Digitalization and Migration: Rethinking Socio-Economic Inclusions and Exclusions

Edited by Colleen Boland and Giacomo Solano

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EDITORIAL

Digitalization and Migration: Rethinking Socio-Economic Inclusions and Exclusions

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Abstract

This thematic issue interrogates the relationship between digitalization and the social inclusion or exclusion of migrants in destination countries. Drawing on thirteen articles employing a breadth of methodological approaches across eight national contexts around the globe, it investigates whether digitalization phenomena simply reconfigure pre-existing socioeconomic inequalities or demonstrate unprecedented, emergent dynamics. Three cross-cutting themes structure the issue. First, authors provide timely evidence on migrant agency and digital practices, demonstrating how migrants navigate and reappropriate digital technologies. In doing so, they challenge exclusionary infrastructures and offline inequalities. Second, articles analyze the role of intermediary organizations, highlighting contrasting dynamics: On the one hand, state digitalization initiatives produce intentional or unintended exclusionary consequences; on the other, NGOs can leverage these technologies to support migrants in the face of old or technologically intertwined challenges. Finally, the issue zooms into a digital intermediary—the platform economy. Platformization creates new layers of precarity for migrant workers in food delivery and care sectors, and can be prevailed upon in migrant strategies to overcome exclusion. Ultimately, the query as to whether technologies and spaces of digitalization reinforce pre-existing inclusion or exclusion or create new ones is answered in a nuanced, context-specific manner that demands even further research: to some extent the embedded power relations in digitalization processes and practices do entail reproduction of the same, but new facets also emerge, and technologies can also be leveraged to challenge inequalities via migrant agency.

Keywords

digitalization; digital technologies; migrants; migration; social exclusion; social inclusion

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1. Introduction

Evidence increasingly suggests that digital technologies have direct consequences for migrants, in affecting their decision to migrate, their migration trajectories, their life in the country of destination, as well as continued relationships beyond this new physical residence (Dekker et al., 2016). In addressing digitalization and migration, this thematic issue explores how digital technologies influence the social inclusion or exclusion of migrants in the country of destination. In particular, it explores the inclusions and exclusions of evolving digitalized phenomena or processes in both digital (or digitally adjacent) practices, implementation of policy schemes at an intersection with digitalization, and digital technologies in the everyday experience of migrants. Here, we define digitalization as the "complex and heterogenous process leading to increased relevance of digital technology and digital data in contemporary society" (Büchner et al., 2022, p. 11).

The issue's thirteen articles canvass digital inclusion and exclusion of migrants and beneficiaries via diverse methodological approaches—including qualitative interviews, ethnographic research, literature reviews, and critical document analysis—across eight national contexts (the Netherlands, Turkey, Italy, Poland, Spain, South Africa, Sweden, and Tanzania). Three cross-cutting themes emerge, illustrating the multifaceted and dynamic relationship between digitalization, mobile subjects, and forms of inclusion or exclusion. We proceed from examining migrant agency to analyzing the role of institutional systems and other intermediaries, to zooming in on the unique case of the platform intermediary. Taken together, they wholistically examine and question the following: to what extent do digitalization phenomena simply manifest as reconfiguration of pre-existing socioeconomic inequalities, versus evidence of newly created dynamics, including empowerment?

2. Context and Framework: Digitalization and the Migrant as a Subject of In- and Exclusion

Digital technologies have been emphasized across interdisciplinary migration studies and even further afield as crucial for migrants' social inclusion in new contexts (Alencar, 2020; Brown et al., 2019; Masiero & von Deden, 2022). For one, it emphasizes how technologies, including social media, smartphones, and a range of digital platforms, facilitate migrants and refugees maintaining connectedness with families and communities at the point of origin or in their destination as they link to local residents, other migrants, and support networks (Gillespie et al., 2018; Kutscher & Kreß, 2018).

In this sense, they can facilitate navigation of new cultural and societal landscapes, both in terms of connectedness and in a mutually constitutive, practical way. Digital structures and networks offer access to information and essential services, such as healthcare, education, and employment opportunities (Brown et al., 2019). Moreover, those working with a remit to support migrants, like governments, national and sub-national bodies, and NGOs, can utilize these technologies in their work (Diaz Andrade & Doolin, 2019; Modesti et al., 2020; Schreieck et al., 2017). For example, e-government services have been proven to streamline processes, including visa applications, work permits, and social services registration, making it easier for migrants to access these resources (Borkert et al., 2009; Diaz Andrade & Doolin, 2019). Moreover, NGOs have been documented as often developing apps and online portals to provide information on asylum procedures, employment rights, and language courses (Schreieck et al., 2017).

Of course, there are the inequalities inherent to societal systems and power structures, and in this case, the digital divide and risk of surveillance and breach of rights come to the fore. Firstly, disparities in access to digital technologies and the internet, due to resources, digital literacy skill levels, socio-economic status, or language barriers, can put migrants at a disadvantage, especially in highly digitalized societies, where many governmental services are offered mainly online (Alam & Imran, 2015; Martin-Shields et al., 2022). Then, state surveillance and algorithmic governance can both limit or breach migrant and refugee rights, or intentionally discriminate and deepen inequalities (Dijstelbloem & Broeders, 2015; Yang et al., 2024).

Before proceeding further, we acknowledge that the issue moves between and examines different categories of migrants (i.e., a person residing in a country other than their country of birth), including refugee (a recognized beneficiary of international protection) and asylum seeker (a subject seeking international protection). We use these labels to communicate or research while understanding that these are bounded categories and forms of legal status remain fluid, and indeed that voluntary and involuntary movement can also be defined and redefined along political, social, and cultural lines over a life trajectory (Robertson, 2018). We also note that while the issue tends to lean towards migrant experiences once arrived to the Global North, we share the criticism and critique of this dominant tendency in the migration literature (Levitt, 2023) and attempt to work towards decentralizing and decolonializing via contributions regarding contexts in South Africa and Tanzania.

With these clarifications noted, a series of three cross-patterns emerge when the issue is taken as a whole, related to migrant agency, the impacts of digital technologies for those intermediaries working with migrants (including power dynamics with the state), and finally, the proliferating platform economy's impact on migrants.

3. Migrant Agency, Digital Practices, and Confronting Exclusive Infrastructures

To begin, several articles find a common thread in noting the agency of migrants despite infrastructural inclusion, both in digital practices and with regard to digital infrastructures. Firstly, Bartlett et al. (2026) offer a scoping review that consolidates research on refugee women's digital practices during resettlement. Through the analytical framework of "tactics," they demonstrate how refugee women reappropriate digital platforms to mitigate risks while pursuing social connectedness, information access, and self-presentation. At the same time, offline inequalities shape practices through which refugee women navigate these technologies, foregrounding the gendered dimensions of digital literacies. Similarly, and with empirical evidence, Hamarat Yalçın and Akar (2026) identify how emotional, linguistic, and structural factors— frequently exacerbated by gender and legal status—create barriers to digital inclusion, in their examination of migrant groups in Turkey. In particular, they point to how monolingual e-government platforms, low digital trust, and reliance on family members for online access emerge as primary obstacles.

The issue also asks as to migrant agency via an ethnographic lens: Wilson and Demirdirek (2026) explore how Congolese refugee women in Dar-es-Salaam leveraged social media engagements for entrepreneurship, to counterbalance the immobilization they experience as part of the Tanzanian asylum regime. The piece presents how virtual mobility and connectivity can provide essential workarounds for an already marginalized group, although it cautions that such encounters do not substitute for offline connections. Their contribution also outlines how technology can reinforce intersectional discrimination based on gender and precarious legal status. Turning to Europe, Gebru and Vrăbiescu (2026) also provide an ethnographic account via digital participant observation with Eritrean refugees. They reveal how differences in digital

knowledge and unequal digital infrastructures between asylum seekers and other Dutch residents create challenges for both refugees and street-level bureaucrats, proposing ethical digital training pathways for both bureaucrats and refugees. In the same vein, Mena Montes et al. (2026) explore how digital communication technologies and informal actors facilitate and shape communication and network development that support Syrian refugees in navigating integration in the Netherlands. The article shows how digitalization introduces both opportunities and challenges in addressing language barriers, cultural differences, and bureaucratic procedures.

Finally, in relation to the category of student migrants, Łukaszewska-Bezulska (2026) presents a case study of internal and international student migrants in Poland, comparing how they form and maintain different types of social capital through social media. Based on in-depth interviews, they demonstrate how online social networks created by student migrants often defy clear-cut distinctions between local and international networks. Instead, contextual factors (i.e., the nature of the diaspora, frequency and type of social media activity, and proficiency in the host-country language) influence the impact of social media as a tool for social capital.

4. Intermediaries: The State and Algorithmic Governance versus NGO Strategies

Another group of articles addresses the role of intermediates when considering deliberate or unintended consequences for migrant exclusion and inclusion. The state first comes to the fore in several articles. Greyling and Johnson (2026) trace the effects of South Africa's online asylum seeker and refugee permit extension system, explaining how digitalization has fundamentally refigured borderscapes navigated by asylum seekers and refugees. While a policy aim may have been to streamline efficiently, in practice, the online system is demonstrated to shift bureaucratic responsibility to asylum seekers themselves, distancing them from the state to affect social, legal, and economic inclusion. Then, Cascone (2026) looks at Swedish detention centers via ethnographic vignettes based on interviews with detained and formerly detained migrants. Cascone explores what happens when everyday digital media practices are no longer possible, marking the return of "old" media forms like basic phones and paper letters. She argues for a double exclusion, via both the initial detention and this "counter-digitalization."

