e.g., Guarnizo et al. 2003, cited by de Haas 2008, 28).

Questions of domestic and international migration flows are highly important for societies worldwide. Consequently, misleading policy articulations of whether, how, why, where, and when to intervene through policy actions are best avoided. Well-grounded understanding of policy design and policy implementation in the context of regional development is vital for regional studies (Uyarra 2010). Therefore, also a closer link should be established between, on one hand, the role of agency and collective leadership, which are commonly recognised in regional-development literature as key forces for fostering change (e.g., Sotarauta 2018; Sotarauta et al. 2007; Uyarra & Flanagan 2021), and, on the other, the RMS approach introduced here. This is one of the important conceptual and empirical issues to be addressed further in future studies.

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