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## Immigrants' Cross-Border Interaction and the Pandemic: Estonians Living in Finland

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### Abstract

Although major Covid-19 restrictions have ended, their impact on how immigrant communities navigate physical and digital mobility continues to demand attention. This article examines shifts in cross-border offline and online interactions before and after the pandemic's most disruptive phase, focusing on Estonians in Finland, the country's second-largest immigrant group. Survey data from 2,398 respondents shows how the pandemic reconfigured cross-border activity spaces: Physical travel to Estonia sharply declined while digital contact via phone and social media intensified. The pandemic altered immigrants' spatial agency and expanded digital spaces of interaction. Digital communication and interaction did not replace embodied mobility nor generate hybrid transnational identities; instead, it reinforced emotional and cultural attachments to Estonia. After restrictions eased, in-person visits not only resumed but exceeded pre-pandemic levels. This case highlights how digital tools reconfigure cross-border activity spaces and belonging in highly specific ways, shaped by ethnic, spatial, and socio-technical factors. Ensuring equitable digital inclusion policies remains essential for sustaining immigrants' well-being and spatial agency.

### Keywords

activity space; Covid-19 pandemic; cross-border; Estonian; Finland; social media

### 1. Introduction

The Covid-19 pandemic marked a profound rupture in everyday spatial practices across Europe, disrupting one of the EU's core principles: freedom of movement. Mobility restrictions and border closures, implemented for public health, temporarily suspended cross-border movement for all, regardless of

institutional rights or mobility entitlements (Flood et al., 2024). These measures disproportionately affected immigrant communities, many of whom rely on regular cross-border interaction to sustain family ties, cultural continuity, and economic livelihoods. Border closures not only interrupted mobility flows but also exposed vulnerabilities in EU integration and heightened societal tensions, including increased hostility toward immigrants and declining support for supranational governance (Herbig et al., 2025).

In this context, the pandemic offers a unique lens for examining how cross-border activity spaces, understood as the spatial and temporal domains in which daily practices unfold across national borders, shifted as interaction moved from physical to digital environments. Institutionally, cross-border activity space is shaped by the spatial and governance dynamics of border regions, where national borders act as both obstacles and resources, structure interaction and integration, and create spatial configurations where flows of people, goods, and capital intersect with localized places (Song et al., 2024). Due to mobility constraints during the pandemic, digital practices such as social media use, messaging, and video calls became essential for maintaining cross-border ties, yet they could not fully replace the value of in-person presence. Still, these technologies expanded spatial possibilities by allowing immigrants to sustain connections to their country of origin despite physical immobility. As this article demonstrates, the interplay between physical and digital mobilities has significant implications for how spatial inequalities are reproduced or reshaped across social and ethnic groups in different countries, regions, and cities.

This article investigates these dynamics by focusing on Estonian immigrants in Finland, the country's second-largest immigrant group and the largest group of foreign nationals in the early 2020s. We examine how their cross-border interaction practices evolved before, during, and after the height of the pandemic. The findings show how the digital transition restructured immigrant cross-border activity spaces across time and space, revealing both the possibilities and the limits of digital substitution during mobility crises.

During the pandemic, digital communication tools, especially smartphones, messaging apps, and social media platforms, became central for immigrants navigating separation from loved ones. These technologies enabled frequent, real-time interaction and emotional proximity at a time when physical visits were severely curtailed (Hillyer, 2021; Reisdorf & Rhinesmith, 2020). In the EU, the use of internet-based telephone and video calls surged from 52% in 2019 to 63% in 2020 and later to 73% by 2025 (Eurostat, 2025), reflecting the broader entrenchment of digital communication in everyday life. In high-connectivity settings such as Finland and Estonia, where digital divides are minimal, this shift reinforced the role of digital infrastructures in enabling social continuity across borders, strengthening immigrants' digital inclusion, and expanding their spatial agency, allowing them to maintain cross-border ties even when physically immobilized.

National responses to the pandemic diverged widely due to differences in institutional capacity and risk tolerance (Docquier et al., 2022; Martin & Bergmann, 2021). Even within the EU, fragmented containment and border policies (Guild, 2020) created uneven impacts on immigrants depending on their national, legal, and spatial circumstances. For many, especially migrants from neighbouring countries or border regions, restrictions disrupted not only international travel but also the daily and seasonal mobilities that structured their lives.

In the early 2020s, due to pandemic-related restrictions, many immigrants experienced prolonged periods of separation from their home countries, sometimes extending to three years, significantly straining familial,

social, and economic relationships (Fredheim & Varpina, 2023; Mencutek, 2022; Triandafyllidou, 2022). Shifting international travel rules and occasional suspensions of domestic mobility (Martin & Bergmann, 2021; Mencutek, 2022) added emotional and logistical uncertainty. Within the EU, inconsistent measures from full closures to differentiated testing and quarantine regimes further complicated mobility, especially for prospective returnees and borderland residents (Guild, 2020; Ruotsala, 2021).

During the pandemic, physical mobility was curtailed unevenly across time and space, but when digital communication infrastructure was available, digital interaction channels remained open. Digital interaction technologies gained new prominence in countries and regions in which digital divides were minimal. Digital connectivity emerged as an essential and immediate substitute for face-to-face interactions, enabling immigrants to exercise a form of digital spatial agency by sustaining relationships and participating in cross-border social life despite enforced immobility. Studies regarding the early stages of the pandemic, such as those in the United States and the EU, revealed that digitally mediated communication intensified in response to lockdowns. With more time and fewer in-person options, individuals reached out more frequently through new and existing digital means, reconnecting with both strong and weak social ties (Eurostat, 2025; Nguyen et al., 2020). Social media platforms were also repurposed to sustain emotional proximity amid physical separation, further demonstrating how digital infrastructures can reshape cross-border activity spaces when physical mobility is limited.

This study addresses the following research questions: What were the patterns of physical and digital cross-border communication and interaction (cross-border activity spaces) among Estonians living in Finland before, during, and after the height of the pandemic? How did digital communication and interaction practices between Estonians in Finland and their contacts in Estonia evolve during the pandemic? Do immigrants' intensified cross-border digital communication and interaction with their home country replace the need for physical on-site interaction, as evidenced by the study population?

The analysis is grounded in a longitudinal dataset of survey responses from 2,398 Estonians residing in Finland, almost 6% of the country's adult Estonian population. Data collected in 2019 (pre-pandemic) and again in 2022 (post-peak pandemic) enable a comparative examination of how cross-border engagement evolved over time. The study focuses on three dimensions of communication and interaction: in-person visits to Estonia, telephonic and social media contact, and broader digital media use, including whether digital interaction could replace or complement physical mobility. The article additionally situates these shifts within longer-term migration and short-term mobility trajectories between Estonia and Finland before and after the pandemic. This dual approach linking empirical patterns with lived experience provides a nuanced understanding of how immigrant communities recalibrate their cross-border lives and activity spaces during systemic crises.