State surveillance becomes a consideration as Alajak et al. (2026) go on to critically investigate the GeoMatch algorithm, a recommender system implemented by the Dutch government to automate employment search and matching for refugees across 35 labour market regions. They reveal that, contrary to official claims or purported policy aims of effectiveness and objectivity, GeoMatch prioritizes aggregate optimization over individual opportunities, creating disproportionate risks of discrimination based on ethnicity, gender, or marital status. Also in the Netherlands, Poelen and van Oers (2026) examine the digitalization of civic integration in the Netherlands under the Integration Act 2021. This act establishes a partially digitalized programme including digital monitoring, digital language classes and exams, and online communication between integrators and case managers. They conduct desk research and in-depth interviews with municipal officers and language teachers to reveal dual impact: On the one hand, for individuals with sufficient digital literacy, technologies offer enhanced language learning and greater self-reliance; on the other, digital technologies exacerbate existing inequalities and create new forms of digital exclusion for those lacking digital skills, stymieing their civic integration trajectory. Moreover, they argue that digitalization transforms street-level bureaucratic discretion into "web-level bureaucracy,"

where technologies may streamline workflows but also impose administrative burdens, introduce bias, and limit discretion.

Turning from the state perspective, the issue presents the case of intermediaries like NGOs tasked with supporting migrations. Solano et al. (2026) examine how NGOs in Turkey and the Netherlands use information and communication technologies to support refugees. In interviews with representatives of 23 NGOs, they find that organizations in both countries use digital technologies extensively for communication, advocacy, and service provision. While such digital technologies enhance visibility and reach, support multilingual and remote service delivery, and assist the organizations in raising funds and building institutional identity, challenges remain. These include, inter alia, unequal access to digital tools, insufficient digital literacy among both staff and clients, lower engagement in online formats, and risks of losing personal connection through standardized digital processes.

5. The Platform Economy and Navigating New Layers of Exclusion

Finally, we zoom into the case of the ever more prevalent platform economy, another so-called intermediary, and highlight the tension generated from a real sense of precarity experienced by migrant workers and the opportunities migrant platform users seem to have. Pasetti et al. (2026) examine platform-mediated food delivery work across Italy, Poland, and Spain through 60 in-depth interviews with migrant riders. Despite distinct regulatory models in the three countries, Italy's "dual-track," Poland's "contractual bricolage," and Spain's "regulated exclusion," the study illustrates that each country context is rampant with legal ambiguity, economic insecurity, and algorithmic control, furthering migrant worker marginalization and platform logics co-producing new forms of labor exploitation.

On the other hand, Boland (2026) examines how migrant mothers in the Netherlands navigate digital childcare platforms heavily reliant on migrant care labor. Findings indicate little or unclear knowledge of domestic work regulation among migrant mothers, further obfuscated by platforms as intermediaries. As the migrant mothers navigate belonging in fluctuating contexts, they can perceive exclusion due to child care costs and factors, causing them to engage with platforms, which, in turn, have been proven to be precarious for migrant workers. It reveals migrants' aspirations for ethical engagement with care workers, versus the structural constraints they face, and how the digital layer creates an added dimension in this contestation.

6. Concluding Remarks: New Dynamics Building Off and in Conjunction With Pre-Existing Societal Inequalities

Taken as a whole, this thematic issue ultimately illustrates how processes and practices of digitalization neither inherently include nor solely exclude migrants. Rather, these new technologies and their utilization function as contested sites where pre-existing inequalities can be simultaneously reproduced, reconfigured, or new ones produced—with all of these systems potentially challenged through migrant agency in limited yet significant ways.

In terms of what remains of the pre-existing inequalities, they remain shaping migrants' offline lives—via, inter alia, legal precarity, gender discrimination, and linguistic exclusion. However, they can also be actively transformed in digital spaces through the specific affordances and constraints of digital technologies. While

it may be an obvious observation, this volume confirms that online and offline reality continues remain deeply intertwined.

Moving forward, as our authors highlight in some concrete, context-specific policy recommendations, ensuring more equitable digital futures for migrants entails multi-level interventions that address both technological access and the power relations embedded in digital systems themselves. These can include, among others, culturally responsive digital literacy programs, critical redesign of algorithmic decision-making systems, further support for intermediary organizations navigating tensions between efficiency and human-centered care, or informed platform labor regulation to support. In this sense, we call for further, comprehensive, and evidence-based accounts of how layers of digitalization mutually reproduce old power dynamics and introduce new, context-specific developments.

Conflict of Interests

The authors declare no conflict of interests.

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"I Don't Want to Underpay People": Platforms for Childcare and Migrant Mothers Navigating Belonging

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Abstract

Feminist scholarship engages with in flux and situational motherhood, childcare, and the boundaries between private and public domains. Decades of knowledge production have signaled undervalued care work and feminized global care chains. Against this backdrop, more recently, digital platforms or social networks connect childcare workers to migrant (and non-migrant) parents, with new or reconstituted implications for gender inequalities. While the limited research to date on childcare platformization has focused on experiences of domestic workers, there is a noticeable gap regarding parents' perspectives on engaging this care, especially that of migrant mothers. This article inquires as to why migrant mothers turn to digital platforms in addressing childcare needs, if they are aware of applicable childcare regulation, and if (and how) platforms mediate understandings of regulation and worker or employer definitions. It frames the discussion in terms of belonging linked to normative values of care. To do so, the article first offers background on the Dutch childcare regime. Then, empirical analysis includes a desk review of online childcare platforms, alongside a survey among 30 participants and 9 semi-structured follow-up interviews with migrant mothers in the Netherlands. On the one hand, findings indicate little or unclear knowledge of domestic work regulation, further obfuscated by platforms as an intermediary. On the other hand, negotiations of belonging in fluctuating contexts, as well as perceptions of exclusion and high costs of care, serve as the rationale behind turning to childcare platforms.

Keywords

belonging; care work; migrant mothers; platformization; social reproduction

1. Introduction

Scholarship has continuously addressed the distinctiveness of the domestic work sector and the global care chains that have emerged in Europe and globally over the past decades (Gil Araujo & Pedone, 2014; Herrera, 2012; Kofman, 2012; Sassen et al., 2006). It evidences that this form of labour is historically societally undervalued, often conducted in spaces of combined isolation, intimacy, or invisibility, alongside power imbalances between employer and employee, with dynamics that can engender dependent and vulnerable positionality (Peterson, 2007). Meanwhile, a proliferation of online platforms brokering either marketplace or on-demand domestic care services stands to recommodify, or at the very least, bear gendered, classed, or racialized consequences for reproductive care work (Rodríguez-Modroño et al., 2024; Schwiter & Steiner, 2020).

The vast majority of literature addressing the platformization of work has investigated delivery and logistics services, perhaps not least due to the more visible nature of these sectors (Altenried, 2021; van Doorn & Vijay, 2021). These studies often argue that platform companies can extract maximum value from workers while neglecting their physical, mental, or economic security (Altenried, 2021; van Doorn & Vijay, 2021). Others have examined how platform works link to migrant labor regimes (Alteinried, 2021; van Doorn, 2022), or have noted the gendered and racialized patterns in this type of work (Kampouri, 2022; Woodcock, 2021). A much smaller fraction of burgeoning scholarship examines the domestic or care work at an intersection with platformization; scholars have called for further investigation of how digital platforms affect long-standing exclusions and inequalities in the sector based on, inter alia, gender, race, class, ethnicity, and legal status (Hunt & Samman, 2023; Ticona & Mateescu, 2018).

These observations raise questions as to whether platformization reconstitutes or maintains former systems of invisible and undervalued care work with the state and capital offloading costs onto gendered and racialized migrant (and non-migrant) workers (Dowling, 2018; van Doorn, 2020). Importantly, these trends present further obstacles to the formalization or regularization of the sector. In considering regulation of the sector and classification of employers and employees, it is important to point out the gaps in literature investigating perspectives of those parents engaging child care labor, either in the physical or digital sphere (Lundström, 2013; Sibiya & du Toit, 2022; van Doorn & Vijay, 2021). For example, a recent project in the context of the Covid-19 crisis in the Netherlands has noted how employers were unaware of the legal status of domestic workers until the crisis hit, and that education or awareness is insufficient among this population (Böcker & de Lange, 2023).

Within this context, the Netherlands serves as a relevant case study as it falls under EU regulatory frameworks, yet has not signed on to the ILO 89 convention, and national legislation regulating domestic or care work employment is critiqued (van Hooren, 2018). It has formalized certain types of domestic work, but remains under scrutiny for sub-standard employment protections and benefits; it is argued that the domestic work regulation legitimizes and promotes poor quality and substandard employment, marginalizing and segregating care work (de volder, 2017; International Labour Organization, 2016). Moreover, studies offer ample evidence of (irregular) migrant domestic care work (de Kort & Bekker, 2024; Siruno & Siegel, 2023; Soraya, 2020). Regarding recent events in applicable EU frameworks, the Directive (EU) 2024/2831 on improving working conditions in platform work theoretically should mitigate some of the pitfalls of platform work, including facilitating the determination of the correct employment status of persons working for these

platforms and allowing them to benefit from any corresponding labor rights. Member states are required to implement the Directive by December 2026, and establish a legal presumption that the platform is an employer; however, in principle, it will still be up to national courts to decide each case, and national case law to date indicates that childcare platform models are often not litigated (Durri et al., 2025; Hießl, 2021).

Against this backdrop, this study seeks to understand the perspective of migrant mothers turning to digital platforms as a care strategy when contemplating the overall political economy of social reproduction at the intersection with platformization. In the Netherlands, there is an indication of migrant communities relying on online social support (Hofhuis et al., 2019). However, there is no research into how migrant parents specifically turn to online networks for care; there are a few studies as to how migrants may use social network sites and smartphones for online support while in Amsterdam and the wider Netherlands (Hofhuis et al., 2019; Patterson & Leurs, 2020).

