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Exploring the Role of Digitalized Migration in Polycrisis: Opportunities and Limitations in the Context of e-Residency



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Abstract

This study examines the digitalised dimensions of migration during polycrises that increasingly restrict physical mobility and introduces digitalised migration as an analytical framework through the case of the government-supported e-Residency programme. Using Estonia's e-Residency as an example, the study conceptualises the integration of digital identity holders into Estonia's economic and administrative systems as virtual mobility, highlighting emerging migrant subjectivities and contributing to contemporary migration debates. Employing a data collection and analysis process that integrates traditional and innovative methods, this study examines the dynamics driving individuals towards transnational virtual mobility during periods of polycrisis and identifies the opportunities and limitations of this digitalised migration form. First, user comments on Turkish-language YouTube videos about Estonia's e-Residency programme were gathered and analysed to explore digital discussions using clustering algorithms and interpretive content analysis. Second, in-depth interviews were conducted with e-Residents and field experts, and the resulting data were analysed through interpretive content analysis. The findings reveal the potential, opportunities, limitations, and risks of e-Residency as a digitalised migration infrastructure, particularly its role in strengthening individual resilience amid economic instability, armed conflict, and global health emergencies. They also underscore the economic and intangible advantages that digitalised migration offers to source and destination countries in the era of polycrisis.

Keywords

Digitalised migration • polycrisis • e-Residency • Estonia • Türkiye



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Introduction

This study argues that the multidimensional effects of polycrisis, which constrain and reshape physical mobility, make it possible to examine transnational virtual mobility through emerging migration practices and migrant subjectivities. In this context, the study discusses the digitalised dimensions of migration and proposes the concept of digitalised migration as an analytical framework, using the government-issued digital identity programme e-Residency as its primary case. This proposal is informed by three strands of existing scholarship: the digital migration approach, which analyzes how migration-related dynamics transform in relation to historical, political, and technological shifts (Leurs & Witteborn, 2021; Leurs, 2023; Arthur & Smith, 2022); studies that conceptualise citizenship and identity as data-driven and algorithmically structured forms extending beyond territorial boundaries (Bridle, 2016; Tammpuu & Masso, 2019; Hintz et al., 2019; Calzada, 2021, 2023; Masso, 2024); and research examining the virtual mobility of entrepreneurs in the global business environment (Kostruba, 2025; Kotka et al., 2015). While related to digital migration, the concept of digitalised migration offers a distinct conceptual perspective. Whereas digital migration research typically examines how digital tools shape or accompany physical migration processes (Bartlett et al., 2025; Godin et al., 2025; Hoang, 2025), the digitalised migration framework advanced in this study seeks to understand cross-border mobility enabled by digital identities and virtual participation mechanisms, such as e-Residency, without any physical relocation. This perspective also enables an examination of the dynamics that lead individuals to adopt virtual mobility under conditions of polycrisis, thereby addressing the largely overlooked digital dimensions in debates on mobility during and after crises. Considering the wide-ranging impacts of regional conflicts in Ukraine and Palestine, disruptions to the global economic system, and the profound consequences of the COVID-19 pandemic, investigating technologies that facilitate transnational virtual mobility has become increasingly critical. In this regard, government-issued e-residency programmes offer a tangible empirical foundation for studying digitalised migration. Currently, countries such as Estonia, Lithuania, Azerbaijan, Portugal, and Ukraine launched e-Residency programmes, among which Estonia continues to lead the e-residency space with its mature ecosystem (Meier, 2025). Accordingly, this study examines Estonia's e-Residency programme as a case study for understanding the

transformation of migration practices and migrant identities within digital environments and infrastructures in an age of polycrisis. By leveraging digital communication technologies and operating within digital geographies, e-residents can transfer their human capital to target countries without physical movement. They may obtain economic advantages similar to those associated with traditional migration, overcome crisis-induced barriers that weaken bureaucratic structures and restrict economic flexibility, and create value in international biometric and data-driven domains through their digital presence, even in the absence of physical relocation. Therefore, the study argues that these opportunities reveal a digitalised migration framework that can generate distinct implications for both origin and destination countries in an era characterised by multiple, overlapping crises. This study focuses on exploring individuals' motivations to digitally migrate through the Estonian e-Residency programme in order to overcome the risks produced by the age of polycrisis. Another focus of the study is to investigate how Turkish e-residents perceive the opportunities and limitations of digitalised migration in the context of polycrisis. This study focuses on digitalised migration from Türkiye to Estonia. Although Türkiye holds a significant place within Estonia's e-Residency Programme, research addressing this specific context remains highly limited. While the primary emphasis is on the Türkiye-Estonia case, broader international dynamics related to polycrisis and digitalised migration are also considered.

Considering the focus of the study, the structure of the research has been organised as follows: the concept of polycrisis is described in a multidimensional manner and crystallised through contemporary examples. Subsequently, the intellectual foundation of the concept of digitalised migration is constructed, and the position of Estonian e-Residency as a digitalised migration infrastructure is discussed. Finally, considering the findings obtained from expert interviews and YouTube comment analysis, the potential, opportunities, limitations, and risks of digitalised migration through the e-Residency programme are explored.

Interconnected Drivers of Contemporary Polycrisis: Conflict, Pandemic, Economic Instability, Migration

By definition, a crisis is necessarily temporary, a break in the regular or expected course of events. Morin and Kern (1999) spoke of intertwined and overlapping crises affecting humanity and argued

that the most “vital” problem of our time is not a single threat but a “complex combination of problems, antagonisms, crises, uncontrollable processes, and the general crisis of the planet.” They called this phenomenon a polycrisis. Swilling (2013), adopting Morin and Kern's concept, defines a polycrisis as “an intertwined cluster of globally interacting socioeconomic, ecological and cultural-institutional crises that cannot be reduced to a single cause.” Tooze and Hobson argue that the polycrisis defines our age, citing it as an intertwined system of increasing problems (cited in Henig & Knight, 2023). The term polycrisis is also called polycrisis in some contexts. Tooze (as cited in Liu, 2025) notes, “In polycrisis, the shocks are different, but they interact to make the whole more overwhelming than the sum of its parts.” Lawrence et al. (2024) illustrate the concept of polycrisis using a domino metaphor. In this context, a polycrisis environment, defined by the interaction between global crises, represents a cause-and-effect chain in which one crisis triggers another. Based on these definitions, polycrisis can be understood as a set of regional crises with various profiles that nevertheless have significant inter-regional or global impacts.