By framing these developments within the broader concept of cross-border activity spaces, the article contributes to ongoing debates about how digital transitions reshape spatial opportunity structures for different ethnic and social groups. It underlines the need to consider how digital infrastructures mediate mobility, belonging, and (in)equality under disruptive conditions such as the Covid-19 pandemic (Nguyen et al., 2020; Simola et al., 2023) and the escalated war in Ukraine (Jauhainen, 2026). Ultimately, it highlights the fluid interplay between digital and physical mobilities and the resilience of immigrant communities navigating unprecedented constraints.

The findings show that Estonian immigrants in Finland experienced prolonged separation from their country of origin during the pandemic, with many unable to travel for extended periods. This created emotional strain and practical difficulties, particularly around caregiving, major life events, cross-border work, and education. At the same time, digital tools enabled forms of virtual co-presence that temporarily expanded migrants' spatial agency by allowing them to sustain relationships and obligations across borders despite immobility. These digitally mediated practices reshaped cross-border activity spaces, yet their effects were uneven: While they offered flexibility and resilience, they also exposed inequalities in access and underlined the continuing importance of physical co-presence for maintaining belonging.

Digital communication and interaction strengthened immigrants' ties to their country of origin rather than producing hybrid transnational identities. Yet it only partially substituted for in-person visits. Once mobility restrictions were lifted, Estonians resumed travel from Finland to Estonia, and did so more frequently and for longer periods than before the pandemic. Digital and physical mobilities remain interdependent, and digital inclusion is crucial for enabling flexible cross-border interaction and activity spaces, as well as preventing social exclusion. Addressing digital divides is therefore essential for contemporary migration policy and the development of cross-border infrastructures in post-pandemic Europe and beyond that.

## **2. Immigrants' Physical and Digital Cross-Border Interaction**

Over two decades ago, scholars already recognized that digital interaction, alongside physical face-to-face contact, plays a crucial role in shaping immigrants' belonging and identity (Cassarino, 2004). Today, migration unfolds within a broader condition of digital spatiality, in which digital infrastructures and practices fundamentally reconfigure how migrants experience, navigate, and produce space. Digital spatiality encompasses the relational spaces created through online communication, platforms, and information flows that are spaces that operate alongside, and increasingly intertwined with, physical geographies. For migrants, these digitally mediated spaces and cross-border activity spaces are not peripheral but integral to their everyday lifeworlds (Cagney et al., 2020).

Immigrants navigate overlapping local, national, cross-border, and transnational social fields as complex spheres of influence that shape their lived experiences across borders (Levitt & Jaworsky, 2007). These spheres often operate in concert but may also come into tension, influencing migrants' adaptation and integration trajectories in multifaceted ways. In this context, digital inclusion became very relevant: ensuring that all individuals, including immigrants, have meaningful access (minimal digital divide) to and use (enhanced digital literacy) of information and communication technologies, affordable internet, devices, digital skills, and accessible content (National Digital Inclusion Alliance, 2017).

Central to contemporary international migration are digitally mediated communication and interactions facilitating migrants' ties between the host and home countries. In 2025, an estimated two-thirds of global population used the internet (68%) and the share of social media users (65%) was near to it. Digital divides are significantly narrowing: In 2010 it was estimated that 30% of the world's population used the internet and now it is expected that by 2030, up to 90% of the world population will have access to the internet and use it (International Telecommunication Union, 2025). Such advancement of digital accessibility has major impacts on migration and immigrants' lives. Increasingly ubiquitous digital access and interaction reshape immigrants' activity spaces (Cagney et al., 2020), enabling cross-border activity spaces in which individuals

carry out daily life in their host-country neighborhoods while remaining intensively connected to their country of origin and its social networks.

In immigration contexts, Levitt and Glick Schiller's (2004) seminal distinction between "ways of being" and "ways of belonging" captures the dual nature of migrants' connections to both host and home countries. Ways of being refer to tangible cross-border practices such as maintaining social and political ties across borders, sending remittances, or managing property. Ways of belonging denote emotional, symbolic, and cultural attachments grounded in memory, language, and collective identity enactments of identification with and attachment to multiple countries, diasporas and/or transnational communities (Skovgaard-Smith, 2023). Belonging is experienced personally yet shaped by socio-spatial forms of inclusion and exclusion (Marlowe et al., 2017). These dimensions often intersect, producing hybrid attachments and reshaping notions of home, adaptation, and integration abroad.

Within this framework, the EU provides a particularly enabling environment for the formation of cross-border activity spaces. Free movement legislation supports high levels of intra-European mobility for work, study, and family life, while policies such as the abolition of roaming charges strengthen digital connectivity and lower the barriers to ongoing cross-border engagement. These infrastructural conditions underpin forms of "liquid migration" (Engbersen, 2018), in which physical and digital mobilities operate as interconnected, continuous processes embedded in migrants' everyday routines.

In the EU, immigrants have possibilities to share their meaningful daily lives between several locations, for example, between the country of origin and the current country of residence, and sometimes even other countries. Some scholars have started to use the concept of transnational lifestyle regarding those people who share their lives between two or more countries within and beyond the physical and cultural boundaries of the nation-state (Levitt & Glick Schiller, 2004). Migrants are embedded in geographically dispersed networks, engaging in these ties at varying intensities throughout the life course.

In this EU context, immigrants can distribute their meaningful daily lives across multiple locations, for example, between the country of origin and the country of residence, and sometimes beyond both. Scholars use the concept of transnational lifestyle to describe such patterns, in which individuals live across physical and cultural boundaries while remaining embedded in geographically dispersed networks that vary in intensity over the life course (Levitt & Glick Schiller, 2004). However, in this article, a conceptual distinction is drawn between cross-border and transnational lifestyles within immigrants' activity spaces.

"Cross-border lifestyles" refer to the ongoing interactions that individuals maintain between their country of current residence (host country) abroad and another country—usually that of origin—referred to as the home country. These practices include physical travel, digital communication, media consumption, and social connections. Individuals engaged in cross-border lifestyles socially and culturally integrate into their host country to a varying extent, yet they sustain active and frequent ties to their country of origin. They maintain strong relationships with family and friends remaining there, participate in cultural traditions of their country of origin, and consume home-country media, thus being present in the cross-border activity space. Importantly, while abroad, such individuals do not necessarily relinquish their original cultural identity or aim for assimilation into the host society. In this context, lifestyles and identification refer to national culture both as an abstract, imagined concept and as something material and internalized through everyday

life. This shapes a sense of distinction between the immigrants' country of origin and their current country of residence.

By contrast, "transnational lifestyles" in this context refer to a deeper and more complex form of cultural hybridity. Transnational individuals navigate and embody multiple cultural frameworks simultaneously, without fully identifying with either the country of origin or the current country of residence. Some research defines transnationalism as maintaining ties between two or more countries, but this study understands transnationalism as deeper cultural blending and hybridization, where individuals no longer identify with any single national culture. Instead of holding distinct affiliations to their home and host countries, transnational immigrants navigate fluid identities. They feel at home in their uniquely blended cultural environment, regardless of their individual physical location, yet they do not fully belong to the cultural frameworks of either the home or host nation, while remaining connected to both but living in a different transnational activity space (Tedeschi et al., 2022).