As part of this, it is important to note the broader feminist literature that has investigated migrant mothering and the politics of care and belonging within which they operate (Svašek, 2008). This article takes as a point of departure how, in migration circuits, the gender politics of social reproduction operate both within and beyond households, inextricably interlinked with the dynamics of material inequalities and cultural norms (Peterson, 2007). For migrant mothers, care responsibilities can be redistributed among state, market, and family, with implications for these women's experiences against social reproductive dynamics (Ikizoglu Erensu, 2025). Moreover, heavily gendered power relations in (re)negotiations of social reproduction across the life course can take place and remain specific to each individual's migratory trajectory (Locke et al., 2013). In looking at family dynamics and migrant mothering from the perspective of the migrant mother "employer" rather than from the (justifiably sought) view of the migrant worker, this expands investigation of platformization of care going forward; it incorporates an understudied, yet integral, perspective in teasing out dynamics of privilege, oppression, and inequalities in social reproduction and care.

Via this Dutch case study, this article seeks to fill in gaps in platformization inquiry by better understanding the perspectives of why migrant mothers seeking childcare outside of their origin contexts turn to digital platforms, and if they are aware of the regulation applicable to the paid childcare that they find through these platforms. This article's theoretical framework draws on feminist scholarship related to reproductive labor and transnational mothering and places the work in relation to digital migration studies and literature addressing the platformization of care work. It then provides an overview of the Dutch context in relation to domestic work regulation and platformization, as well as the childcare system. Finally, on the one hand, it analyses empirical data from a review of existing web platforms and an anonymous survey of 35 migrant employers; on the other, the main analysis consists of nine follow-up interviews with mothers from the survey. Conclusions in response to the dual research question are several. Firstly, it is observed that those surveyed are largely unaware of the applicable domestic care work regulation and/or workers' legal status and rights, or as to the role of the platform as employer versus intermediary. At the same time, the interviewed mothers express interest in becoming better informed. Secondly, participants appear to turn to digital platforms in the context of a lack of network and a crisis of care, as part of an overall negotiation of their sense of self and belonging that includes aspects of care, mothering, migrant status, and perceived gender roles in fluctuating contexts. Ultimately, the article fills existing gaps in the literature by examining the experiences and expectations of migrant mothers who rely on or seek paid care in their overall migration and life trajectories.

2. Theoretical Framework

Our theoretical framework first overviews feminist theory and migration studies, examining social reproduction, family dynamics, and mothering; then it bridges to digital migration studies, and finally canvases literature addressing the platformization of care work. It then links this context to Yuval-Davis' (2016) conceptualization of the politics of belonging and its intersection with care. These various strands of research are gathered here because, as Kofman (2012, p. 154) notes, the study of migrant family life versus migrant labor often represent divorced fields of inquiry, which prevents "a more complete picture of the migrant caring subject within a broader perspective of the social reproduction of their own and other families."

Social reproduction is understood as the interplay between various actors in a dynamic network that can be grouped broadly into state, household, capital, and civil society categories (Katz, 2001, p. 131). Migration studies related to care have been critiqued as limited to work on transnational mothering, South to North flows, and a structural globalization argument premised on assumptions that lack nuance (Kofman, 2012). Such transnational mothering has noted how women's experiences of social reproductive dynamics involve continually renegotiating, varied and context- or situation-specific gendered power relations across their migratory trajectories (Christou & Michail, 2015; Kraler et al., 2011; Locke et al., 2013). While this work notes that combinations of mothering and paid labor can be transformed in these differing material and social circumstances (Dyck, 2018), a great deal of it speaks to so-called "low-skilled" migrants from developing countries (Locke et al., 2013).

There is less literature dedicated to migrant mothering from the standpoint of women with the resources to seek out paid care; much of the literature on this demographic explores themes of transnational elites, trailing wives and their shifting identities (Slobodin, 2025), and the social norms of "expat bubbles" or dynamics of third culture parenting (D'Attoma & Germann Molz, 2024). However, there is a call to more thoughtfully approach the gendered ethics of care embedded across moments, cultures, and spaces in individual migration trajectories, and to explore how these individuals negotiate care obligations with different actors in these contexts (Kofman, 2012; Kofman & Raghuram, 2022). In terms of digital migration studies, work has been conducted on the lives of migrant profiles like the so-called "expatriate" or "middle-class transnational," and how they may use social network sites and smartphones for online or hybrid support networks, both globally as well as in the Netherlands (Hofhuis et al., 2019; Leurs & Prabhakar, 2018; Patterson & Leurs, 2020). It follows that migrant mothers with resources may be tapping into platforms for paid care as they negotiate their care obligations in new contexts. This presents a very particular gendered dynamic of mobile subjects employing other mobile subjects. The gap in examination of migrant mother "employer" perspectives as relates to their childcare expectations and understandings of paid care work (Lundström, 2013)—evidenced as frequently performed by migrant workers—is the focus of this article.

In light of the above, it is important to also address the platformization of work at an intersection with care. Platform work has been evidenced as gendered and racialized labor, with men more represented in the food services and delivery sectors, and women disproportionately represented in domestic care (albeit this can vary globally based on context, regions, and levels of development; see Balaram et al., 2017; van Doorn & Vijay, 2021). Overall platform scrutiny to date can be classified into strands of research addressing worker misclassification or exploitation, issues of low skills and migrant worker access, and enhanced precarity (Baum,

2024). At the same time, some studies on platform and gig work also point to the agency that it can offer, in terms of new opportunities and independent decision making (Katta et al., 2024).

Within this, a burgeoning body of work has begun to point to the specificities of carework within platformization (largely in cleaning services, but sometimes relating to child or elderly care). There are varied qualitative studies, inter alia, in Australia (Kalemba et al., 2024), Argentina (Pereyra et al., 2022), Canada, (Hopwood et al., 2024; Yin, 2023), Germany (Altenried, 2021; Baum, 2024), India (Rathi & Tandon, 2021), Netherlands (van Doorn & Vijay, 2021), South Africa (Hunt & Samman, 2020; Sibiya & du Toit, 2022), Spain (Rodríguez-Modroño et al., 2024), and the US (Ticona & Mateescu, 2018). In the European context, empirical evidence underlines how care platforms target or exploit specific migrant communities, and intentionally allow registration with minimum documentation (Floros & Jørgensen, 2022). Ultimately, many of these studies or reports argue as to the exacerbation of inequalities for workers, given: insufficient remuneration to sustain quality of life; a lack of control over work time; no union representation and collective bargaining power; pressure from algorithmic ratings or adverse effects of algorithmic supply and demand matching; algorithmic discrimination; or platform-facilitated driving down of wages or undervaluing carework even further (Rodríguez-Modroño et al., 2024; Sibiya & du Toit, 2022). In short, work remains precarious, undervalued, and unprotected, and platformization entails capitalizing on preexisting global care chains or reconstituting neoliberal dynamics in care (Hunt & Samman, 2020; Rodríguez-Modroño et al., 2024).

In light of these thought trajectories informing the study of platformization of care, this work attempts to better flesh out the perspective of migrant mothers seeking paid care work via digital platforms. In particular, the research question must take into account the politics of care and belonging inherent to the subject at hand. To do so, this section finally touches upon the work of Yuval-Davis (2016). On the one hand, she addresses belonging as a concept—a dynamic process, multilayered and multiscalar, with individuals belonging in different ways to different attachments. Construction of self and identity form part of this, and how these are evaluated by the self and others (Yuval-Davis, 2016, p. 371). On the other hand, she distinguishes the concept of belonging from political projects of belonging, or contestations around discourses of inclusion and exclusion; these are often inextricably linked with normative values of care. As women participate in the labor market, alongside neoliberal, globalized economy demands that result in a care gap or crisis, a growing dependency on migrant workers raises questions as to inclusionary or exclusionary political projects of belonging (Yuval-Davis, 2016).

Finally, a clarification on terminology concerning migrant mothers seeking care: While this article refers to literature employing the term "expatriate," it is noted that there is a critical examination of the category of "expatriate" and "migrant," with expatriate often understood as skilled and temporarily mobile, white, and from the Global North (Kunz, 2023). These profiles are positioned as privileged and valuable human resources compared with the positioning of the "migrant" as the other and disempowered (Croucher, 2012).

In sum, tackling questions of care work at an intersection with platformization requires melding several fields of study and interdisciplinary approaches to provide a comprehensive framework in which to examine empirical evidence that grounds the very nuanced and context-specific nature of this research. For this reason, the theoretical framework overviewed feminist theories related to social reproduction and global care chains, as well as migration literature addressing migrant mothering and digital migration studies, before reviewing studies on platformization—particularly those to date at an intersection between platformization

and carework. Going over the work in these disciplines is important in asking what societal and institutional shortcomings may be informing the rise of care platformization. Finally, this section situates Yuval-Davis' (2016) understanding of the politics of care and belonging in the context of these interlinked strands; it serves as the lens through which the research questions are examined.

3. Background and Context as to the Dutch Case of Care Regimes and Regulation

The sociocultural context of the Netherlands may inform its current regulation regarding domestic work. While post-war society framed the male as the breadwinner, women's movements in the 1960s and 1970s, as well as the Netherlands becoming party to international treaties for equal rights, led to the premise that all individuals are to support themselves with paid labor rather than via family relations (van Walsum, 2011a). However, provisions for subsidized childcare and parental care are considerably less generous than in other comparative European welfare state countries (de Volder, 2017).