Many economic, political, or social adversities caused by or contributing to crises can also become drivers of migration mobility (Castles & Miller, 1998). For example, the political, economic, and social effects of the war in Ukraine have triggered widespread crises not only within Ukraine but also across neighbouring countries. In particular, the mass exodus from war zones has significantly altered migration dynamics in Ukraine and several EU countries. On an international scale, numerous population movements that cause and interact with polycrisis illustrate how conflict, human mobility, and humanitarian challenges are deeply intertwined. These include the flight of thousands of people towards Europe, particularly across the Mediterranean; the irregular migration at the southern border of the United States; the migration of Syrians in Türkiye and Lebanon; the protracted plight of Palestinians in the Middle East since the 1950s; and the ongoing displacement of Afghans in Iran and Pakistan since the 1970s. (Cantat et al., 2023). On the other hand, although it is quite common to diversify the causes of migration as a natural social practice, it is very important to consider the consequences that migration practice has created or will create at the level of countries as a result of this polycrisis. This is because when crises are associated with migration, they often play an important role in the trust policies adopted by countries. Indeed, Lawrence et al. (2024), evaluating crisis interactions between systems in the context of migration, mention that a

crisis in one system can interact with a crisis in another system and change the dynamics of each of them (p.8):

“For example, an international security crisis can exacerbate a climate crisis by diverting urgently needed attention and resources away from climate action, while a climate crisis can intensify an international security crisis by escalating conflict over resources and encouraging mass migration.”

In addition to all these factors, the COVID-19 pandemic can be identified as one of the key triggers of contemporary polycrisis. It emerged at a time when global population movements, which were driven by work, education, family ties, tourism, and survival, have been more extensive and interconnected than ever before, both locally and internationally (Guadagno, 2020). Moreover, the pandemic triggered a global economic recession by significantly shrinking economic activity, which adversely affected workers' employment and income levels, thereby setting the stage for increased migratory mobility. The current framework illustrates that migration functions both as a driver and a consequence of the polycrisis era. Another example of polycrisis as a concept that describes inter-related problems at different spatial and temporal scales and depths—structural, immediate, long, global and local (Henig & Knight, 2023)- is the 2008 global economic collapse in the United Kingdom. This collapse marks a process that has continued to this day and has been replaced by austerity. The job losses associated with these economic crises, the discontent caused by below-inflationary wage growth and household precarity, rising anti-establishment sentiment, and xenophobic anti-immigrant sentiment have all led to a dual crisis of economy and immigration. The dual crisis of the economy and migration coincided with a pandemic that required massive spending on health care to develop vaccines, pushing vulnerable communities further into precarity across all areas of social welfare (Henig & Knight, 2023). Since the mid-2000s, alongside protracted conflict situations, a series of new crises with strong migration elements have interacted (Lindley, 2014, p. 1), from uprisings in the Arab world to the global economic crisis, from drought in East Africa to mega-disasters such as the Haiti earthquake and typhoons in the Philippines. Again, “Europe's first polycrisis was triggered by the intertwined effects of the Euro/external debt crisis (2009-2016) and the refugee/migration crisis (2015-2016), each of which mobilised specific constituencies and led to deep divisions between member states” (Nicoli & Zeitlin, 2024, p. 3012). This demonstrates that regional crises within a polycrisis context can generate socioeconomic impacts on regions geographically distant from the

original crisis zone. As emphasised by Voss and Lorenz (2016, p. 47), the term crisis carries ambivalent connotations, referring not only to threats but also to the potential for positive outcomes through the reshaping of habitual patterns, social practices, and institutions. This perspective, which the authors frame as crisis optimism, enables an understanding of the relationship between polycrisis and migration in terms of opportunities created by the digital ecosystem rather than merely as threats. At this point, it is essential to discuss the concept of digitalised migration, as it offers opportunities to address the risk factors generated by the age of polycrises and has the potential to contribute to the resolution of elements that trigger such crises. Furthermore, it represents a transformation of physical migration, which is both a consequence of and a contributor to polycrisis dynamics.

Estonian e-Residency as an Instrument of Digitalised Migration in the Era of Polycrisis

The concept of digitalised migration proposed in this study is grounded in a body of literature demonstrating how digitalisation reshapes identity, mobility, and state-citizen relations. In this regard, existing research shows that identities and citizenship practices are increasingly shaped not by territorial boundaries but by data-driven digital infrastructures (Hintz et al., 2017; Calzada, 2021; Molnar, 2022). These studies also highlight how the e-Residency digital identity assigns a virtual dimension to state-citizen relations (Orgad, 2018; Tammpuu & Masso, 2018) and conceptualise the citizenship emerging through e-Residency as citizenship by connection (Masso et al., 2024) or as a form of algorithmic citizenship (Calzada, 2023). Accordingly, the state-citizen interaction shaped by the e-Residency digital identity underscores a form of virtual transnationalism that enables non-residents to access administrative, economic, and legal infrastructures (Sullivan & Burger, 2017; Tammpuu & Masso, 2019), thereby pointing to new forms of subjectivity rooted in digital legitimacy. Estonia's e-Residency programme enables entrepreneurs to establish companies that operate entirely through digital business models, access financial services without leaving their home countries, and enter the European Union market through their digitally managed enterprises (Abaku et al., 2021). Examining the programme's structure clarifies e-Residency's role in digitalised migration. Launched in 2014, Estonia's e-Residency programme provides access to the country's digital identity

system. While it does not confer residence permits, citizenship, or visa rights, it enables users to access Estonia's digital public and commercial services. e-Residents can sign documents online and establish or manage a fully digital company. Profits retained within the company are not taxed, whereas distributed profits are subject to taxation. The programme supports global entrepreneurs operating within the EU market and contributes to Estonia's economic growth. The e-Residency card does not function as a passport and grants no travel rights (e-Residency, 2025). Within the framework of "digitalised migration" adopted in this study, e-Residency is conceptualised as a mechanism that facilitates the transfer of human capital to the target country without physical relocation. At this point, e-Residency, which can serve as a transformative venue for global social interaction and commercial activity (Kotka et al., 2015), is understood as one of the key components of transnational citizenship and mobility enabled through virtual means (Tammpuu & Masso, 2019). This perspective builds on approaches that move beyond traditional understandings of migration as solely physical relocation and instead conceptualise it as part of a transnational social field shaped by social ties, digital interactions, and economic connections (Levitt & Glick Schiller, 2004; Sheller & Urry, 2006). These conceptualizations have been further expanded by approaches that reassess migration and migrant experiences through the lens of digital infrastructures (Fayomi et al., 2023) and paradigm shifts that explain migration motivations not only through external factors but also through individuals' subjective aspirations and capacities to realise them (de Haas, 2021). Within this framework, the concept of digitalised migration contributes to this expanded understanding by foregrounding forms of mobility made possible through e-Residency, which occur without physical relocation and therefore extend migration theory beyond its conventional spatial foundations. Digitalised migration also draws on the insights of digital migration scholarship, which has examined how digital practices accompany or mediate physical migration processes, including digital diasporas, online community formation, and migrants' engagement with platform economies (Ponzanesi, 2020; Leurs & Witteborn, 2021; Leurs, 2023). However, while digital migration research has largely focused on "how migrants use, appropriate, and creatively expand digital technologies to enhance and augment their migration processes and experiences" (Shah, 2024, pp. 197-198), digitalised migration emphasises a distinct shift by concentrating on forms of mobility that take place entirely through digital means and without any physical relocation.