Early scholarship on immigrants' cross-border interaction and transnationalism, especially from the 1990s and early 2000s, emerged in a context where sustained daily interaction across borders was limited by distance, cost, and technological constraints. Until the 2010s, digital communication was neither advanced nor widely accessible enough to support continuous, interactive engagement between migrants and their countries of origin (Bacigalupe & Cámara, 2012). Expensive and cumbersome international phone calls produced a punctuated sociality that both alleviated and intensified the emotional strain of long-distance separation (Skovgaard-Smith, 2023; Vertovec, 2004). As a result, early academic discussions of digitally mediated cross-border interaction now appear dated in light of technological transformations of the 2020s, including those visible during the pandemic.

The widespread adoption of smartphones and ubiquitous internet access has fundamentally reshaped migration experiences. Digital tools have become essential for maintaining both emotional and informational ties across borders, ranging from passive media consumption to active participation and interaction through blogging, vlogging, and other forms of user-generated content (Telve et al., 2023). Migrants now use digital platforms throughout the entire migration cycle from pre-migration information searching to post-migration settlement and potential return (Recchi & Favell, 2019). Real-time access to information, support networks, and emotional sustenance enables migrants to inhabit multiple locales simultaneously, transforming the spatiality of migration. Digital interaction thus enhances both virtual and physical forms of mobility, allowing migrants to sustain meaningful ties with their country of origin while engaging in everyday life in the host society.

Strong cross-border ties, however, can have mixed implications for integration. They may dilute local engagement and slow aspects of social integration in the host country (Verdery et al., 2018), support circular migration, or facilitate selective, domain-specific integration (de Haas & Fokkema, 2011). For returnees, digital connections may continue to anchor them to their former country of residence. Digital engagement also shapes belonging through media consumption: Simultaneous access to home- and host-country news and cultural content contrasts with earlier eras in which information was limited or filtered through diasporic intermediaries. This dual media engagement allows migrants to remain socially, culturally, and politically informed in both contexts, supporting civic participation in two settings or, in some cases, sustaining primary orientation toward the country of origin despite residence abroad.

In recent years, social media has become central to migrants' cross-border communication and interaction. Messaging applications enable intimate, real-time interaction, while broader platforms support public sharing of life events and expressions of diasporic identity. Group chats and digital communities reduce the burden of maintaining one-to-one ties and facilitate participation in geographically dispersed networks. Among regular and irregular migrants, platforms such as WhatsApp, Facebook, X (formerly Twitter), Instagram, Snapchat, TikTok, and YouTube serve different communicative needs across age, ethnic, and socioeconomic groups (Hillyer, 2021; Merisalo & Jauhainen, 2021). Video calls via WhatsApp, FaceTime, or Messenger simulate physical co-presence, allowing migrants to participate in everyday family rituals, such as meals, celebrations, and caregiving, across distance (Demirsu, 2021; Toumi, 2023). Sharing short videos further fosters affective intimacy and a sense of shared daily life (Kedra, 2020). Although not all migrants produce content actively, the range of engagement from passive observers to transnational influencers illustrates the evolving nature of migrant subjectivities in the digital age.

The Covid-19 pandemic heightened the importance of digital inclusion policies as remote work, learning, and social interaction became essential, exposing and often widening digital inequalities (Reisdorf & Rhinesmith, 2020). Remote work expanded rapidly, including across national borders, and online economic and professional activities increasingly replaced offline practices. This super-digitalization weakened the traditional, place-bound link between residence and work, even across national borders, though the possibilities for remote work and digital entrepreneurship were unevenly experienced among immigrants (Andrejuk, 2022).

### **3. Estonians in Finland During the Covid-19 Pandemic: Diverging Mobilities and Policy Responses**

Estonia and Finland, neighboring EU member states, are geographically separated by a two-hour ferry crossing across the Gulf of Finland. Despite their cultural and geographical proximity and advanced digital infrastructure, high smartphone penetration, and robust internet connectivity, the Covid-19 pandemic revealed significant divergences in their mobility regimes and policy responses. These differences had profound implications for Estonians' mobility and settlement patterns in Finland, regarding their country of origin and their lifestyles in between these two countries (Järv et al., 2021).

In the early 2020s, Estonians constituted the second-largest foreign-background population and the largest foreign citizen group in Finland, numbering approximately 50,000. The vast majority (80%) of them were adults, with a slight male majority (53%; see Statistics Finland, 2025). Since Estonia's independence in 1991, Finland has served as a prominent destination for Estonian labor migrants and later family reunifiers, especially during the early 2010s migration peak (Jakobson et al., 2012; Telve, 2019).

This migration is multifaceted. While some Estonians relocate permanently, others engage in lifestyle migration seeking improved living standards and earnings in Finland while maintaining strong ties to Estonia, to which they eventually return (Jauhainen & Smolander, 2025). Prior to the pandemic, frequent cross-border travel was a central feature of this mobility system. In the mid-2010s, 29.1% of all Estonians visited Finland annually, and made an average of 4.1 trips each year (Silm et al., 2021), and in 2018 alone, Estonians made over 244,000 overnight trips to Finland (Visit Finland & Business Finland, 2019). Over the years, migration inflows from Estonia to Finland remained modest but steady, ranging annually from 500 to

6,000, in recent years between 1,400 and 2,400, while return migration to Estonia rarely exceeded 2,000, being in recent years between 1,200 and 1,900 (Statistics Estonia, 2025a; Statistics Finland, 2025).

The outbreak of Covid-19 in early 2020 radically disrupted these patterns. Despite geographical proximity and initially synchronized responses, Estonia sealed its borders on March 17, followed by Finland on March 19. Both nations initially adopted quarantine rules and travel restrictions, but policy trajectories soon diverged: Subsequent practices generated considerable uncertainty for cross-border practices of Estonians (Guild, 2020; STT, 2021).

Notably, ferry travel, which was the primary mode of transport, was intermittently suspended or severely limited, hindering mobility and fracturing cross-border routines. The air travel was also at times suspended. In summer 2020, low infection rates allowed the temporary reopening of borders, but Finland reinstated border controls in January 2021 in response to external spikes in Covid-19 cases, prompting diplomatic friction with Estonia over the impact on commuting Estonians or Estonian residents in Finland aiming to spend holidays in the country of origin. The rollout of the EU Digital COVID Certificate in June 2021 eventually eased mobility barriers, and all travel restrictions were lifted by late June 2022 (Finnish Institute for Health and Welfare, 2022; Kriis.ee, 2022). However, pandemic-era travel volumes remained well below pre-pandemic levels: Overnight visits to Finland by Estonians dropped to just 83,500 in 2021 (a third of 2019 levels) and recovered to only 140,000 in 2022, just 57% of their pre-pandemic frequency and up to 168,300 in 2024, still below the pre-pandemic time (Statistics Estonia, 2025b).