While the outsourcing of domestic work remains lower in the Netherlands compared to other countries, an imbalance remains between employment and caregiving responsibilities; women continue disproportionately serve as primary caregivers and homemakers, as evidenced by the high proportion of part-time employment among women in the country (van Walsum, 2011b).

Some work is subsidized by the government via subsidized daycare or "guest parenting" in private homes, but private domestic work in the Netherlands remains under-researched (de Volder, 2017). The Dutch market-driven approach to childcare springs from a series of policy reforms beginning in the 2000s, increasing competition and private services (van Hooren, 2021). Childcare in the Netherlands is primarily composed of childcare centers and childminders, both of which are subsidized by the government in an income-based approach (Emery, 2020). Most parents use a formal form of childcare with another form, according to the Netherlands Statistics Bureau (2022).

Understandably, studies note a high childcare penalty in the country, with mothers' earnings 46% lower compared to their pre-birth earnings trajectories and also versus fathers' unaffected earnings (Rabaté & Rellstab, 2022). Formal childcare costs have steadily and sometimes sharply increased, thanks in part to shortages in the sector (Verkooijen & Hovius, 2023). A report found that the average 2023 hourly rate in North Holland (9.96 euros per hour) would entail 2388 euros monthly for daycare, five days a week, with prices rising (BOiNk, 2023). Low-income parents can receive 96% of billable childcare costs for up to 230 hours per month, while high-income parents can receive 33% (with a range of income-driven rates in between; see Ministry of Social Affairs and Employment, 2024).

If not using subsidized daycare or "guest parenting" (i.e., *gasthouders*), key legislation important to understanding regulation of domestic care in the Netherlands is the Home Services regulation (HSR). The HSR is specific to domestic care work, and entails that, regardless of legal status, domestic workers who work for less than four days (weekly) for the same employer are entitled to holiday allowance (8% on top of wages), four weeks of sick leave annually, six weeks of sickness benefit (at 70% wage), one month notification of termination of employment, and paid emergency and maternity leave (Bijleveld & Cremers, 2010; de Volder, 2017). As signaled by activists and scholars, the HSR falls short of other rights and, for this reason, migrant organizations lobby for the ratification of the ILO (van Hooren, 2018). If working four or

more days per week, employers are obligated to deduct taxes from their workers' salaries, as well as contribute to the health insurance system (van Hooren, 2018). Academic studies and advocacy reports reveal that there is a rampant lack of compliance with the HSR, while existing regulatory frameworks seldom provide support to irregular workers. Moreover, these regulations can even have adverse effects on declared workers and the sector as a whole, particularly in that they can lead to inadequate social protections (de Kort & Bekker, 2024; de Volder, 2017).

Finally, in the context of the Netherlands and the platformization of care work, it is important to mention the case of Helpling. Helpling, a gig cleaning site, primarily functioned as a platform for migrants with varying backgrounds and migration trajectories, but few income opportunities (Altenried 2020; van Doorn & Vijay, 2024). After a migrant domestic workers' union brought Helpling to court, an Amsterdam Appeals Court (in a September 2021 decision) reclassified Helpling's cleaners as temporary agency workers; in other words, the court held the platform accountable as the employer (Hießl, 2021; Piletić, 2024; Van Doon & Vijay, 2024). However, Helpling later pivoted its business model, taking fees from clients rather than cleaners, and acting as a gig platform with independent contractors supposedly falling under the HSR (Piletić, 2024). Helpling ultimately faced bankruptcy in the Netherlands (Piletić, 2024). At the same time, based on the review of platform sites further below, it seems many childcare platforms have modelled after the Helpling pivot: They establish themselves as a marketplace model and place responsibility on the employers or parents seeking care on those sites. This is an important point given how parents may be unaware of their responsibilities as employers in informal childcare arrangements; the fact that the platform's employer status is litigated on a piecemeal basis can compound this murky territory.

In sum, even with proper enactment and enforcement of existing domestic work regulations, platformization presents a real risk of increased (and compounded) exploitation, as indicated by a growing body of literature. New regulations on platform and gig work could be a pathway to reforming the sector; at the same time, as with other country contexts, the sector often involves informality and a lack of interest in regulation enforcement (van Doorn, 2022; van Hooren, 2018). In the Dutch context, this is particularly evident both in the literature to date on the failed or unclear implementation of the HSR, and the contestation around the roles and responsibilities of platforms for domestic work, as well as definitions of who is the employer in these childcare arrangements.

4. Methodology

This section includes a description of the methodology and the data canvased, before proceeding to the following section, which provides an in-depth analysis of the qualitative interviews. Firstly, a systematic Google search was conducted to identify digital platforms, using seven different search queries with varying combinations of the English words "babysitter," "online," "Amsterdam," "Netherlands," and "nanny" set to an Amsterdam IP address. English was used in order to capture the non-Dutch population. Ultimately, twenty sites were identified for desk review. A separate analysis of these sites was conducted with special attention to any regulatory or compliance-related aspects (Boland, 2025). Of these sites, Facebook Groups, Sitly, and Charley Cares were identified as platforms that offered a marketplace exchange between parents and caregivers, had the most users, and were most accessible to non-Dutch parent populations (and caregivers).

While this article does not provide an in-depth examination of the desk review, it is worth noting that the identified sites pitched themselves as facilitator of connecting with qualified caregivers. Images on the landing and main pages of the sites often feature smiling caregivers, and information is available in friendly and accessible English. Then, in a more obscure terms and conditions section of the site, they often indicated they were not to be considered liable as employers or a temporary agency, and that the onus was on the parent for employment arrangements or screening the candidate. This reflects other work interviewing migrant platform employees in Amsterdam, who reported that sites did not conduct background checks, for example (van Doorn & Vijay, 2021).

Drawing on this, secondly, in collaboration with community managers, an anonymous survey was posted in English and Spanish-speaking Facebook groups designed for parents in different regions and communities in the Netherlands. Participants were asked to complete the survey if they did not hold Dutch nationality and had used one of the identified sites (Facebook Groups, Sitly, or Charly Cares) to solicit or currently receive live-out cleaner and childcare services. The survey and interview questions were reviewed by a migrant union representative and migrant worker in a collaborative research approach to ensure that questions captured their concerns and views as to what should be addressed in research on this sector (Hearn et al., 2022). The snowball method and consequent selection bias of this methodology are noted (Kalimeri et al., 2020). Both surveys and interviews took place from April to September 2024. A total of 35 surveys were completed, with the bulk of the analysis here relating to the follow-up, semi-structured interviews (complementary interviews with a community manager and platform founder are also excluded from the analysis). The nine migrant mother volunteers from the survey participated in semi-structured interviews organized in follow-up, with anonymized data coded in Atlas.TI. Interviews were accompanied by an information sheet and consent procedure, and the entire research project, as well as participant recruitment, was approved by an institutional ethics committee. The information sheets and consent forms assured participants that the researcher would not indicate which respondents correspond with which demographics, at the risk that those details might make the respondents identifiable.

5. Analysis

This section proceeds to offer insights regarding the interviews. All of the self-identifying women were between the ages of 25 and 45 and did not originally hold Dutch nationality, and included both EU and third-country nationals. They also all held legal status in the Netherlands. All except one were in a two-parent household. Some acknowledged privileged socioeconomic positions, and the single-parent household participant explained that she needed care assistance given the demands of her well-paid employment. All interviews were conducted in English and lasted from 30 minutes to an hour and a half. A first main observation was that they found or perceived a real crisis of care in the Dutch context, and often turned to platforms as they lacked support or networks. The second observation relates to the research question on knowledge of regulation: Participants remained unclear on the regulation applicable to domestic work in the Dutch context, although they often differentiated domestic labor from other categories, as the Dutch legislation indeed does. It also seemed that they were not seeking to exploit or undervalue labor. The final main observation that surfaced, particularly when inquiring via the lens of the politics of care and belonging, included that a multifaceted and dynamic mothering identity: Participants' belonging and identity remained evolving and impacted by complex normative values of care (inextricably intertwined with platform-mediated dynamics), which they straddled across their individual or migratory trajectories.

5.1. Turning to Platforms Due to Perceived Lack of Support in Navigating or Securing Childcare

Of course, as one of the main and fundamental research questions in this investigation, mothers were asked why they had turned to online platforms in the first place. Overwhelmingly, it was evident that they felt they did not have sufficient childcare support, knowledge, trust, or contacts to look for help otherwise. As one mother explained:

> I mean, I can speak a little bit of Dutch, but yeah, [it's] really terrible. And when we lived in [former neighborhood]...I would never have asked one of the neighbors to, like, watch my children. Right. Just, just absolutely not. Now living in [current neighborhood], we've got some teenage girls across the street. Okay, maybe. Yeah, maybe they could babysit. But like, we're not quite there yet. And I'm too afraid to talk to teenagers....So, yeah, [we are] just, like, navigating all of that. It's not, like, I've got, yeah, like, a sister I can call. (P4)

In addition to struggling without a network, the accessibility of privatized daycare in the Netherlands was a repeated challenge. As one mother explained, while they initially had a place for their child, moving within the Netherlands meant an unsuccessful waitlisting process:

> And we just went into, like, panic mode, of course. Like, what are we going to do? We don't have, you know, any network here. We have no family here...and we had...you know, not long been [sic] in the area that we lived in, because we [had] moved from Amsterdam [to be] outside of the city for a bit more space and what have you. (P8)

Similarly, P5 turned to online networks because of difficulties accessing the daycare option:

> So, basically, we had to look online everywhere because, when we were pregnant last year, you know, we heard everyone saying, like, "get in early," but we didn't really take it that seriously, to be honest with you. And then, when it came to, like, a few months before she was born, I started inquiring, and they're all, like, oh no, we are full for the next year. Try next year, again, the following year. And I was like, what? Like, that can't be true. Yeah. And then I started looking online on platforms, like, everything I could find, Facebook, Google. (P5)

This participant also explained that they saw support for raising a family as something unavailable to migrant families without local family:

> So...the sentiment here is that the grannies watch the kids. So, I know my neighbor, I see her mom come over, fetch the kids in the morning, and then drop them off in the afternoon. So I think that also happens, um, the days they don't go to the school. (P5)

Indeed, whether due to their knowledge or embeddedness in the community or not, some found difficulty in securing a spot in the government-subsidized private daycare facilities. As one participant described: "Well, I think, in the end, we don't want to do daycare in general, but I didn't even really have the option. Like, they only gave me one day, eventually. And that's not enough if we work full time" (P8). Aside from migrant status, this perhaps reflects the Dutch statistics on women's participation in the workforce.