The primary analytical focus that concretises the transformation of mobility is the notion of polycrisis. As Triandafyllidou et al. (2024) emphasise, reflecting on new forms of migration and mobility and their implications for identity, citizenship, and migration governance holds significant potential for identifying key challenges and opportunities related to migration and social change in a world shaped by overlapping global crises. Moreover, particularly in the context of transnational networks, rethinking what it means to hold the status of citizenship in an era of polycrisis becomes increasingly important. Indeed, the intensification of intersecting health, economic, and climate crises, most notably the pandemic, has brought to the fore new patterns of digitally mediated transnational attachment and mobility alongside traditional forms of physical migration (Nehring & Hu, 2021; Harima, 2022; Skovgaard-Smith, 2023). Within this context, the concept of digitalised migration becomes particularly salient, as the digitalisation of state migration and governance systems enables individuals to engage in cross-border economic, administrative, or social participation without physical relocation (McAuliffe et al., 2021). For instance, 61% of e-Residency holders reported that the Estonian e-Residency Programme facilitated the management of their business operations during the COVID-19 pandemic. Moreover, the programme's light bureaucratic procedures and the flexibility it offered throughout the quarantine period were particularly emphasised (Brown, 2020). Taken together, these developments suggest that digitalised migration provides a strong analytical framework for understanding how polycrisis contexts reshape mobility, revealing digital and platform-based forms of movement that extend beyond traditional, physically grounded models of migration. From this perspective, the case of Estonia's e-Residency programme illustrates that digitalised migration, offering political, cultural, social, and economic advantages for both source and destination countries, should be recognised as a relevant concept, particularly in crisis contexts where physical mobility is constrained (e.g., post-COVID-19) and within socioeconomic ecosystems marked by rising global tensions and ongoing military or political conflicts. Given that entrepreneurs and freelancers in developing, non-EU countries face increasing barriers in the shifting global business environment (Kostruba, 2025), e-Residency can be viewed as a viable alternative to traditional migration and physical cross-border mobility for individuals whose transnational movement is restricted in various ways (Tamppuu & Masso, 2019). The high volume of e-Residency applications from non-EU countries, such as Ukraine and Türkiye, both significantly affected by economic and

political strains (e-Residency, 2024), further supports this assessment. The digitalised migration route, which has become particularly prominent in the Baltic region and especially in Estonia, is actively utilised according to the strategic needs and goals of individual states (Tschap, 2024, p. 55). As Tammpuu and Masso (2018) note, Estonia has enhanced its global visibility and cultivated the identity of a transnational society through the e-Residency programme. At the same time, digitalised migrants who hold e-Residency cards and reside across various countries constitute a form of soft power for Estonia (Blue, 2021; Kimmo et al., 2018). Consequently, Estonia emphasises digital diplomacy to maintain a global presence, effectively transforming digital identity into a tradable and distributable national trademark (Tschap, 2024, p. 53). Digital solutions facilitate individuals' interactions with governments and institutions, support their participation in global markets, and enable the formation of transnational connections. As a concrete manifestation of digitalised migration, the e-Residency programme creates opportunities for individuals living in different geographies who are affected or potentially affected by various crises. This dynamic signals a process in which individuals reconstruct their migrant identities in digitalised forms.

According to the 2024 data on companies established under Estonia's e-Residency Programme, Türkiye ranks fourth both in the number of companies founded and in the number of individual applications submitted in the past three months (e-Residency, 2024). Türkiye has been significantly affected by global economic pressures following the post-pandemic period, as well as by the military and political conflicts in its immediate region. In this context, the digitalised migration opportunities offered by Estonia's e-Residency Programme, particularly the ability to digitally transfer economic and intellectual capital, provide a useful framework for understanding the conditions of polycrisis and situating the e-Residency experience within the broader concept of digitalised migration. Examining how digitalised migration is perceived by digital migrants and experts is also essential for assessing the opportunities e-Residency may offer and for identifying potential implications for the countries involved in the process. Although Türkiye holds a prominent position in the programme, national and international research focusing specifically on Türkiye and Turkish e-Residents remains limited. Given the substantial representation of Turkish e-Residents in the programme and the global nature of polycrisis, the advantages and limitations of digitalised migration can be evaluated

in a broader international context. In line with this aim, the following research questions are addressed:

1. What are the driving factors behind digitalised migration through Estonian e-Residency in the age of polycrisis?
2. What are the perceived opportunities and limitations of digitalised migration for Turkish digital migrants through Estonian e-Residency in the age of polycrisis?

Method

This explorative study employed a two-stage data collection and analysis process that integrates traditional and innovative research methods. Ethical board approval was obtained from the researchers' institutions. The study uses the concept of interpretive content analysis, which aligns with the principles of exploratory research. As Drisko and Maschi (2016) emphasise, exploratory designs are appropriate when there is limited prior knowledge, conceptualisation, or theoretical grounding on a given topic. Interpretive content analysis enables the systematic and transparent examination of both explicit and subtle meanings within content while maintaining a close connection with the data. Although the concept of digital migration is related to the components of the polycrisis, which has become a defining reality of our time, there is a limited number of studies at this intersection. In particular, there are no studies that specifically address e-Residency within this intersection. This indicates an unsaturated nature of the field in terms of knowledge accumulation. Therefore, it should be noted that findings would be instrumental in pioneering the knowledge base in this area.

Stage 1: Exploring Digital Discussions: Data Collection & Analysis

Expert interviews were positioned as the primary source of data within this study. However, YouTube user comments have been examined as complementary data to explore clues about the types of problems individuals seek to address through e-Residency in response to the polycrisis. This has served to enhance the effectiveness of the expert interview findings and support them with an external data source.

In the first stage, user comments on social media platforms were analysed to explore discussions on Turkish-language videos about the Estonian e-Residency. According to Datareport (2023), the platforms on which users in Türkiye spend the most time are Instagram, TikTok, and YouTube, respectively. In this study, which focuses on the intersection of polycrises and e-Residency, data were collected from YouTube because of its nature as a platform where individuals frequently engage in information-seeking behaviour. Starbird (2020) states that individuals attempt to overcome information gaps that emerge during times of crisis through a collective sense-making process by seeking information on social media. In a study by İlhan and Görgülü Aydoğdu (2019) with a sample of Turkish users, most participants are on YouTube to obtain information. The findings of prior research suggest that, to cope with the effects of polycrises, individuals may engage in information-seeking behaviour on YouTube, and the platform can serve as a valuable data source. There are also technical justifications for collecting data from YouTube. The platform provides researchers with Data API v3, which enables an effective data collection process. Turkish-language videos about the Estonian e-Residency were identified, and the user comments posted under these videos were collected. The researchers employed YouTube Data API v3 and Facepager (Jünger & Keyling, 2021) to facilitate the extraction of user comments.

In the analysis phase, a clustering algorithm was designed using Orange Data Mining. In this study, the clustering algorithm was preferred because it informs researchers before manual content analysis by thematically categorising the collected comments in an automated manner. This situation enables researchers to effectively conduct interpretive content analysis, which has an inductive nature. After importing the YouTube comments into the algorithm, several preprocessing steps were applied to improve clustering accuracy: comments were tokenised, stop words were filtered out, URLs were removed, and all text was converted to lowercase. The stopwords list consisted of 187 words that contain questions suffixes, conjunctions, and words that function within the agglutinative structure of Turkish but do not have a thematic function. To calculate the similarity between YouTube comments, the cosine distance between text entries was computed, and similar comments were grouped into clusters. In the final step, videos containing similar comment themes were grouped into clusters. Researchers examined these clusters using the distance map and, more specifically, the hierarchical clustering table. These clusters provided insights into the thematic pat-

terns present in YouTube user discussions. Building on the visualised cluster structure, researchers applied interpretative content analysis to explore the themes within each cluster.