Pandemic-related restrictions also suppressed long-term migration. In 2020, only 1,596 Estonian citizens migrated to Finland, which was an all-time low since Estonia's EU accession in 2005, while 1,269 returned to Estonia. Although migration temporarily rebounded in 2021 (2,349 out-migrating and 1,052 returning), 2022 saw a decrease in out-migration to Finland (1,794) while return remained almost the same (1,185), trends continuing to 2023, 1,400 and 1,012, respectively (Statistics Finland, 2025). In parallel, smaller yet steady flows involved Estonians born in Finland to migrate to Estonia, reflecting second-generation mobility patterns (Jauhainen & Smolander, 2025).

Importantly, policy responses diverged not only in timing but in stringency. Estonia implemented fewer restrictions on gatherings and social interactions compared to Finland. This divergence shaped the epidemiological landscape: By March 2023, Estonia had recorded over 600,000 confirmed cases (46.2% of the population), while Finland registered 1.4 million (25.5%; see Johns Hopkins, 2023). However, these figures may mask real infection rates, as public compliance with case reporting declined as the pandemic evolved.

#### 4. Data and Methods

This study draws on data from two semi-structured surveys conducted among Estonian citizens officially residing in Finland, collected in 2019 and 2022. To align with the study's objectives, only respondents meeting the following criteria were included in the analysis: adult Estonian citizens who migrated to Finland after 1998, as they could do so without a visa, who reported Estonian as their mother tongue, and who provided valid responses on gender and age. The respondents were randomly selected from all Estonians in Finland who met this criterion. They were contacted by phone and informed about the study's aims and procedures, and could withdraw at any time. Those who participated did so anonymously, and by responding

during the call or filling the sheet on-line they gave consent to take part in the research. The broader project had ethical approval from the relevant university.

The final sample totaled 2,398 respondents, all aged 18 or older. They comprised about 5.8% of the total adult Estonian population in Finland. In 2019, 1,607 participants completed the survey; in 2022, 791 did so. The 2022 dataset had a balanced gender distribution (55% female), but the 2019 dataset had a slight overrepresentation of women (65%). Respondents in 2022 were also slightly older on average. To ensure comparability, the data weighting was implemented so that the 2019 data matched the age and gender structure of the 2022 sample to allow direct comparison.

In addition to analyzing the full sample, three overlapping subgroups were identified to highlight distinct characteristics and lived situations within the broader Estonian immigrant community in Finland. However, the same person can belong to one, two, or three subgroups, i.e., the subgroups are neither exhaustive nor mutually exclusive.

The first group consisted of employed and self-employed respondents, spanning various life stages. They formed the majority (83%,  $n = 1,987$ ) of respondents. Their employment rate increased from 81% in 2019 to 87% in 2022. Notably, 27% of those over 65 remained economically active despite they had reached the official age of retirement.

The second group contained older adults and retirees: respondents aged 60 or older. They comprised 14% of the sample ( $n = 347$ ): 13% in 2019 and 17% in 2022. Fully retired, non-working individuals accounted for only 28% of them ( $n = 96$ ), indicating continued labor market participation among older Estonians in Finland, as mentioned above. Furthermore, many retired non-working Estonians return from Finland to Estonia (Jauhainen & Smolander, 2025).

The third group of respondents had underage children in Finland. In Finland, school attendance is compulsory until one is 18 years old. This group formed a substantial portion (43%,  $n = 1,035$ ): 45% in 2019 and 40% in 2022. Among these, a clear majority (73%) had children enrolled in Finnish schools, and that increased from 69% in 2019 to 79% in 2022, reflecting the challenge to travel back and forth to Estonia during the pandemic.

Comparative temporal analysis was conducted between responses collected prior to the onset of the Covid-19 pandemic (in 2019) and after the pandemic's peak period (in 2022). This longitudinal comparison allowed for the identification of temporal shifts in attitudes or behaviors among Estonians living in Finland during the pandemic context. The analytical approach employed in this study involved several complementary methods. First, a direct frequency distribution of responses was calculated for Estonian respondents residing in Finland to provide an overview of response patterns. Second, responses were disaggregated into three principal subgroups of respondents, as mentioned above, to inspect group-specific trends and variations, and they were each analyzed independently to detect intra-group patterns. Third, cross-tabulation techniques were applied to examine associations between categorical variables, and  $p$ -values were computed to identify statistically significant relationships.

## 5. Results

### 5.1. Digital Interaction Devices Among Estonian Respondents in Finland

Among the studied Estonians living in Finland, neither first-level (access to digital interaction tools) nor second-level (use) digital divides were present. Digital interaction was affordable and easily accessible: Finnish telecom contracts often include low-cost or equal-rate calls to Estonia and robust, unlimited internet access, enabling frequent and meaningful cross-border communication. The combination of advanced digital infrastructure, affordable pricing, and high digital literacy created favorable conditions for sustained cross-border connectivity and the formation of local, cross-border, and transnational social spheres (Cassarino, 2004; Levitt & Jaworsky, 2007; Tedeschi et al., 2022).

Digital proficiency was widespread. All respondents had access to digital communication tools, and 98% owned a smartphone (Table 1). The small share of basic-phone users (2%) reflected personal preference rather than economic constraint. They spanned different age groups, were mostly employed, and were not concentrated in low-income households. A substantial majority of Estonian immigrants in Finland reported strong digital access: 90% had fixed internet and 89% used WiFi. Device ownership was also high—76% had a laptop, 45% a tablet, and 33% a desktop computer—with no significant variation across the three sub-groups studied. This digital access enabled dynamic connections within Finland, to Estonia, and globally.

Most respondents were active on at least one social media platform. In 2022, the most commonly used were Facebook Messenger (86%), Facebook (85%), WhatsApp (84%), and YouTube (78%). While YouTube was mostly used for passive content consumption, the other platforms supported active, multidimensional interaction. Usage was high across demographic groups, though slightly lower among retirees and those over 60.

Facebook Messenger and WhatsApp dominated messaging, reflecting familiarity with Estonian (Messenger) and Finnish (WhatsApp) digital communication and interaction norms. Other platforms saw more limited use: Snapchat (16%), Twitter (5%), and Instagram (40%), with Instagram particularly popular among women and respondents under 35. TikTok was used by 18%, especially by parents of school-aged children (27%) and far less by retirees (7%). Only 8% used Telegram, indicating limited engagement with Russian-speaking digital networks. Prior research shows that Russian-speaking Estonian citizens in Finland rely far more on Telegram, which is linked to their cross-border interaction with Russian-speaking communities, including those in Estonia (Vorobeva & Jauhainen, 2023).

The widespread use of both Messenger and WhatsApp reflects respondents' strategic choice of platforms depending on social context and location: Messenger was mainly used to connect with Estonians in Estonia or in Finland, while WhatsApp was preferred for communication with Finns. This cross-platform engagement allowed migrants to draw on digital practices from both countries and navigate national differences in social media use. Together, these tools supported varied forms of communication and interaction from casual short-video exchange to more in-depth audio-visual content sharing, which helped sustain shared, digitally mediated social spaces between Finland and Estonia (Demirsu, 2021; Hillyer, 2021).