5.2. Unclear on Regulation and Largely Viewed Paid Carework as Different From Traditional Labor

While not the main data analyzed here, when asked if they were aware of any rules regarding hiring domestic workers or contracting childcare services in the Netherlands—and if so, which ones—the vast majority of respondents replied they did not know, had no idea, or said they had some idea but then demonstrated that their understanding was incorrect. Only two demonstrated complete familiarity with the regulation within the Dutch system. The same general question was asked in the follow-up interviews with the migrant mothers, again demonstrating that participants were largely unaware of the HSR or their responsibilities in contracting child care (from a platform or otherwise).

For example, several were unaware of the current minimum wage, a requirement of the HSR. One participant asked: "What is the minimum, actually? I don't even know" (P1). As with answers in surveys, some assumed that online platforms were responsible or should communicate that information. Another mother recounted:

> I would have thought that if you're going through a site like this and you're paying, because we pay for lots of insurance and additional things, that they would be taking care that that was all covered. Yeah. It's certainly not clear that it's not covered. (P8)

Another mother pointed out the difficulty of looking up or understanding what regulation applied in domestic work and what their role was as an employer:

> I mean, it's hard enough to figure out all these rebates [privatized daycare government subsidies] and what you are entitled to. And if you, now, have to figure out, if you hire a nanny, what do you need to do, and what do they have to do, and, yeah, my goodness, it becomes complicated. (P9)

For example, P7 assumed that the Dutch system worked the same way as it did in their country of origin:

> [I assume you provide the worker with] Minimum wage and pay their related income tax on their behalf, right? Like, they're an employee of yours, right? But if you hire someone to be a babysitter in a one-off instance…like, you don't have to file taxes on their behalf because it's just kind of a one-off thing….So I just kind of assumed there must be some similar mechanism for that here.

While knowledge on the topic of child care regulation and their role as employers remained confusing, particularly as related to platforms and their corresponding responsibility, the mothers interviewed demonstrated an interest in attempting to abide by employer responsibilities and seeking to remunerate care work appropriately. The same participant asked the interviewer:

> [I would] like if, at the end of this, you could produce some sort of, like, best practice, right? [For] parents, like, what's the minimum wage? What are your responsibilities when hiring someone on, like, a contractor basis, right? Like, is it okay to pay someone cash for a one-off service if they don't have a visa, I don't know. I just think, like, all those things might be really helpful for parents. (P7)

> I actually don't know, like I was saying, I don't know the minimum wage, but I pay more than that….I need to pay you more [than minimum wage]. Especially because I like you, and I feel like I would be able to trust you…I don't want to underpay people. (P2)

On the one hand, the participant expressed the intention to value care work; on the other, she was not aware of state regulation on its value. The parents' obfuscated knowledge of worker rights mirrors studies with migrant care workers seeking or gaining employment on platforms, which find that workers are often not aware of their labour rights, including minimum wage (Hopwood et al., 2024; Rodríguez-Modroño et al., 2024).

5.3. Belonging and Situational Meaning of Motherhood in Flux

Insights from participants reveal that they lack the network necessary to pursue childcare "offline" and are thus forced to turn to online communities, platforms, and other alternatives to the Dutch privatized daycare system. Beyond the initial lack of support or recourse in balancing work responsibilities and securing paid childcare, their narratives also reveal evolving identities as they navigated the intersections of work and family life, gender roles, and caregiving—set against a backdrop of exclusionary politics of belonging and deeply embedded care norms.

P5 expressed that their difficulty in securing daycare was not due to a general crisis of care per se, but rather to exclusion stemming from her family's migrant (non-Dutch) status:

> I mean, other countries are much cheaper with schooling. I don't know how, how it's so expensive here. Like, the amount of tax you pay. It doesn't make sense...they don't really want to deal with people who don't speak Dutch or the kids who don't speak Dutch.

Another mother explained she was not comfortable with the childcare she had secured, but felt she had no choice:

> I had to bring him to the daycare. And I know those ladies...I have no photo, no update. I have no clue what he's doing all day. They are...now they have decided that he should not nap anymore. Although he really needs to nap. Yeah. But they decided it [won't happen]. So you know, it's like, Jesus, I pay 1000 euros for three days. (P1)

Another interviewee described how in they felt continuing their participation in the labor market was related to their sense of belonging:

> I do think it's important to keep on working...as a woman. Because you get out of practice with work, your career can stagnate, and later on, your pension's going to be affected. That's my reasoning for needing to continue working. And also because...because I think exposure to different people [matters]....Not just me, especially when you're isolated. (P2)

Finally, some had found security in their trajectories of navigating childcare in their new context. P4 noted that she was grateful for the childcare options in the Netherlands, despite the price, because it afforded their children a connection to the community:

> So it's kind of, like, I think it's outrageous. I think it's so expensive, but then at the same time, I'm also, like, at least you're getting a provision of care...ah. We love the Dutch daycare system, honestly, just because it teaches our kids Dutch. (P4)

One participant also reckoned with their experience of mothering in evolving and sometimes unknown contexts that came with navigating family life on the move. Their choices remained difficult within a complex, multiscalar process of finding belonging in various geographical situations across space and time:

> And all you can do is be the best advocate for your child and make sure that you're leaving them in care that you're comfortable with and, like, it will be fine. My kids are…eight and five, and they have definitely had some questionable situations. They're all still okay….Everybody survived, we still have a long way to go, but I'm feeling pretty good. (P7)

In sum, patterns emerged in responses to the research questions. Regarding the query as to whether they understood the regulations for childcare when hiring paid work through these platforms, it became evident that they largely were not aware of the HSR, and some even thought the platforms were responsible for compliance, which a desk review indicated these sites intentionally shrugged off responsibility. The reasons why they turned to online networks to seek childcare in the first instance spoke to negotiations of belonging or perceptions of exclusion and difficulty in access to traditional childcare.

6. Conclusions

While investigation into platformization in the care industry has increased, it still significantly lags behind the inquiry into other sectors. Moreover, given the involvement of various mobile subjects in these processes, feminist literature, migration literature, and digital migration studies could reach improved dialogue to understand the complex trajectories of both migrant families and migrant workers negotiating care in the context of this proliferating platformization.

Here, the underdeveloped perspectives of migrant mothers using these platforms are addressed; the lens of belonging as both a politics and a multidimensional concept proved useful. Regarding the first approach, the reliance on migrant labor regimes and commodifying care in the face of an unresolved care crisis came to the fore, in the reasons behind why families turned to online platforms to seek alternative methods of care to the common Dutch practice of privatized daycare. Some perceived the costs of privatized daycare, even with government subsidies, as inaccessible; others found it inaccessible regardless of cost; and still others did not receive sufficient coverage from or access to daycare. As for conceptions of belonging linked to both the concept as construction of identity and self, the participants also expressed varying levels of belonging, including dimensions of mothering and care: they experienced both exclusion in their new communities and grappled with their construction of self and identity as they embarked on journeys of mobility and contemplated gender roles and responsibilities; they also found identity in motherhood. On the one hand, this reflected the multidimensional construction of belonging; on the other hand, as they negotiated gender roles and their role in society and the labor market, they found themselves contending with the normative values of care and the political project of belonging.

Limitations include the positionality of the researcher and the scope of the study. Firstly, the researcher attempted to remain reflective of their own intersectional dimensions of privilege as well as their proximity in identifying as a mother and migrant. However, it is difficult to untangle binary and exclusive "insider" versus "outsider" divides, as rapport was established via dynamic combinations of nationality, gender, age, professional and parental status, and migratory status (see Ryan, 2015). Moreover, solely around a third of

the survey participants volunteered for the semi-structured interviews—and the fact that they volunteered could entail selection bias. Finally, participants drew from diverse migration trajectories and cultural and societal backgrounds that could inform very different perspectives, although they were united by common experience as newcomers in the Netherlands.

Despite this last caveat as to the homogeneity of the group, it is clear that the Netherlands is not exempt from the rising costs of social reproduction documented in the literature to date. Questions raised by this study include whether the mothers' lack of access to daycare had some relation to their migrant or non-Dutch background, or whether the difficulty in daycare access and cost, which has been evidenced in the Netherlands, is equally difficult for all parents. It has been posited that, to date, in the Netherlands, platformization has not disrupted traditional childcare but serves as a temporary stopgap (Piletić, 2024). Still, a first takeaway for further research is that, with the costs of childcare rising and platformization proliferating, the stopgap claim could be tested in longitudinal studies, particularly in varying contexts (including in other European welfare states).

Moreover, it could be argued that platformization allows these mothers to operate in isolation from physical communities in their family strategies. At the same time, further examination is required as to the distinction between migrant trajectories and in- or exclusion, versus the general challenges of the ethics of care and decision-making parents face regardless of migrant background. Undoubtedly, gendered norms and expectations continue to operate alongside the rising costs of social reproduction, and there are overlooked categories of migrants navigating these.