Stage 2: In-depth interviews with experts after exploring digital discussion

Referring to the ideas of Bogner & Menz and Meuser & Nagel, Li (2021, p. 327) describes experts as having the “institutionalised authority to construct reality” and highlights expert interviews as functional for explorative and theory generation purposes in little investigated fields of study. On the other hand, the exploratory expert interviews approach is employed in poorly defined areas to develop basic hypotheses and adopts interpretivist epistemology (Hassmann & Westner, 2025, pp. 64, 68). In this context, expert interviews are positioned as an effective data collection method to explore the intersection of polycrisis and digitalised migration; an area of significance within the scope of and digital transformation, yet one that remains under-researched.

Expert interviews were conducted to explore digitalised migration’s role in polycrisis challenges. Experts were purposively selected based on their high-level expertise and academic or professional experience in e-Residency, media, digital technologies, data-driven systems, and polycrisis, and their willingness to participate. In addition, since only 16% of e-residents are women (e-Residency, 2022), accessing female experts or e-residents in the field becomes more challenging. In line with these criteria, the research was conducted with the contributions of various professionals, each representing a different aspect of the e-Residency ecosystem through their area of expertise and providing an assessment in the context of polycrisis, with the aim of revealing the multidimensional structure of the field. The selection process did not solely rely on e-Residents’ perspectives. To capture the programme’s multi-faceted nature, input was gathered from experts across disciplines. Participant 1 (F, 38, Estonia, Consultant) offers consultancy on the programme, contributing through both professional experience and personal practice. Participant 2 (M, 45, Estonia, Business Consultant) provides business consulting and develops projects in Estonia that support the country’s financial growth and international image. Participant 3 (M, 36, Türkiye, Computer Engineer) promotes the programme in Türkiye via social media, ensuring proper understanding and legal clarity, and serves as a key expert due to direct communication with the e-Residency team. Participant 4 (M, 45, Türkiye, Consultant and Data Expert) provides analytical insights into the programme’s digital advan-

tages as a data expert. Participant 5 (M, 51, Germany, Company Owner), a former diplomat, manages European activities through the Estonian e-Residency programme and evaluates its technological and managerial benefits. Participant 6 (M, 48, Türkiye, Professor), examines the programme's fully online structure and social network-based communication from a communication and digital media perspective. Participant 7 (M, 45, Türkiye, Author and Columnist), drawing on expertise in digital media and opinion leadership, provides insights into social perceptions, communication practices, and media representations of the programme. Participant 8 (M, 49, Türkiye, Journalist), who has a background in technology journalism, is evaluating the programme in terms of technological infrastructure and digital transformation.

Prior to data collection, an interview roadmap was developed (as outlined in deMarrais, 2003) and discussed with researchers, who are not part of the research team, working in the field of new media. The interviews were conducted following the following structure: the interview started with initial questions, additional interview questions were asked, the responses were probed for detailed explanations, and the interviewer took the role of active listener (deMarrais, 2003, p. 66). Interviews were held via online video conferencing platforms, recorded, and transcribed. The data were analysed using an interpretative content analysis approach. In the initial analysis phase, half of the data were reviewed, and a discussion session was held among the researchers to collaboratively identify emerging patterns. Measures were taken to minimise bias and ensure the inclusion of divergent or minority viewpoints. In the next phase, the remaining interview data were analysed, followed by a second discussion session to ensure inter-coder agreement. Upon finalising the analysis, the findings were discussed with an external researcher specialising in new media, who is not affiliated with the research team, to further strengthen inter-coder agreement.

Findings

In the first phase of the research, which focused on observing digital discussions on social media, 1867 videos were retrieved by searching YouTube using highly inclusive keywords. Following a review of these videos, 19 were identified as relevant to the Estonian e-Residency programme. The themes of the videos from which user discussions were collected include content that introduces the Estonia e-Residency programme, highlights the scope of commercial activities that can be conducted

through e-Residency, provides guide-format explanations on how to obtain e-Residency, positions e-Residency as a formula for accessing the EU market, and focuses on potential tax advantages it offers. Additionally, there are videos that present e-Residency as a solution for accessing payment methods not available in Türkiye, as well as those that refer to e-Residency as a form of “digital citizenship.” From these 19 videos, 250 user comments were collected. It was observed via the clustering algorithm that videos with similar comment patterns were grouped into four sub-clusters under two main clusters. The following themes were identified due to interpretive content analysis within the clusters.

Table 1

Thematic distribution of clusters

Main Cluster 1		Main Cluster 2	
Sub Clusters	Content of User Comments	Sub Clusters	Content of User Comments
Sub-Cluster 1 (Video: 1, 2, 3, 4)	Regulations and links about the e-Residency.	Sub-Cluster 1 (Video: 9, 10)	Question on taxation
Sub Cluster 2 (Video: 5, 6, 7, and 8)	Accessing payment systems, information request on legislation, and questions about alternatives & costs	Sub Cluster 2 (Video: 11, 12, 13, 14, 15, 16, 17, 18, 19)	Taxation, potential for residence permit, company establishment, methods of transferring profit to homeland, and accessing payment systems

The results of the interviews directed the researchers towards the following topics and codes (see Table 2).

Table 2

Topics and codes obtained through in-depth interviews

Topics	Code
Key parameters causing digitalised migration	-Globalisation global market access - Access to financial services - Bureaucratic simplifications - Tax-related advantages
The functionality of digitalised migration in polycrisis	-Digital services that reduce bureaucracy - Ease of access to financial services - Ability to continue commercial activity - Time-saving digital services
Opportunities of digitalised migration to address polycrisis	-Hedge against economic irregularities and uncertainties in the source country

Limitations and risks of digitalised migration in polycrisis	- To sustain economic activities in crises caused by political tensions and war - Receiving fast feedback on public services - Contributing to country image and cultural recognition - Attracting skilled labour - Potential to create cooperation between countries - Capacity requirement for digital business models - Requirement for strong digital infrastructure - Economic stability - Access to online payment systems - Risks to the climate crisis
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Driving factors causing digitalised migration in the polycrisis era

The dimension of globality is one of the prominent factors of digitalised migration. It is also possible to interpret this dimension as overcoming the challenges of physical presence that traditional migration involves.

“It doesn’t require you to be anywhere while you do it. It doesn’t require you to go anywhere. So, it doesn’t require you to go or be or come from anywhere. It is digital and therefore global.” (P5, Company Owner).

“In traditional migration, there are much greater difficulties, you physically change your place (...) you have to adapt to another culture when you are offline, there are many difficulties such as learning its language and conducting daily business, realities such as people being cut off from their social environment exist, but this digital citizenship is something that offers much more comfort zones in that regard.” (P7, Author and Columnist).