## 5.2. Media Consumption Among Estonian Respondents in Finland

Estonians are active digital media users, aligning with broader trends toward digital-first news consumption. Nearly all respondents in Finland regularly followed both Finnish and Estonian media, indicating sustained engagement with societal developments in both countries. This dual media orientation reflects immersion in two national social spheres and signals cross-border or transnational forms of belonging rather than exclusive attachment to either the country of origin or the country of residence (Levitt & Jaworsky, 2007).

No statistically significant shifts were observed in respondents' media engagement during the pandemic (Table 1). Their overall following of media declined only slightly during the pandemic: Finnish media from 95% in 2019 to 92% in 2022; Estonian media from 96% to 94%, respectively. Frequent media consumption was also stable. In 2019, 75% of respondents followed Estonian media at least daily; this figure was 1% unit less in 2022. Estonian respondents followed Finnish media almost with equal frequency and at the same daily rate in both years (72%). Retirees and individuals over 60 were the most consistent consumers of both media spheres during pre-pandemic and post-height pandemic periods (Table 1).

**Table 1.** Estonians living in Finland: Following of Estonian and Finnish media (%).

	Estonian media					Finnish media					n	
	more	daily	weekly	monthly	no	more	daily	weekly	monthly	no		
All	34	40	13	9	4	33	39	14	9	6	2403	
2019	34	41	13	9	4	33	39	14	9	5	1612	
p: E = 0.072, F = 0.168	2022	35	39	12	8	31	39	13	9	8	791	
Employed	33	40	13	9	5	32	39	14	9	6	1981	
2019	32	41	14	9	4	32	39	14	9	6	1293	
p: E = 0.170, F = 0.264	2022	34	39	13	8	32	39	13	8	8	688	
Child at school in Finland	31	40	15	11	3	34	37	16	8	4	750	
2019	30	40	16	12	3	33	38	18	7	4	501	
p: E = 0.462, F = 0.081	2022	33	41	14	8	37	35	12	10	6	249	
Retired and over 60	38	44	8	6	4	40	43	8	7	3	348	
2019	39	43	9	6	3	45	41	7	6	1	213	
p: E = 0.450, F = 0.079	2022	37	45	5	7	5	33	44	11	7	4	135

## 5.3. Physical Cross-Border Practices With Estonia Among Estonian Respondents in Finland

Physical visits to Estonia are a key cross-border engagement for Estonians residing in Finland. Travel between the two countries is relatively easy and affordable: The Helsinki-Tallinn ferry route offers approximately 10 daily departures in each direction, with a two-hour crossing time and typical one-way fares ranging from EUR 15 to EUR 30. Unsurprisingly, Estonian residents in or near Helsinki, the closest Finnish city to Tallinn, the capital of Estonia, visit Estonia more frequently than those living farther away, reflecting geographical proximity's role in enabling cross-border practices and the maintenance of physical cross-border activity space.

Visits to Estonia are typically bottom-up initiatives, illustrating migrants' agency in maintaining ties to the country of origin. Nearly all respondents reported having cross-border social spheres, combining local ties in Finland with enduring connections in Estonia. In 2019, prior to the pandemic, almost all respondents (96%) had visited Estonia within the previous year. By 2022, this figure had declined to 90%, but was still very high despite the pandemic restrictions had made the travel more troublesome (Table 2).

Earlier estimates suggest that in the mid-2010s about 20,000 people lived intensively and equally between Finland and Estonia, reflecting relatively rare cross-border or blended transnational lifestyles and activity spaces (Silm et al., 2021). Such patterns were uncommon among our respondents. Before the pandemic, 34% traveled to Estonia at least monthly: evidence of sustained cross-border "ways of being" (Levitt & Glick Schiller, 2004) through regular embodied interaction with the country of origin. During the pandemic, this share dropped sharply to 20%, indicating a significant contraction in highly frequent cross-border mobility and the partial substitution of physical visits with other practices (Table 2).

The pandemic disrupted and hindered mobility routines and these results were statistically significant (Table 2). Of all respondents, the majority (59%) experienced a decrease in travel frequency to Estonia, 34% maintained their prior patterns, while almost none (2%) reported an increase during the pandemic. These findings confirm the profound impact of pandemic-related mobility restrictions and complexities on maintaining the physical cross-border activities among Estonians in Finland during the pandemic.

**Table 2.** Estonians living in Finland: Visit frequency to Estonia in previous year (%).

	weekly or almost	monthly or almost	4-7 times	1-3 times	no visits	n
All	7	22	28	37	6	2395
2019	8	26	30	33	10	1604
2019 vs. 2022: <i>p</i> < 0.001	2022	5	15	24	47	791
Employed	7	22	28	37	7	1997
2019	8	25	30	32	5	1289
2019 vs. 2022: <i>p</i> < 0.001	2022	5	15	25	46	688
Child at school in Finland	5	20	28	40	6	751
2019	6	24	34	29	7	502
2019 vs. 2022: <i>p</i> < 0.018	2022	4	17	25	48	249
Retired and over 60	7	27	28	30	8	346
2019	8	30	30	26	7	211
2019 vs. 2022: <i>p</i> < 0.119	2022	7	26	32	8	135

Strict travel restrictions in early 2020 intensified respondents' need and/or desire to reconnect physically with Estonia, and this was realized once travel resumed in 2021. After the peak pandemic period, a larger share of respondents (34%) reported longer stays in Estonia compared to before the pandemic (25%), a statistically significant increase (Table 3). Many extended their annual visits from 2-3 weeks to 4-8 weeks, dedicating a substantial portion or even all of their holidays to Estonia, marking a clear departure from pre-pandemic patterns. Employed individuals and those living with children in Finland were especially likely to report longer post-pandemic visits. This shift reflects a strong need to re-establish in-person contact and compensate for prolonged absence, despite the availability of digital interaction (Simola et al., 2023).

**Table 3.** Estonians living in Finland: Visit length to Estonia in previous year (%).

	over 6 months	3–6 months	1–2 months	2–3 weeks	up to one week	no visits	n
All	3	9	28	34	25	2	2290
2019	3	9	25	36	24	2	1579
2019 vs. 2022: <i>p</i> < 0.001	2022	2	9	34	30	25	711
Employed	3	8	28	35	25	2	1894
2019	3	9	24	37	25	3	1271
2019 vs. 2022: <i>p</i> < 0.001	2022	2	8	35	30	25	623
Child at school in Finland	0	2	23	42	31	2	722
2019	0	2	19	46	30	3	493
2019 vs. 2022: <i>p</i> < 0.001	2022	0	3	33	34	31	229
Retired and over 60	3	16	33	26	20	3	328
2019	3	15	28	30	20	4	207
2019 vs. 2022: <i>p</i> < 0.008	2022	3	19	41	18	19	121

#### 5.4. Changes in Interaction Among Estonian Respondents in Finland

Limits on public and private gatherings and mandatory social distancing, combined with cross-border travel bans, curtailed Estonians' direct face-to-face social interaction in Finland for extended periods during the pandemic (Järv et al., 2021). Their local social spheres and networks were disrupted, geographical extension of physical activity space was reduced even if digital tools provided partial alternatives.