The literature is concerned about private actors beyond individual employers and the state, stepping into the domestic space and potentially operating with impunity. In this case, the mothers interviewed expressed a willingness to value carework, but their understanding of platforms was obscured and confused. As such, as increasing attempts at regulating platformization take place in national and international contexts, further research should take into account the specificities of the care sector (and the multiple distinctions within it, including childcare versus elder care, etc.), and that the sector continues to remain less visible, less litigated, and its regulation less implemented. Such inquiry could go towards better informing industry best practices, parents' awareness of careworker rights, and attempts at platform regulation. Ultimately, further research should incorporate the nuances of the ethics of care across transnational contexts, taking into account all stakeholder perspectives, if seeking to understand the phenomenon of platformization and how to mitigate any of its potential consequences.

Conflict of Interests

The author declares no conflict of interests. In this article, editorial decisions were undertaken by Ulf R. Hedetoft (University of Copenhagen).

Data Availability

Data is archived on the Radboud Data Repository with closed access settings according to the research ethics design of the study.

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ARTICLE

Eritrean Refugees in the Digital Netherlands: Between Inclusion and Exclusion

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Abstract

While the use of digital technologies has been associated with refugees' successful integration, this perspective overlooks the digital divide growing on the existing structural inequalities. For Eritrean refugees living in the Netherlands, the digital divide cuts deep into their personal lives and endangers their relation to authorities. Based on two months of ethnographic research and five continuous months of digital participant observation (first author), our article aims to show how differences in digital knowledge and unequal digital infrastructures between Eritrean asylum seekers and Dutch society led to challenges for both refugees and street-level bureaucrats in the Netherlands. Tackling the case study of Eritrean refugees in the Netherlands, we demonstrate how a non-homogeneous understanding of the digital divide, organizational blind spots, and a lack of socio-political support hinder refugees' integration. At the same time, the case study offers novel ways to ethically assess the digital training and learning paths of street-level bureaucracy as well as the state's adaptation and updating of the asylum seekers' digital assessment framework in the Netherlands.

Keywords

bureaucracy; digital divide; digital inclusion; Eritrea; refugees; The Netherlands

1. Introduction

The rapid advancement of digital technologies in recent years has transformed societies worldwide, creating both new opportunities and structural challenges for vulnerable populations such as refugees, and for their host states. While digital tools are increasingly critical for integration into host societies (Culbertson & Schuler, 2019), existing scholarship often reflects a techno-optimistic bias (Bouffet, 2020; Damian & Van Ingen, 2014), failing to capture the digital exclusion many refugees face due to structural barriers (Bryant, 2022; Kaurin,

2020; Potocky, 2021). This dominant narrative, while recognizing the utility of digital tools, tends to obscure the systemic inequalities embedded within digital access and literacy.

Portraying digital technologies as a "one-size-fits-all" solution overlooks the differentiated realities of refugee populations, particularly their unequal access to devices, networks, skills, and language resources that help refugees navigate displacement, reconnect with transnational families, and access essential services (Bouffet, 2020; Damian & Van Ingen, 2014; Gifford & Wilding, 2013). Some authors (AbuJarour et al., 2021; AbuJarour & Krasnova, 2017) link digital engagement with successful integration but fail to critically interrogate the digital divide and the socio-political structures that mediate refugee–state interactions in increasingly digitalized bureaucracies. AbuJarour et al. (2021) and AbuJarour and Krasnova (2017) argue that digital engagement supports integration by enabling refugees to access services, build networks, and participate socially. However, these studies largely treat digital tools as integration enablers, without critically interrogating how the digital divide and state-driven infrastructures simultaneously reproduce exclusion.

In this context, what is called a "digital divide" is less a technological gap and more a reflection of bureaucratic indifference: a failure to imagine that digital illiteracy, like homelessness or trauma, is not a personal deficit but a product of systemic design. The refugee is expected to adapt—quickly, invisibly—to a digital order that was never made with them in mind. Building on van Dijk's (2006, 2017) foundational work, we understand the "digital divide" as a multi-layered phenomenon encompassing (a) access to devices and infrastructure, (b) digital skills and literacy, (c) patters of use and meaningful outcomes, and (d) the agency or awareness required to critically and securely engage in digital spaces. While these levels are often treated as sequential or technical, our findings show they are relationally produced through encounters between refugees and state bureaucracies. By foregrounding this framework, we highlight how Eritrean refugees' struggles with access, skills, and use are not simply personal deficits but the outcomes of systemic blind spots and bureaucratic assumptions.

Much of the literature on digital technologies and refugee integration has celebrated the enabling power of smartphones, apps, and platforms to support refugees in navigating displacement, accessing information, and maintaining transnational ties (Alencar, 2018, 2020; Gillespie et al., 2018; Udwan et al., 2020). These studies rightly document how digital tools can offer continuity, empowerment, and mobility in moments of disruption. Yet, they often remain silent on the structured asymmetries that determine who gets to benefit from these technologies and who does not. The uneven distribution of digital tools, skills, and access among refugees is routinely underexamined, as is the digital architecture through which states classify, assess, and manage asylum seekers.

We contend that this absence—showing how structural asymmetries in benefiting from digital technologies disadvantage refugees—is not accidental but symptomatic of a deeper failure to interrogate how digital governance produces inequality. Digital literacy, in this context, is not just a skill but a gatekeeping device. Our contribution begins from this gap: to understand the digital divide not only as a technical issue of access or skills, but as a relational process between refugees and states, humans and infrastructures. It includes the hardware (devices), the software (portals, forms, ID cards), and the human dimension—the clerks and caseworkers whose own digital fluency or biases shape outcomes. In this article, we trace these entanglements to show how digital systems are used to manage asylum, but rarely to support it.

Our argument unfolds in three parts. First, we situate our approach within scholarship on Science and Technology Studies, surveillance, and migration governance, which highlights how digital infrastructures embed power and reproduce inequality. Second, we examine how the digital divide manifests across the refugee journey, from connectivity gaps in places of origin to survival strategies on the move, to structured constraints in the Netherlands. Drawing from our fieldwork with Eritrean refugees, we uncover how language hierarchies, racialized assumptions, and institutional inertia shape their digital encounters. These are not simply matters of access or skills, but entanglements of power, visibility, and erasure. Finally, we turn to the Dutch state itself, showing how public servants, platforms, and policies project an idea of the "digitally ready migrant," an ideal type few Eritreans are in a position to perform. In doing so, we highlight how migration governance increasingly relies on digital systems that sort, assess, and often exclude. Unless digital frameworks are reimagined as sites of learning rather than judgment, the promise of inclusion will remain hollow.

1.1. Note on Methodology

This article is based on qualitative fieldwork with Eritrean refugees in the Netherlands, conducted between May and June 2023 by the first author. Data were analyzed, interpreted, and structured together with the second author. Seventeen in-depth interviews and one focus group were carried out by the first author in Tigrinya, with participants selected through intersectional criteria including gender, age, education, and location. Recruitment occurred via Eritrean community centers and associations, using both phone and in-person outreach. Interviews focused on digital practices in daily life—communication, services, employment, and access to digital infrastructures and information. Participants reflected on their experiences with smartphones, apps, and public portals, as well as their interactions with institutions such as the Immigration and Naturalisation Service (IND), municipalities, and welfare agencies. Thematic analysis (Braun & Clarke, 2019) was used to interpret the data. Coding yielded 76 initial codes, which were clustered into 15 categories and then into broader themes. Pseudonyms were used throughout.

Using empirical data, we explore how a lack of training on both sides—refugees and bureaucrats—contributes to a digitally skewed integration process. Digital literacy is not a static skill but a relational capacity shaped by support, recognition, and institutional flexibility. We argue for a shift from digital acceleration to digital empathy: toward infrastructures that adapt and update rather than assess, and that treat integration as a process of mutual learning rather than unilateral compliance.

This study passed through the ethics review self-check provided by the Faculty of Social Sciences Research Ethics Review Committee, Vrije Universiteit Amsterdam. Informed consent was obtained from all participants after the study procedures were explained in Tigrinya, both orally and in writing. Given the sensitivity of participants' asylum status and digital vulnerabilities, particular care was taken to anonymize personal details and avoid traceable digital identifiers. The first author shared with participants a cultural and linguistic background, such as speaking Tigrinya and being Eritrean himself, which facilitated rapport but also shaped interpretation. We acknowledge this positionality as a methodological strength that requires reflexive awareness.

2. Structural Inequalities and the Digital Divide

The digital divide does not come from nowhere, but reveals societal inequalities rooted in multiple forms of exclusion. Specifically, migration and border studies have shown how augmented and/or automated decision-making in migration governance (Godin et al., 2025; Nedelcu & Soysüren, 2022; Scheel, 2024) disproportionately surveil, police, and punish with deportation racialized migrants (Vrăbiescu, 2020). The influential work of Eubanks (2018) demonstrates how digital welfare systems reproduce inequality, shaping outcomes well before individual discretion. Especially, in surveillance studies, discretion is located at the interface between refugees and the state (Ozkul, 2023; Vohra, 2023), between the automated decisions and human biases. Building on this scholarship, we argue that digital infrastructures are never merely technical—they embed social assumptions and organizational routines. Our findings show how these embedded assumptions about a "digitally ready migrant" systematically reproduce exclusion.