It is also important to note that in digital discussions, there are criticisms regarding the fact that e-Residency does not permit physical mobility. In this context, it can be argued that one of the initial motivations driving individuals towards digitalised migration is the potential it offers to enable physical migration in the long term. In other words, for those who can work remotely, it enables

the avoidance of local polycrisis parameters without physical mobility; and for those who wish to migrate physically, it potentially provides a first step within the digital cyberspace.

Advantages emphasise the triggering role of digital services, such as fully online access to financial systems that are effective in the process of establishing a company and conducting its activities, and the ability to perform fast transactions without bureaucratic obstacles. In this context, it is possible to define the digitalised migration route through economic motivations in the context of polycrisis. In addition, especially for Turkish e-residents, tax-related issues seem to be an important parameter in the preference for digitalised migration.

“Being able to invoice from a country in the EU is a great advantage both for America and Europe. Anyway, these are the regions where I work. I cannot say it is a disadvantage from Türkiye, but I can say that the EU puts you ahead.” (P1, Consultant)

“In recent years, there have been serious fluctuations in Türkiye, especially in terms of corporate tax. This uncertainty is a threat to entrepreneurs. Therefore, to eliminate this threat, what digitalised migrants are doing, I should globalise and follow my work in different countries than Türkiye.” (P2, Business Consultant)

When observed in the digital discussions, it is possible to observe that there are inputs related to starting a business, tax advantages, and access to the EU market. Users perceive Estonia as a stepping stone to access the EU market and are engaged in an information-seeking process related to trading with other EU countries. Additionally, there are discussions in which users investigate the differences in tax rates between Türkiye and Estonia, focus on discovering potential advantages, seek information regarding money transfer processes between Estonia and Türkiye, and praise Estonia’s fair tax policies.

The functions and opportunities of digitalised migration in the polycrisis era

Digitalised migration is directly associated with unexpected crises, such as pandemics, conflicts, and predictable crises, such as migration or climate crises. This association is predominantly discussed through the economic dimension of the polycrisis environment. The functions of digitalised

migration are emphasised in terms of reducing bureaucracy, facilitating access to financial systems, and sustaining commercial activity. Participants primarily associated the solutions presented by digitised migration with the pandemic and its economic dimension. In this context, by leveraging the capabilities of the digital environment through e-Residency, digitalised migrants benefit from several practical functions, such as conducting fast transactions by overcoming bureaucratic obstacles, engaging in economic activities at a lower cost than traditional migration, and saving time.

“During the pandemic as an e-Residency company meant that I could just start a business 100% of the time, you know, without leaving my kitchen table. Furthermore, I couldn’t do that in a conventional government relation company setup. I would have to go to Brussels, Paris, London, Istanbul, and do government relations on the ground. But I was in a position where it was a level playing field. All companies were shut down. You couldn’t travel. So, I had a good advantage. I was starting up a company in a field where nobody could travel. Equally, I could keep my costs down.” (P5, Company Owner)

“It makes everything very easy, from a bureaucratic point of view, from an economic point of view, I can even say that in terms of reaching somewhere in the world and maybe even in terms of time management. You must go and be there and spend the whole day handling something bureaucratic. In terms of these time costs, I think the digital everything that e-Residency provides is a huge advantage in terms of application, accounting, economics, invoicing, and everything you can think of.” (P1, Consultant)

It is also possible to observe user discussions that do not overlap with opinions. At this point, there are comments stating that opening a bank account as an e-resident is not easy. This indicates that while Estonia opens its digital cyberspace to entrepreneurs, it also takes steps to regulate financial flows.

The problems caused by international conflicts are also evaluated in terms of the functionalities of digitalised migration. Participants make this assessment based on the example of the Russo-Ukrainian War.

“Direct money flow has also stopped. If we think about the whole world economy, which is increasingly connected, Ukraine was hit hard.” (P6: Professor)

“During the illegal occupation of Ukrainian territories by Russia, Ukrainian individuals are allowed to start an e-Residency company in Estonia free of charge. I think it’s still free of charge and with very little bureaucracy. Furthermore, there has been a strong push between the two governments, the Ukrainian and Estonian governments, to make that happen. To make it possible for people living in difficult circumstances with bombs dropping or living in an underground station avoiding bombs overhead to start a company from their smartphone or laptop. Furthermore, I think that’s a new opportunity that didn’t exist without e-Residency.” (P5, Company owner)

Some participants addressed the issue of intervening factors affecting international mobility during the era of polycrisis in the interviews. Within this framework, P6 (Professor) evaluated the advantages of digitalised migration at the intersection of the sustainability of economic activities and the available solutions individuals can pursue in response to intervening parameters in international mobility:

“The (physical) mobility will decrease. We see this, especially in Türkiye, in the form of not being able to get a Schengen visa. In this case, for example, your capacity is increasing. You can’t go to the West, but since you can take advantage of most of the economic conditions of the West and establish a company and do trade or something else, you can produce something from where you are while mobility decreases in this time of crisis. This is a good thing, I think this is something that can increase the potential.”

It has been observed that the scale of the opportunities provided by digitalised migration through e-Residency has been shaping based on the conditions in the source country. One of these appears to be related to the direct impact of economic irregularities and uncertainties in the source country on individuals’ business practices. Participants emphasised that for entrepreneurs affected

or potentially affected by crises, benefiting from digitalised migration constitutes an effective strategy for mitigating crisis-related risks:

“In fact, in international crises or pandemics that affect the world or Türkiye’s economic crises, especially digital nomadism becomes a life-saving thing.” (P2, Business Consultant)

“When crises come, it is (e-Residency) like a treasure. I mean, the business here has stopped right away, but your business is suitable for this, your entrepreneurship is suitable for this, and you can continue. Your idea is an idea that can be valid anywhere in the world.” (P8, Journalist)

“When the domestic market in Türkiye shrinks, it is problematic to find customers in Türkiye. Because if we consider an economic crisis, and the pandemic economy shrinks due to closures, many people actually focus on international markets and (focus to) sell abroad, which is probably the biggest benefit. Apart from that, it can be considered (e-Residency) in the framework of management and accessing payment systems. But still, the biggest thing (benefit) is to find new customers.” (P3, Computer Engineer)

Local dynamics are also frequently interpreted alongside the components of the polycrisis in YouTube discussions. In particular, there is an observed information-seeking behaviour aimed at accessing certain payment methods, which are unavailable in Türkiye, by establishing a company through e-Residency.

On the other hand, it is possible to emphasise that digitalised migrants tend to position themselves within a safeguarded framework to sustain their economic activities in the face of potential crises arising from political tensions and the threat of interstate conflict. The following statements of P5 (company owner) support this inference:

“Estonia and the Baltic states are very worried about being attacked by Russia. And if I have a company that is digital and can be moved around as I move around, and I can run it from a safe place, then it is going to be a very good kind of company to be mitigating the risk of wars and pandemics as well. Because, you know, in the shutdown with pandemics, I was able to run my company digitally online when a lot of companies had to stop trading offline. So both war and pandemic certainly came into my mind when I thought about the residency company.”