In 2022, 45% of respondents reported a decline in their leisure-time communication within Finland, compared to pre-pandemic period, while only 1% noted an increase, and 54% reported no change. This reduction in local communication indicates how pandemic-related measures weakened everyday social connectivity and interaction. Some respondents maintained contact with both Finns and Estonians, while others favored one of these groups.

A key compensatory practice to the lack of face-to-face encounters was the increased use of phone calls as an interaction practise. In 2022, 88% of respondents made phone calls at least daily—up from 78% in 2019. This pattern held across all subgroups: Employed respondents increased their daily phone calls from 80% to 89%, households with children from 82% to 92%, and retirees/over-60s from 71% to 80%. Concurrently, infrequent calling dropped from 6% to 2%.

Digital communication and interaction via social media rose as well. In 2019, almost all respondents used at least one platform (95%) and in 2022 even more did so (99%). Social media was thus present in everyone's lives. The most frequently used platforms—Facebook, Messenger, and WhatsApp—enabled instant messaging, video calling, and multimedia sharing, often in combined modes. Frequent use of Facebook (including Messenger) rose from 63% in 2019 to 73% in 2022, with notable increases among households with school-aged children (68% to 84%) and retirees/over-60s (55% to 65%). WhatsApp usage also increased significantly suggesting increased digital communication and interaction with Finns. Instagram's daily/near-daily use rose from 14% to 21%, driven more by generational uptake than by the pandemic context itself.

With in-person travel restricted, digital interaction became essential for maintaining cross-border activity spaces. Finland and Estonia's highly developed digital infrastructures removed structural barriers to such contact. Nearly all respondents (99%) stayed in touch with Estonia by phone during the pandemic: 14% increased call frequency, while only 5% reduced it. Among those who cut back on physical visits, 17% increased phone contact, underlining its role as a substitute for face-to-face interaction.

Social media communication and interaction with Estonia also remained high. While 88% maintained pre-pandemic levels, 13% increased their use and only 6% decreased it. Among those who traveled less, 17% intensified social media engagement to compensate for reduced in-person contact. Digital interaction thus became a central component of respondents' cross-border social practices during the pandemic.

Digitally accessible Estonian media offered broad information during the pandemic, but direct contact with family and friends remained essential for personalized and context-specific updates. Most respondents maintained regular communication with their social networks in Estonia, highlighting the strength and continuity of their cross-border ties. Interaction frequencies remained largely stable: About three-quarters were in contact with relatives or friends at least weekly (75% in 2019; 78% in 2022), showing the persistence of strong cross-border social networks and activity spaces.

There was no major increase in hyper-frequent communication and interaction, as the share interacting several times a day showed no significant change. Daily or near-daily contact remained most common among retirees and those over 60, rising slightly to 44%. Respondents with school-aged children, being typically less frequent communicators, also increased their engagement by four percentage points to 32% in 2022. The share contacting Estonia a few times a week grew modestly by 3% units to 40%, while monthly or less frequent interaction declined by 3% units to 21% (Table 4).

Overall, personal cross-border relationships proved highly important and resilient. Despite mobility restrictions, respondents maintained and in some cases modestly deepened their ties through consistent

**Table 4.** Estonians living in Finland: Interaction with friends and family in Estonia (%).

	several times a day	almost daily	a few times	monthly or almost	Not at all	n
All	12	26	38	23	1	2403
2019	12	26	37	24	1	1612
2022	11	26	40	21	1	791
Employed	12	25	39	22	1	1981
2019	13	25	38	23	1	1293
2022	12	26	40	22	1	688
Child at school in Finland	7	22	42	28	2	751
2019	6	22	41	30	2	502
2022	8	24	43	23	1	249
Retired and over 60	9	33	36	20	2	348
2019	8	33	33	23	3	213
2022	11	33	40	15	2	135

digital communication and interaction. Only 1% in both years reported no contact with individuals in Estonia. These respondents had already oriented away from Estonian culture and identity, did not follow Estonian media, and showed broader signs of assimilation to Finland, with the pandemic having no discernible effect on their behavior.

## 6. Conclusion

Increased digitalization enables the emergence of cross-border activity spaces in which immigrants conduct daily life in their host-country neighborhoods while remaining intensively digitally and socially connected to their country of origin (Cagney et al., 2020). When digital divides are minimal, these activity spaces are integral to migrants' everyday lifeworlds, combining relational spaces created through online communication, platforms, and information flows with physical geographies that are increasingly intertwined. This impacts also the formation of institutional cross-border activity spaces (see Song et al., 2024).

In an increasingly interconnected and mobile yet crisis-prone world, as demonstrated by the Covid-19 pandemic and the escalation of war in Ukraine, understanding how migrants navigate the interplay between digital and physical cross-border interaction between the country of origin and that of current residence is essential for grasping contemporary lives across borders (Andrejuk, 2022; Herbig et al., 2025; Jauhainen, 2026). This article contributes conceptual and empirical insight by examining how Estonian immigrants in Finland adapted their cross-border practices during and after the pandemic, preserving, modifying, and reconfiguring ties across space, time, and media.

The analysis demonstrates how digital transitions reshape cross-border activity spaces for ethnic groups whose everyday lives span multiple spatial and technological domains. The pandemic operated as a critical juncture that disrupted physical mobility and intensified reliance on digital communication and interaction, revealing both the resilience of migrant ties and the differentiated ways digital and physical mobilities structure their spatial agency, access to opportunity, and experiences of belonging. These findings indicate the theoretical importance of cross-border activity spaces and highlight digital inclusion as a key condition for equitable participation in social life across national borders.

The findings show that digital communication and interaction played a crucial role during the pandemic in sustaining Estonians' emotional, cultural, and informational ties across borders, thereby maintaining their cross-border activity spaces. Overall, digital communication functions as a complement not a substitute to physical cross-border engagement, highlighting the enduring importance of embodied social relations and place-based ties. Once travel restrictions eased, many Estonians increased both the frequency and duration of their visits. Notably, retirees and others over 60 differed somewhat from employed respondents and those with underage children: After the height of the pandemic they made longer and more frequent trips to Estonia, as they were less constrained by work obligations. Furthermore, older generations were the most consistent consumers of both Finnish and Estonian media.

Digital transitions alter but do not erase the centrality of physical co-presence in migrants' cross-border activity spaces. Instead, migrants recalibrate these practices dynamically as constraints and opportunities shift, creating new configurations of cross-border engagement. Among Estonians in Finland, digital interaction primarily reinforced national identity and origin-oriented belonging rather than fostering hybrid

transnational identities or deeper embeddedness in Finland. In this sense, digital tools functioned more as connective infrastructures strengthening homeland affiliations. This highlights how evolving digital geographies may unevenly reproduce or challenge existing patterns of spatial inclusion and exclusion in host contexts.