Previous studies of voluntary migrants show us how digital tools can support mobility, belonging, and economic participation (Anderson & Daniel, 2020; Damian & Van Ingen, 2014). However, voluntary migrants typically engage with digital infrastructures by their choice and under conditions of relative stability. Refugees, by contrast, are compelled to interact with state-mandated digital systems that determine their access to housing, benefits, and legal recognition. Our contribution lies in extending this literature to the governance of asylum, showing how digital infrastructures can function less as enablers of inclusion and more as gatekeeping devices that institutionalize inequality.

We situate our work within *digital divide scholarship* (Alam & Imran, 2015; Potocky, 2021) but push beyond its technocratic framing to confront the epistemic erasure of refugee knowledge. The digital divide perpetuates existing social inequalities, keeping refugee groups with limited digital skills in the margins of society (Correa-Velez et al., 2013; Helsper, 2012)—a topic debunked by the socio-technical systems theoreticians (Fill, 2025). Recent studies reflect on how refugees are affected by newly introduced automated decision-making and artificial intelligence, but also how these new technologies shake the foundations of the human rights framework (Judijanto, 2025; Kinchin, 2021; Madianou, 2019; Molnar, 2021). Given the ubiquity of digital technologies in all spheres of life, particularly in Western societies, the digital divide can put some groups at a disadvantage compared to others. Studies on the digital divide focus on economic and demographic factors (Lythreatis et al., 2022; Ramsetty & Adams, 2020) and on inequalities as a result of access (Bartikowski et al., 2018). Yet, digital skills as an aspect of the digital divide among refugee groups and how these skills influence the integration process is an overlooked area.

In the Dutch context, despite the rapid digitalization of public services, little attention has been given to Eritrean refugees, who are the second-largest group of asylum seekers after Syrians, among the refugees who arrived between 2014 and 2017 (Sterckx & Fessehazion, 2018). While policy and scholarship have historically focused on migrant groups from Morocco, Turkey, and Surinam (Te Lindert et al., 2008), Eritrean realities remain peripheral. This invisibility is not benign; it shapes policy blind spots, obstructs tailored support, and reinforces a default model of integration that fits few and fails many (Bonjour & Chauvin, 2018).

Moreover, we look at how mismatched digital infrastructures and asymmetric digital literacies generate tension not only for Eritrean refugees but also for the Dutch street-level bureaucrats tasked with integrating them. We focus on how a non-homogeneous understanding of the digital divide, organizational blind spots,

and a lack of socio-political support hinder refugees' integration. When refugees encounter state systems that presume universal connectivity and fluency, they are often positioned as failing before they begin (Vrăbiescu, 2019). But this is not a story of individual incapacity but rather of a faulty design, of digital regimes calibrated to a normative user that Eritrean refugees were never imagined to be. Integration, then, becomes an exercise in endurance: navigating misrecognition, opacity, and technologies that offer access while demanding compliance.

Through the case of Eritrean asylum seekers in the Netherlands, we interrogate how institutional blind spots—assumptions about what digital competence looks like, who possesses it, and who should adapt—reproduce exclusion in the name of efficiency. Refugees with limited access to digital tools are left out of housing systems, job platforms, and healthcare appointments. Meanwhile, civil servants operate within frameworks that rarely acknowledge the digital precarity of those they assess. Lipsky's (2010) theory of street-level bureaucracy and Tummers and Bekkers' (2014) discretionary decision-making help us qualify civil servants' digital assumptions and systemic routines as part of the problem.

Our findings illustrate how Eritrean refugees experience all four levels of the digital divide (van Dijk, 2006, 2017). Access is constrained not only by devices but by unstable housing and precarious internet contracts. Skill deficits center on navigation and language barriers, with email emerging as a critical yet unfamiliar tool. Use and outcomes are highly unequal: While some participants leverage digital tools to secure jobs or education, others miss housing appointments, incur debt, or face homelessness. Finally, agency is curtailed by surveillance fears and linguistic barriers, which limits participants' ability to engage critically and autonomously online.

Despite the spread of digital infrastructures, the digital divide continues to operate as a quiet architecture of exclusion. It no longer simply marks a lack of access to devices—it marks who systems are built for, and who they silently ignore. What began as a conversation about connectivity (van Dijk, 2006) has deepened into a layered structure of inequality: digital skills (Alam & Imran, 2015), comprehension, linguistic inclusion, and the right to private, unmonitored digital presence. For refugees, these are not abstract levels. They show up in the inability to open a state email, to complete a form in a foreign script, to understand what is being assessed; and ultimately why they are being assessed. The digital divide is not a developmental lag, but rather a designed asymmetry, reproduced at the interface where refugees meet the state.

Access to digital technologies has become a prerequisite for navigating life in host societies (Andrade & Doolin, 2016), but not all access is equal, and not all users are imagined. While digital tools promise integration, they often deliver stratification. Refugees who arrive with prior skills and linguistic capital can leverage these tools to find information, housing, and work. Others are left circling systems they cannot enter. Digital access is rarely neutral. It is shaped by gender, class, age, and ability, producing uneven terrains of connectivity and control (Kaurin, 2020). What masquerades as inclusion is often a form of selective legibility, where only the digitally literate become visible to the state. For everyone else—women, older adults, disabled refugees—the platform does not open because it was never designed with them in mind.

Moreover, connectivity is not just about access—it's about privacy, autonomy, and the right not to be watched. Refugees with access to stable devices and connections are better able to obtain life-sustaining information; those without remain dependent and vulnerable. Prior studies highlight how connectivity can

reduce exploitation during displacement (Gillespie et al., 2018; Kaurin, 2020; Mancini et al., 2019), but access is rarely individual: Phones are often shared, making privacy a luxury. As Latonero et al. (2018) explain, digital safety is gendered—when women rely on devices controlled by male relatives, even health apps fail to function as intended.

Fears of surveillance and data misuse (Eubanks, 2018) further shape digital participation. For many refugees, the risks of being watched or misinterpreted outweigh the promise of inclusion. Artificial intelligence and digital systems in migration governance often heighten vulnerability and blur accountability (Kinchin, 2021; Nalbandian, 2022). Studies from Sweden and Australia (García Alonso et al., 2021; Lloyd, 2020) show how surveillance anxiety and linguistic exclusion converge to silence participation. These are not marginal concerns but signs of a system calibrated more for suspicion than safety. In the following two sections, we present our empirical data to demonstrate how each of the four levels of the digital divide—access, skills, usage and outcomes, and agency—manifests in the daily interactions between Eritrean refugees and Dutch state representatives.

3. The Digital Divide of Eritrean Refugees in the Netherlands

Refugee studies have long examined questions of displacement and integration, yet too often refugees are spoken about, not listened to. Their digital competencies—what they know, how they learn, what they build—remain obscured beneath institutional framings that treat them as data points or administrative burdens. What is missing from dominant scholarship is a grounded account of what refugees themselves say about their digital lives: how they navigate bureaucratic portals, what they fear when asked for an email they cannot access, what is lost when a notification is missed. These are not just digital gaps; they are stories of exclusion, shame, improvisation, and (lack of) care. This article centers these lived accounts, not as anecdotes but as analytic evidence.

3.1. Limited Resources, Traveling, and Transition to a New Country

For Eritrean refugees in the Netherlands, the digital divide is not simply a matter of connectivity but a mechanism through which the state sorts, assesses, and disciplines. Refugees are classified not by needs but by their ability to perform digital competence on demand. Integration becomes a performance of fluency, judged against standards that are culturally situated and technologically uneven across EU states. Barriers also begin before arrival: SIM cards that require documents, reception centers with unreliable Wi-Fi, and bureaucratic encounters that assume an email address equals digital readiness. In this context, the digital divide is less a gap to be bridged than a terrain of exclusion structured by unequal access, forced immobility, and institutional oversight. Integration cannot be understood without recognizing the violence of digital expectation.

Digital exclusion is the outcome of intersecting disadvantages—lack of access, limited literacy, constrained mobility—layered upon refugees already navigating fragmented bureaucracies. Refugees often lack the digital skills and resources required to meet the demands of integration (Hudson, 2017). But exclusion runs deeper: Education, age, language, income, and cultural familiarity all shape whether technology becomes a bridge or yet another threshold (Alam & Imran, 2015; Cohen et al., 2022). Even those with prior digital experience may find their knowledge unusable in host societies where essential services are delivered only in dominant

national languages (McCaffrey & Taha, 2019). This linguistic filtering functions as quiet exclusion. It does not deny access outright—just makes it incomprehensible. Over time, these exclusions compound. As Beaunoyer et al. (2020) show, digital disconnection affects work, education, and social ties, reinforcing the very barriers digital technologies claim to dismantle. Nguyen et al. (2021) further reveal that lower internet quality and limited skills are directly tied to diminished communication capacity. Digital exclusion is self-reinforcing—once you fall behind, the system is designed to keep you there.

For many Eritrean refugees, arrival in the Netherlands does not mark the end of precarity—it simply reconfigures it. Digital access, often taken for granted by host institutions, remains patchy, conditional, and deeply unequal. Smartphones are common, but functional internet is not. Housing is unstable, documents are delayed, and with them, SIM cards, Wi-Fi contracts, and digital participation itself. As Mahlet, a 42-year-old woman in Amsterdam, put it: "For many years I was not given a refugee status, I didn't have a permanent place to stay, and I had no Wi-Fi, no internet. I just had a small phone for calling." The device is there—but the infrastructure is missing. In these early months and years, the digital divide is not abstract. It is the silence of an unopened email, the absence of a stable address, the long wait to become legible to the system.

3.2. Digital Challenges: From Smartphone to Emails and Digital Communication

To live in the Netherlands is to engage with a digital state—but for many Eritrean refugees, this state speaks in codes they were never taught to read. Digital engagement is often limited to the familiar safety of calls and WhatsApp, while housing portals, benefit systems, and application platforms remain out of reach. The cost of this partial access is steep: missed appointments, lost letters, and growing invisibility within the very institutions meant to support them (Beaunoyer et al., 2020).