Participants also emphasise the advantages offered by destination countries through digitalised migration. Note that these advantages include key factors that contribute to making a country a preferred destination for digitalised migrants during the polycrisis era. From this perspective, and based on the example of the e-Residency programme, which offers a digitalised migration pathway for citizens of various countries, participants highlight Estonia’s approach to crises by pointing to factors such as promoting a fully digitalised national image, supporting entrepreneurship, integrating capital transfer into digital services, eliminating bureaucratic barriers, providing rapid public service feedback, and maintaining economic stability. These evaluations are conveyed considering the advantages Estonia’s e-Residency programme provides in the crisis environment. For instance, participants emphasise the prominent aspects of Estonia’s digital services in the crisis environment with the following statements:

“Estonia has such an advantage within the EU. It is digitalised, one of the most digital countries in the world. It is positioned somewhere (important) because of these.” (P6, Professor)

“The most appealing aspect of Estonia is that you can go to the embassy, get your card from there, apply, and establish your company without going there (Estonia).” (P3, Computer Engineer).

On the other hand, in digital discussions, there are also occasional opposing views claiming the contrary; arguing that positioning Estonia as the “Silicon Valley of Europe” is not always appropriate.

Although digitalised migration is generally associated with economic factors, some participants also evaluated it in terms of the international image and cultural recognition of both source and destination countries. In addition, according to the participants, digitalised migration can be associated with potentials such as fostering cooperation through the transfer of human capital between source and destination countries in a polycrisis environment. Participants examine the potential advantages of digitalised migration for Türkiye as a source country in the following words:

“E-Residency gives you a digital identity and you don’t have to move. As e-Residents increase, we will be faced with a more flexible mass of talent. I think there is a possibility that these talents can also be utilised by other countries that do not grant e-Residency. In the future, in many countries in Western Europe, these Turkish digital brains will become more active. Türkiye needs to benefit from their work while they are there and ensure that they contribute to Türkiye from there.” (P4, Consultant and Data Expert)

On the other hand, in digital discussions, users emphasise that the inability to access these payment methods results in the establishment of companies abroad via e-Residency and consequently a tax revenue loss for Türkiye.

It is observed that the brand value of countries offering digitalised migration services has increased, and their attractiveness in terms of receiving conventional migration has also increased. When digital discussions are analysed, users who comment on Estonian e-Residency videos often question how they can move to Estonia, residence permit, and citizenship requirements in this country. There are cases where highly skilled professionals who interact with Estonia within the scope of the e-Residency programme, which offers a digitalised migration infrastructure, have also physically moved to Estonia through the start-up visa programme offered by Estonia.

“When I say e-Residency most importantly, there is a business advantage to the outside world. There is a big difference between saying that I am doing business from Estonia or another European country and saying that I am trying to do it from Türkiye. Some say that if I had done this in this country and not in Türkiye, I would have already made an exit.” (P8, Journalist).

Limitations and risks of digitalised migration in the polycrisis era

In terms of its functions, digitalised migration appears promising due to the opportunities it offers in crisis environments; however, its limitations and associated risks should not be overlooked. Considering online discussions, users generally hold a positive view of digitalised migration; however, questions remain regarding how to simultaneously adapt to the tax regulations of their country of physical residence as well as those of Estonia, which hosts digitalised migrants in its digital environment. On the other hand, participants highlighted several prerequisites that must be met for digitalised migration to be considered and implemented as a viable solution to the dimensions of polycrisis. For individuals, these prerequisites include a range of individual skills, while for source countries, digital infrastructure, economic stability, and regulatory frameworks are subject to scrutiny. Participants expressed their views with the following statements:

“I am very close to Norway, Finland, and Sweden, and when I look at those places, the people who are preferred for migration here have very high levels of education. Furthermore, yes, this is digitalised migration. For example, if you don’t speak English in e-Residency, it is difficult to carry out, if you know what I mean, you need to have that skill because we need to handle everything in a foreign language.” (P1, Consultant)

“To carry digital data, to carry the digitalised migration well; we need to expect the internet infrastructure in Türkiye to develop accordingly. We need to increase our digital resilience. Because we do not seem to be very resilient, we see this in both physical disasters and digital crises.” (P8, Journalist)

Emerging issues related to technological infrastructure or digital platforms in source countries are perceived as limitations and risk factors associated with digitalised migration. For example, P2 (Business Consultant) emphasises that “blocking PayPal or taking control of YouTube or WhatsApp [are] catastrophic problems.” It is possible to state that this concern is also observed in digital discussions. Users discuss the potential of e-Residency technologies to provide access to certain globally used online payment systems that are not licenced in Türkiye due to national banking regulations.

Discussion and Conclusion

The findings indicate that the virtual mobility enabled by Estonia’s e-Residency programme can be understood as a form of digitalised migration shaped by the interaction of global, economic, and crisis-driven dynamics that have become increasingly pronounced in the age of polycrisis.

Regarding the first research question—the driving factors behind digitalised migration- the data show that digitalised migration is primarily motivated by the desire to bypass the structural constraints of traditional mobility, particularly in contexts where physical movement is restricted due to pandemics, conflicts, or visa limitations. Participants consistently emphasised the appeal of a fully digital, global, and location-independent system that eliminates the cultural and bureaucratic barriers associated with conventional migration, including the removal of travel costs and documentation requirements (e.g., visas), as well as the opportunity to access large international markets, such as the EU, with limited budgets. Additionally, access to EU markets, stable tax regulations, bureaucratic ease, rapid financial transactions, and the ability to transfer intellectual and economic capital digitally have highlighted economic motivations as key driving factors. YouTube discussions further support these findings, highlighting information-seeking behaviour related to tax advantages, payment systems unavailable in Türkiye, and the perception of Estonia as a gateway to the EU economy. In this sense, digitalised migration serves both as an alternative to physical migration and as a potential pathway towards it.

In relation to the second research question, the findings illustrate that e-Residency offers several functional advantages in crisis environments. Participants reported that digital company formation, remote market access, and the continuity of business operations during pandemic restrictions

exemplify the resilience-enhancing qualities of digitalised migration. For Turkish entrepreneurs, the ability to sustain economic activity despite domestic uncertainties, currency fluctuations, and shrinking local markets positions digitalised migration as a strategic form of crisis mitigation. At the same time, participants noted structural limitations that constrain its full potential. Challenges include difficulties in opening bank accounts, navigating dual tax issues, and the fragility of digital infrastructure in source countries. Moreover, the need for strong digital skills, English proficiency, and reliable internet connectivity underscores the selective nature of digitalised migration. Risks linked to platform restrictions in Türkiye (e.g., PayPal or other digital services) also emerged as potential barriers.

Based on all of this, the study demonstrates that digitalised migration through e-Residency functions as a resilience mechanism that enables economic continuity, global integration, and adaptive mobility in periods of polycrisis. In this regard, digitalised migration functions both as an alternative to physical migration and as a potential pathway towards it, and, consistent with previous research (Kotka et al., 2015; Tammpuu & Masso, 2018; Tammpuu & Masso, 2019; Calzada, 2023; Triandafyllidou et al., 2024), reveals emerging forms of citizenship and migrant identities shaped by transnational virtual mobility. However, its effectiveness depends on individual capacities, national digital infrastructures, and evolving geopolitical risks. The Turkish case shows that while e-Residency offers significant opportunities, it also exposes underlying structural vulnerabilities that shape how digitalised migration is experienced and operationalised.