With respect to spatial inequality, the study illustrates that access to affordable, familiar, and linguistically accessible digital infrastructures enabled continued cross-border engagement for Estonians in Finland. For migrants in more precarious legal, economic, or technological positions, the shift from physical to digital space may reproduce or intensify exclusion from essential social, economic, and familial networks. However, a limitation of this study is the lack of in-depth analysis of the content of Estonian immigrants' digital practices, and the long-term effects of the pandemic remain uncertain given that survey data covers only 2019–2022.

These findings call for more nuanced, comparative research into how digital transitions differentially shape the cross-border activity spaces of diverse ethnic groups across urban and regional settings. Migration and integration policies must treat digital inclusion not merely as a technological matter but as a core dimension of spatial justice and immigrant well-being. Digital inclusion is nowadays a fundamental part of social inclusion.

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### **Conflict of Interests**

The author declares no conflict of interest.

### **Data Availability**

The data is not available for public use.

### **LLMs Disclosure**

ChatGPT-4o has been utilized for language checking.

### **References**

Andrejuk, K. (2022). Pandemic transformations in migrant spaces: Migrant entrepreneurship between super-digitalization and the new precarity. *Population, Space and Place*, 29, Article 2564. <https://doi.org/10.1002/psp.2564>

Bacigalupe, G., & Cámara, M. (2012). Transnational families and social technologies: Reassessing immigration psychology. *Journal of Ethnic and Migration Studies*, 38(9), 1425–1438. <https://doi.org/10.1080/1369183X.2012.698211>

Cagney, K., Cornwell, E., Goldman, A., & Cai, L. (2020). Urban mobility and activity space. *Annual Review of Sociology*, 46, 623–648. <https://doi.org/10.1146/annurev-soc-121919-054848>

Cassarino, J. (2004). Theorising return migration: The conceptual approach to return migrants revisited. *International Journal on Multicultural Societies*, 6(2), 13–30. <https://ssrn.com/abstract=1730637>

de Haas, H., & Fokkema, T. (2011). The effects of integration and transnational ties on international return migration intentions. *Demographic Research*, 25, 755–782. <https://doi.org/10.4054/DemRes.2011.25.24>

Demirsu, I. (2021). Watching them grow: Intergenerational video-calling among transnational families in the age of smartphones. *Global Networks*, 22(1), 119–133. <https://doi.org/10.1111/glob.12334>

Docquier, F., Golenvaux, N., Nijssen, S., Schaus, P., & Stips, F. (2022). Cross-border mobility responses to Covid-19 in Europe: New evidence from Facebook data. *Globalization and Health*, 18(41), 1–17. <https://doi.org/10.1186/s12992-022-00832-6>

Engbersen, G. (2018). Liquid migration and its consequences for local integration policies. In P. Scholten & M. van Ostaïjen (Eds.), *Between mobility and migration* (pp. 63–76). Springer. [https://doi.org/10.1007/978-3-319-77991-1\\_4](https://doi.org/10.1007/978-3-319-77991-1_4)

Eurostat. (2025). *Internet activities*. <https://ec.europa.eu/eurostat/en/web/products-key-figures/w/KS-01-25-003>

Finnish Institute for Health and Welfare. (2022). Travel-related coronavirus measures to end at Finland's borders—From 1st July no certificates or tests will be required at the borders. <https://thl.fi/en/web/thlfi-en/-/travel-related-coronavirus-measures-to-end-at-finland-s-borders-from-1-july-no-certificates-or-tests-will-be-required-at-the-borders>

Flood, C., Chen, Y., Deonandan, R., Halabi, S., & Thériault, S. (2024). *Pandemics, public health, and the regulation of borders*. Routledge. <https://doi.org/10.4324/9781003394006>

Fredheim, K., & Varpina, Z. (2023). The Covid-19 pandemic's impact on migrants' decision to return home to Latvia. In A. Visvizi, O. Troisi, & M. Grimaldi (Eds.), *Research and innovation forum 2022* (pp. 767–777). Springer. [https://doi.org/10.1007/978-3-031-19560-0\\_67](https://doi.org/10.1007/978-3-031-19560-0_67)

Guild, E. (2020). Covid-19 using border controls to fight a pandemic? Reflections from the European Union. *Frontiers in Human Dynamics*, 2. <https://doi.org/10.3389/fhmd.2020.606299>

Herbig, L., Unan, A., Kuhn, T., Rodríguez, I., Rodon, T., & Kluver, H. (2025). Closed borders, closed minds? COVID-related border closures, EU support and hostility towards immigrants. *European Journal of Political Research*, 64(4), 1923–1944. <https://doi.org/10.1111/1475-6765.70025>

Hillyer, R. (2021). Staying connected: Effects of online platforms on transnational family relations and social capital. *Contemporary Japan*, 33(1), 3–23. <https://doi.org/10.1080/18692729.2020.1847389>

International Telecommunication Union. (2025). *Facts and figures 2025*. <https://www.itu.int/itu-d/reports/statistics/facts-figures-2025>

Jakobson, M., Järvinen-Alenius, P., Pitkänen, P., Ruutsoo, R., Keski-Hirvelä, E., & Kalev, L. (2012). The emergence of Estonian-Finnish transnational space. In P. Pitkänen, A. Içduygu, & D. Sert (Eds.), *Migration and transformation: International perspectives on migration* (Vol. 3, pp. 159–205). Springer. [https://doi.org/10.1007/978-94-007-3968-0\\_5](https://doi.org/10.1007/978-94-007-3968-0_5)

Järv, O., Tominga, A., Müürisepp, K., & Silm, S. (2021). The impact of Covid-19 on daily lives of transnational people based on smartphone data: Estonians in Finland. *Journal of Location Based Services*, 15(3), 169–197. <https://doi.org/10.1080/17489725.2021.1887526>

Jauhainen, J. (2026). *From Ukraine to the European Union and back: Return migration and reintegration of Ukrainians during the war*. Routledge. <https://doi.org/10.4324/9781003653745>

Jauhainen, J., & Smolander, S. (2025). Return, adaptation and transnational relations among Estonian citizens returned from Finland. *Journal of Baltic Studies*, 56(1), 23–42. <https://doi.org/10.1080/01629778.2024.2374780>

Johns Hopkins. (2023). *See the latest data in your region*. <https://coronavirus.jhu.edu/region>

Kedra, J. (2020). Performing transnational family with the affordances of mobile apps: A case study of Polish

mothers living in Finland. *Journal of Ethnic and Migration Studies*, 47(13), 2877–2896. <https://doi.org/10.1080/1369183X.2020.1788383>

Kriis.ee. (2022). *Current restrictions*. <https://web.archive.org/web/20220624144835/https://www.kriis.ee/en/covid-crisis-management-qa/crisis-management/current-restrictions#entry>

Levitt, P., & Glick Schiller, N. (2004). Conceptualizing simultaneity: A transnational social field perspective on society. *International Migration Review*, 38(3), 1002–1039. <https://doi.org/10.1111/j.1747-7379.2004.tb00227.x>

Levitt, P., & Jaworsky, B. (2007). Transnational migration studies: Past developments and future trends. *Annual Review of Sociology*, 33, 129–156. <https://doi.org/10.1146/annurev.soc.33.040406.131816>

Marlowe, J., Bartley, A., & Collins, F. (2017). Digital belongings: The intersections of social cohesion, connectivity and digital media. *Ethnicities*, 17(1), 85–102. <https://doi.org/10.1177/1468796816654174>

Martin, S., & Bergmann, J. (2021). (Im)mobility in the age of Covid-19. *International Migration Review*, 55(3), 660–687. <https://doi.org/10.1177/0197918320984104>

Mencutek, Z. (2022). Voluntary and forced return migration under a pandemic crisis. In A. Triandafyllidou (Ed.), *Migration and pandemics: Spaces of solidarity and spaces of exception* (pp. 185–206). Springer. <https://doi.org/10.1007/978-3-030-81210-2>

Merisalo, M., & Jauhainen, J. (2021). Asylum-related migrants' social media use, mobility decisions, and resilience. *Journal of Immigrants and Refugee Studies*, 19(2), 184–198. <https://doi.org/10.1080/15562948.2020.1781991>

National Digital Inclusion Alliance. (2017). *Definitions*. <https://www.digitalinclusion.org/definitions>

Nguyen, M., Gruber, J., Fuchs, J., Marler, W., Hunsaker, A., & Hargittai, E. (2020). Changes in digital communication during the Covid-19 global pandemic: Implications for digital inequality and future research. *Social Media + Society*, 6(3). <https://doi.org/10.1177/2056305120948255>

Recchi, E., & Favell, A. (Eds.). (2019). *Everyday Europe: Social transnationalism in an unsettled continent*. Policy Press. <https://doi.org/10.2307/j.ctvbqs785>

Reisdorf, B., & Rhinesmith, C. (2020). Digital inclusion as a core component of social inclusion. *Social Inclusion*, 8(2), 132–137. <https://doi.org/10.17645/si.v8i2.3184>

Ruotsala, H. (2021). Living on the both sides of an invisible border—The impacts of Covid-19 in the Tornio River Valley. *Hungarian Studies Yearbook*, 38(1), 147–162. <https://doi.org/10.2478/hsy-2021-0009>

Silm, S., Jauhainen, J., Raun, J., & Tiru, M. (2021). Temporary population mobilities between Estonia and Finland based on mobile phone data and the emergence of a cross-border region. *European Planning Studies*, 29(4), 699–719. <https://doi.org/10.1080/09654313.2020.1774514>

Simola, A., May, V., Olakivi, A., & Wrede, S. (2023). 'On not 'being there': Making sense of the potent urge for physical proximity in transnational families at the outbreak of the Covid-19 pandemic. *Global Networks*, 23(1), 45–58. <https://doi.org/10.1111/glob.12382>

Skovgaard-Smith, I. (2023). Transnational life and cross-border immobility in pandemic times. *Global Networks*, 23(1), 59–74. <https://doi.org/10.1111/glob.12350>

Song, Z., Yao, Q., & Liu, W. (2024). The growth of cross-border regions toward "two countries, one park": A case study of the Mohan–Boten cross-border cooperation zone. *Growth and Change*, 55(4), Article 70005. <https://doi.org/10.1111/grow.70005>

Statistics Estonia. (2025a). *RVR08: External migration by year, indicator, age group, sex and citizenship*. [https://andmed.stat.ee/en/stat/rahvastik\\_\\_rahvastikusundmused\\_\\_ranne/RVR08/table/tableViewLayout2](https://andmed.stat.ee/en/stat/rahvastik__rahvastikusundmused__ranne/RVR08/table/tableViewLayout2)

Statistics Estonia. (2025b). *TU63: Outbound overnight trips of Estonian residents by country of destination*. [https://andmed.stat.ee/en/stat/majandus\\_\\_turism-ja-majutus\\_\\_eesti-elanike-reisimine](https://andmed.stat.ee/en/stat/majandus__turism-ja-majutus__eesti-elanike-reisimine)

Statistics Finland. (2025). *Maahan–ja maastamuutto kansalaisuuden, syntyperän ja kielen mukaan, 1990–2023*. [https://pxdata.stat.fi/PxWeb/pxweb/fi/StatFin/StatFin\\_muutl/statfin\\_muutl\\_pxt\\_11a8.px](https://pxdata.stat.fi/PxWeb/pxweb/fi/StatFin/StatFin_muutl/statfin_muutl_pxt_11a8.px)

STT. (2021, January 23). Viron ulkoministeri toivoo, että Suomi keventää asettamiaan matkustusrajoituksia. *Yle News*. <https://yle.fi/a/3-11752150>

Tedeschi, M., Vorobeva, E., & Jauhainen, J. (2022). Transnationalism: Current debates and new perspectives. *GeoJournal*, 87, 603–619. <https://doi.org/10.1007/s10708-020-10271-8>

Telje, K. (2019). Family involved or left behind in migration? A family centred perspective towards Estonia-Finland cross-border commuting. *Mobilities*, 14(5), 715–729. <https://doi.org/10.1080/17450101.2019.1600885>

Telje, K., Vill, K., & Silm, S. (2023). Transnationalism in the digital age: Estonians connected to their country of origin via ICT. *Journal of Baltic Studies*, 54(3), 513–531. <https://doi.org/10.1080/01629778.2022.2144395>

Toumi, I. (2023). 'A wedding through a piece of glass': Transnational Tunisian family communication as driver of ICT adoption. *Media, Culture and Society*, 45(1), 142–156. <https://doi.org/10.1177/01634437221099616>

Triandafyllidou, A. (2022). Spaces of solidarity and spaces of exception: Migration and membership during pandemic times. In A. Triandafyllidou (Ed.), *Migration and pandemics: Spaces of solidarity and spaces of exception* (pp. 3–22). Springer. <https://doi.org/10.1007/978-3-030-81210-2>

Verdery, A., Mouw, T., Edelblute, H., & Chavez, S. (2018). Communication flows and the durability of a transnational social field. *Social Networks*, 53, 57–71. <https://doi.org/10.1016/j.socnet.2017.03.002>

Vertovec, S. (2004). Migrant transnationalism and modes of transformation. *International Migration Review*, 38(3), 970–1001. <https://doi.org/10.1111/j.1747-7379.2004.tb00226.x>

Visit Finland & Business Finland. (2019). *Visit Finland visitor survey 2018*. <https://www.businessfinland.fi/4a1d9f/globalassets/julkaisut/visit-finland/tutkimukset/2019/visit-finland-visitor-survey-2018.pdf>

Vorobeva, E., & Jauhainen, J. (2023). Transnationalism and belonging: National identity negotiations and their outcomes. *Journal of Ethnic and Migration Studies*, 49(13), 3389–3408. <https://doi.org/10.1080/1369183X.2023.2184293>

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