In an era of polycrisis, physical migration may increase, carrying significant implications for both source and destination countries. In this respect, it can be argued that digitalised migration can reduce the risk associated with the framing of “migration as a crisis.” This is because digitalised migration offers the possibility of mitigating the effects of inter/national crisis components that disrupt the economic environment and drive migration, particularly in economically disadvantaged regions. This situation significantly reduces the risks associated with international mobility on shocking scales and eliminates the burden on destination countries of coping with the effects of physical migration while also preventing source countries from suffering consequences such as brain drain, which could weaken their economic and social environments. Moreover, both the source and destination countries involved in digitalised migration can benefit from the economic gains

and enhanced international prestige generated through this process. In some cases, digitalised migration has been observed to serve as a preliminary stage to physical migration. However, this pattern differs significantly from traditional forms of physical migration. In cases where digitalised migration leads to physical migration, a suitable framework, such as a Start-up Visa, can facilitate the transition for both the destination country and the digitalised migrant. This creates an opportunity for the destination country to attract highly skilled migrants who contribute to economic sustainability and for the migrants to expand their capacity for economic activity. Together, these dynamics generate value for both the destination and source countries. This offers the capacity to mitigate the effects of the intertwined and overlapping nature of polycrisis referred to by Morin and Kern (1999). Just as polycrises are interconnected, the transnational economic value generated by this type of migrants is also interlinked between the source and destination countries and is of shared concern to both.

Migration in digital spaces through e-Residency technologies offers intangible advantages for both source and destination countries that go beyond purely economic benefits. The existing literature (Blue, 2021; Kimmo et al., 2018; Tschap, 2024) highlights the opportunities for country brand development and soft power building for Estonia as a destination country for digitalised migration. However, the findings indicate that digitalised migration offers benefits that extend beyond unidirectional contributions to the destination country's country branding and public diplomacy efforts. As part of this transnationally advanced technological structure, the source countries of digitalised migration have the opportunity to strengthen their country brand through the visibility of digitalised migrants' entrepreneurial activities and the establishment of a digital diaspora. This intangible asset strengthens the positive interconnectedness of countries. The views of the participants suggest that digitalised migration can be conceptualised as a shared set of values embedded within digital spaces. Source and destination countries that adopt this mindset are open to interaction, transparent in their practices, and digitally engaged with emerging economic opportunities. This situation can mitigate the effects of variables such as economic fragility, polarisation caused by miscommunication, and destructive competition that may arise among countries in the era of polycrisis.



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References

- Abaku, T., Calzati, S., & Masso, A. (2021). Exploring digital sustainability of/through Estonia's e-residency: Africa's case and the importance of culture for sustainability. *Digital Policy, Regulation and Governance*, 23(3), 300-313.
- Arthur, L. P., & Smith, I. (2022). Human journeys in the digital age: Advances and challenges in digital historical migration studies. *Frontiers in Human Dynamics*, 4. doi: 10.3389/fhumd.2022.915978
- Bartlett, A., Montes, M. N., Verheijen, L., Leurs, K., & Broersma, M. (2025). Digital tactics of refugee women: Towards an inclusive framework for digital literacy. *Social Inclusion*, 14. <https://doi.org/10.17645/si.10866>
- Blue, A. (2021). Evaluating Estonian E-Residency as a tool of soft power. *Place Brand Public Diplomacy*, 17, 359-367.
- Bridle, J. (2016). Algorithmic citizenship, digital statelessness. *GeoHumanities* 2(2), 377-381.
- Brown, H. (2020). *10 Ways e-residents are adapting their businesses during the crisis*. Retrieved from <https://www.e-resident.gov.ee/blog/posts/10-ways-e-residents-are-adapting-their-businesses-during-the-crisis/>
- Calzada, I. (2021). Pandemic citizenship: Will COVID-19 reinforce nation-state borders and liquify citizens? *Academia Letters Article* 910. doi:10.2935/AL910.
- Calzada I (2023) Emerging digital citizenship regimes: pandemic, algorithmic, liquid, metropolitan, and stateless citizenships. *Citizenship Studies*, 27(2), 160-188.
- Cantat, C., Pécou, A., & Thioulet, H. (2023). Migration as a crisis. *American Behavioural Scientist*, 69(6), 627-649.
- Castles, S. Miller, M. J. (1998). *The age of migration: International population movements in the modern world* (2nd ed.). London, UK: Guilford Press.
- Datareportal. (2023). *Global social media statistics*. Retrieved from <https://datareportal.com/social-media-users>.
- De Haas, H. (2021). A theory of migration: the aspirations-capabilities framework. *Comparative Migration Studies*, 9.



- deMarrais, K. (2003). Qualitative interview studies: Learning through experience. In K. deMarrais & S. D. Lapan (Eds.), *Foundations for research: Methods of inquiry in education and the social sciences* (pp. 51–68). Mahwah, NJ: Lawrence Erlbaum Associates.
- Drisko, J. Maschi, T. (2016). *Content analysis*. New York, USA: Oxford University Press.
- e-Residency. (2022). *How can e-Residency empower women entrepreneurs?* Retrieved from <https://www.e-resident.gov.ee/blog/posts/how-can-e-residency-empower-women-entrepreneurs>.
- e-Residency. (2024). *e-Residency in numbers. Republic of Estonia, e-Residency*. Retrieved from <https://www.e-resident.gov.ee/dashboard/>
- e-Residency. (2025). *About us*. Retrieved from <https://www.e-resident.gov.ee/about-us>
- Fayomi, J.O., Mamaiev, D., Olanrewaju, A.A. (2023). Digital transformation and ease of migration process (A Case Study of Lithuania). *Psychological Research (in the Balkans)*, 26(2), 145-160.
- Godin, M., Ozkul, D., & Humphris, R. (2025). Digital technologies and migration: behind, beyond, and around the black box. *Journal of Ethnic and Migration Studies*, 51(14), 3571-3589.
- Guadagno, L., (2020). Migrants and the COVID-19 pandemic: An initial analysis. Migration Research Series No. 60. *International Organisation for Migration (IOM)*. Retrieved from <https://publications.iom.int/system/files/pdf/mrs-60.pdf>
- Harima, A. (2022). Transnational migration entrepreneurship during a crisis: an immediate response to challenges and opportunities emerging from the COVID-19 pandemic. *Business and Society Review*, 127(S1), 223-251.
- Hassmann, T., & Westner, M. (2025). A framework for rigorous execution and presentation of expert interviews in IS and digital transformation research. In B. Marcinkowski, A. Przybytek, A. Jarzębowicz, N. Iivari, E. Insfran, M. Lang, H. Linger, & C. Schneider (Eds.), *Advances in information systems development* (Lecture Notes in Information Systems and Organisation, Vol. 77). Cham, Switzerland: Springer.
- Henig, D. & Knight, M. D. (2023). Polycrisis: Prompts for an emerging worldview. *Anthropology Today*, 30(2), 3-6.
- Hintz, A., Dencik, L., & Wahl-Jorgensen, K. (2017). Digital citizenship and surveillance|Digital citizenship and surveillance society—Introduction. *International Journal of Communication*, 11(2017), 731-739.
- Hintz, A., Dencik, L., & Wahl-Jorgensen, K. (2019). *Digital citizenship in a datafied society*. Cambridge, UK: Polity Press.
- Hoang, A. L. (2025). Migration infrastructure, digital connectivity, and porous borders: Vietnamese migration to Australia. *Population, Space, and Place*, 31(e2868), 1-11.
- İlhan, E., & Görgülü Aydoğdu, A. (2019). Youtube kullanıcılarının kullanım motivasyonlarının incelenmesi [A research into Youtube users' motivations for use]. *Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi*, 7(2), 1130-1153.
- Jünger, J. Keyling, T. (2021). *Facepager. An application for automated data retrieval on the web*. Retrieved from <https://github.com/strohne/Facepager/releases>.
- Kimmo, M., Pappel, I., & Draheim, D. (2018). E-Residency as a nation branding case. *Proceedings of the 11th International Conference on Theory and Practice of Electronic Governance* (pp. 419-428). New York, USA: Association for Computing Machinery. <https://doi.org/10.1145/3209415.3209447>
- Kostruba, A. (2025). Managing foreign business operations in Ukraine in the context of war. *Business Horizons*, 68, 67-81.
- Kotka, T., Vargas, C., Korjus, K. (2015). *Estonian e-Residency: Redefining the nation-state in the digital era*. University of Oxford Cyber Studies Programme working paper, 3. Retrieved from https://proudengineers.com/wp-content/uploads/2025/01/Working_Paper_No.3_Kotka_Vargas_Korjus.pdf.
- Lawrence, M., Homer-Dixon, T., Janzwood, S., Rockstöm, J., Renn, O., Donges, J. F. (2024). Global polycrisis: the causal mechanisms of crisis entanglement. *Global Sustainability*, 7, e6, 1-16.
- Leurs, K. (2023). *Digital migration*. London: Sage.
- Leurs, K., Witteborn, S. (2021). Digital migration studies. In M. McAuliffe (Ed.), *Research handbook on international migration and digital technology* (pp. 15-28). Cheltenham, UK: Elgar.
- Levitt, P. & Glick Schiller, N. (2004). Conceptualising simultaneity: A transnational social field perspective on society. *International Migration Review*, 38(3), 1002-1039.
- Li, Q. (2021). Computational thinking and teacher education: An expert interview study. *Human Behaviour and Emerging Technologies*, 3(2), 324-338.
- Lindley, A. (2014). Exploring crisis and migration concepts and issues. In A. Lindley (Ed.). *Crisis and migration critical perspectives* (pp. 1-23). New York, USA: Routledge.
- Liu, H., & Renn, O. (2025). Polycrisis and systemic risk: Assessment, governance, and communication. *International Journal of Disaster Risk Science*, 16, 526-549.
- Masso, A., Kasapoglu, T., Tammpuu, P., & Calzada, I. (2024). *Datafied control and selection of digital identity: Estonian e-residency as "citizenship by connection."* Retrieved from <https://zenodo.org/records/12666905>
- McAuliffe, M., Blower, J., & Beduschi, A. (2021). Digitalisation and artificial intelligence in migration and mobility: Transnational implications of the COVID-19 pandemic. *Societies*, 11(4), 135. <https://doi.org/10.3390/soc11040135>
- Meier, S. (2025). *The ultimate guide to e-Residency: Digital residency countries in 2025*. Retrieved from <https://citizenx.com/insights/e-residencies>.



- Molnar, P. (2022). Territorial and digital borders and migrant vulnerability during a pandemic. In A., Triandafyllidou (Eds.), *Migration and pandemics: Spaces of solidarity and spaces of exception* (pp. 45–64). Cham, Switzerland: Springer.
- Morin, E., & Kern, B. A. (1999). *Homeland earth: A manifesto for the new millenium*. New Jersey, USA: Hampton Press.
- Nehring, D., & Hu, Y. (2021). COVID-19, nation-states and fragile transnationalism. *Sociology*, 56(1), 183-190. <https://doi.org/10.1177/00380385211033729>
- Nicoli, F. & Zeitlin, J. (2024). Introduction: Escaping the politics trap? EU integration pathways beyond the polycrisis. *Journal of European Public Policy*, 31(10), 3011-3035.
- Orgad, L. (2018). Cloud communities: the dawn of global citizenship? In R. Bauböck (Eds.), *Debating transformations of national citizenship* (pp. 251–260). Cham, Switzerland: Springer International Publishing.
- Ponzanesi, S. (2020). Digital diasporas: Postcoloniality, media, and affect. *Interventions*, 22(8), 977-993.
- Shah, N. (2024). When immovable bodies meet unstoppable media circulation: The aporetic body in digital migration studies. K. Leurs, S. Ponzanesi (Eds.), *conducting digital migration studies: Theories and practices of the every day*. Amsterdam, Netherlands: Amsterdam University Press.
- Sheller M., & Urry J. (2006). The new mobility paradigm. *Environment and Planning A: Economy and Space*, 38(2), 207–226.
- Skovgaard-Smith, I. (2023). Transnational life and cross-border immobility during pandemic times. *Global Networks*, 23(1), 59-74.
- Starbird, K. (2020). *How a crisis researcher makes sense of COVID-19 misinformation*. Retrieved from nonzero. medium.com/reflecting-on-the-covid-19-infodemic-as-a-crisis-informatics-researcher-ce0656fa4d0a
- Sullivan, C., & Burger, E. (2017). E-residency and blockchain. *Computer Law and Security Review*, 33(4), 470–481. doi: 10.1016/j.clsr.2017.03.016.
- Swilling, M. (2013). Economic crisis, long waves, and sustainability transition: An African perspective. *Environmental Innovation and Societal Transitions*, 6(March): 96–115.
- Tammpuu, P., Masso, A. (2018). 'Welcome to the virtual state': Estonian e-Residency and the digitalised state as a commodity. *European Journal of Cultural Studies*, 21(5), 543-560.
- Tammpuu, P., Masso, A. (2019). Transnational digital identity as an instrument for global digital citizenship: The case of Estonia's E-Residency. *Information Systems Frontiers*, 21, 621-634.
- Tschap, N. (2024). *The new Baltic way: Baltic identity in the middle of the geopolitics of digital transformation*. University of Twente Student Theses. Retrieved from <https://essay.utwente.nl/102316/>
- Triandafyllidou, A., Bivand Erdal, M., Marchetti, S., Raghuram, P., Sahin Mencutek, Z., Salamonaska, J., Scholten, P., & Vintila, D. (2024). Rethinking migration studies for 2050. *Journal of Immigrant & Refugee Studies*, 22(1), 1-21.
- Voss, M. Lorenz, D. S. (2016). Sociological foundations of crisis communication. In Schwarz A., Seegar M. W., Auer C. (Eds.) *The Handbook of International Crisis Communication Research* (pp. 45–54). Chichester, UK: Wiley Blackwell.