Participants did not speak of programming or software literacy. They spoke of something more basic, more urgent: navigation. The ability to reach a website, locate the right tab, complete a form without needing to ask:

> If I have to choose a specific skill that is very important, I would say the ability to go to a certain website on the internet, search for something, find information, and complete something that concerns you. If a person is able to do this, I think their life here would be much, much easier. (Yonas, 27, male, Amsterdam)

Yonas' reflection captures a quiet truth: In the digital state, to not know how to navigate is to fall behind silently. This is the divide that structured every conversation. Smartphones were everywhere, but computers remained symbols of another tier of access—one that most had not reached. As Salem, a 35-year-old female in Amsterdam, put it: "If you can read and understand the language, if you can use a computer and the internet, you will be happy here." Her words cut to the core: Digital skill is not just a technical asset, it is a condition for well-being. Without it, refugees are left guessing, dependent on others, or locked out of the very tools meant to integrate them.

Smartphones were ubiquitous among participants—but digital confidence was not. Most used their phones for what they knew: calls, messages, WhatsApp, Telegram. These were not just apps; they were lifelines to familiarity, safety, and social presence. As Yonas, 27, male from Amsterdam, explained: "I use my phone for

everything, to connect with my people." But beyond that social terrain, a harder digital world loomed—web portals, payment systems, appointment apps. Only a few, often those with higher education, could navigate these spaces with ease. These individuals became informal intermediaries, bridging digital gaps within the Eritrean community itself. Their roles reveal both solidarity and stratification. We notice communal coping strategies that emerge when public systems fail to offer support. Digital exclusion is not only vertical—between refugee and state—but also horizontal, lived unevenly within the group itself:

> On my phone, I use direct calls, and mainly social media....I also use apps like banking apps and I use email as well....I also have the DigID app on my phone....I use my computer for accessing language learning resources for example. I watch videos and so on. There are also online available books that I access with my computer....I use Microsoft packages, mainly Microsoft Word. I download images on my phone. But if it is a document, for example in PDF version, I download it on my computer. (Gere, man, 22, Tilburg)

Across conversations, participants described smartphones as lifeline tools to stay connected with family, friends, and familiar languages. Basic digital skills like making calls or sending messages were widespread, and for many, these skills sustained their social world. But beyond these familiar platforms, the digital terrain shifted quickly from connection to confusion. Those with stronger digital literacy could navigate public services, apply for jobs, or access education. Those without remained reliant on others for help. Digital skills, then, are not simply technical. They are permissions to move, to know, to belong. And the absence of those skills is not just an inconvenience but a form of exclusion, quietly enacted through every app they cannot open.

While email was peripheral or unused in many participants' countries of origin, in the Netherlands it becomes not just a communication tool but an administrative lifeline. Refugees are quickly expected to rely on email for everything—from housing notifications to medical appointments—yet little support is provided to develop the skills required. The shift is not just technical; it is disorienting:

> We don't use email in my country. But here, wherever you go, they ask if you have an email. It is all about emails. Some of them even say, if you don't have an email, we won't send you a postal mail. This is extremely difficult. (Halima, female, 30, Zandaam)

Halima explains how email itself becomes a threshold; one that determines access to the state. This threshold often excludes those least prepared to cross it. Lacking digital skills is not a minor inconvenience— it is a barrier to everyday life. For Eritrean refugees, the inability to send an email or navigate an online payment system often results in missed opportunities and cascading penalties. Digital bureaucracy becomes punitive by design. The inability to engage with these digital platforms negatively affects refugees' interactions and leads to missed opportunities. Yonas, a 27-year-old young man who is currently living in Amsterdam, shared how he missed an opportunity for housing because he did not know how to use email:

> When I arrived in this country, in the first few months, I had an appointment at an organization. I had an email address, but I didn't know how to use it. Someone set it up for me back then, filling my email address in a form. Later on, they sent the appointment to my email address. I was waiting for someone to tell me or notify me about [the appointment] as I didn't know how to use an email. I had no idea

about it. Because of that, I failed to go to my appointment. It was for a housing arrangement, by the way. And I missed my opportunity [to obtain social housing] just because of that.

Yonas's story is not about forgetting—it is about being untrained and structurally unprepared. The system assumes competence without offering pathways to achieve it. These experiences extend to interactions with private employers and public officials, where digital illiteracy leads to missed opportunities, debt, fines, and even homelessness. What begins as a technical oversight quickly escalates into a life-altering outcome. These are not isolated cases; they are symptoms of a broader design that penalizes nonconformity to digital norms. An interviewee recounted an incident where she was fined due to a missed digital payment, which led to financial pressure. Another touching story narrated how a fellow Eritrean refugee ended up becoming homeless due to accumulating debts originating from digital transactions he could not understand. Halima, a 30-year-old woman living in Zandaam, recounted the tale of this Eritrean refugee who had journeyed alongside her to the Netherlands as follows:

> Let me share with you a story of a friend who came here the same year as me. So, a lot of contacts in this country are made via email, or they would ask you to do something on the internet. This guy doesn't know much about the internet or other digital tasks. So, for this poor friend, a debt that he was not aware of was accumulating, because he didn't check and pay on time. Then, his belongings were confiscated, and even then his debt would not be covered. Then he was forced to leave his house and he ended up becoming homeless. He became excluded from all the services and benefits in the country.

This narrative lays bare how digital exclusion is not benign but has material consequences. It can leave people not just offline, but unhoused.

The digitalization of services in the Netherlands, juxtaposed with the often limited digital proficiency of numerous Eritrean refugees, gives rise to sensations of powerlessness and isolation among participants. The high reliance on digital technologies for basic tasks fosters a sense of dependence on others and feelings of inadequacy:

> The reliance on digital systems leaves me feeling powerless, as if I can no longer accomplish anything independently. I had to ask for help when applying for something on the internet or using an application. And honestly, I don't like that. The freedom I longed for appears to be further out of reach. (Welday, male, in his 40s, Amsterdam)

Others, too, shared their experiences of seeking support for tasks like making appointments online, checking emails, or navigating applications. These stories encapsulated refugees' yearning for independence and the ability to navigate digital spaces independently.

Even among those with robust digital skills, language remains a bottleneck. Yohanes explained: "Language barrier sometimes makes it hard to understand certain digital applications even if you have the skill to use them" (Yohanes, male, 28, Rotterdam). His statement reveals the co-dependence of language and digital literacy. Integration cannot be reduced to access or skills alone—it must contend with the epistemic exclusions that emerge when the language of the state is the only one that counts. Multilingual design is not a luxury; it is a condition for equitable access.

Language learning, as a key aspect of integration, obliges participants to access digital and interactive language learning platforms. Participants have identified language as a multifaceted challenge that affects their ability to use digital technologies, access information, and engage with different online resources. Few participants acknowledged that having a basic proficiency in the English language provided them with an advantage, especially during the first months or years in the Netherlands. One participant said: "Language is a challenge obviously, but for me, I understand a little bit of English and that helped me a lot. So I translate Dutch content into English" (Gere, male, 22, Tilburg). This shows that individuals with some level of English understanding could reduce some of the language-related challenges. The participant's experience further illustrates this notion, as he articulates how his understanding of English helped his digital engagement.

Eritrean refugees navigating Dutch digital infrastructures encounter a particular form of erasure—one not simply rooted in not knowing the language, but in the deeper misalignment between linguistic systems. Most complaints among participants were not about the content of digital instructions, but their form. Tigrinya, unlike European languages, relies on the Ge'ez script—a non-Latin orthography that most mainstream platforms do not accommodate. The digital world of the Netherlands thus becomes linguistically opaque, even hostile. This isn't just a case of bad translation; it is a structural disjuncture that alienates. As refugees are asked to engage with integration systems online, they are met not only with foreign languages but with characters, logics, and platforms that deny the existence of their mother tongue. One participant voiced a common longing: "The first challenging thing is the language. Sometimes I think to myself, what if all the websites were available in Tigrinya too, all the applications and everything? Everything would have been so much easier" (Yonas, male, 27, Amsterdam).

3.3. Digital Tools and Privacy Concerns

For Eritrean refugees in the Netherlands, the digital divide is not only technical but linguistic. Interfaces assume fluency in Dutch or English, silencing those who cannot read them. These linguistic barriers do not just impede access—they exacerbate privacy risks. Refugees navigating the Dutch asylum system described a deep sense of unease, an anxiety that their digital traces might be weaponized against them. Fears of being monitored prompted some to hide or discard their devices altogether, in a desperate attempt to retain control over their data. Yet the irony is stark: In trying to evade digital scrutiny, many became even more reliant on others to complete the most basic online tasks. This dependency, born of systemic neglect, came at a steep cost. As one participant noted, even opening an email or accessing a government site required surrendering their private information to acquaintances or intermediaries. In these moments, privacy became a luxury afforded only to the digitally fluent.

The absence of secure access not only violated personal autonomy but also made some refugees targets of deception and exploitation. Participants recounted being charged exorbitant sums by strangers to perform simple online tasks—filling forms, checking messages, or printing documents. These interactions, often marked by coercion or manipulation, reveal a darker underside of digital exclusion—where informal economies of exploitation thrive on the very gaps the state refuses to close.

The issue of privacy has arisen as a significant obstacle, impacting the accessibility of devices for Eritrean refugees. Some participants expressed concern about privacy issues due to rigorous monitoring and inspection by authorities during the asylum procedure (see Eubanks, 2018). The fear of having their mobile phones and

online activities inspected thoroughly creates a sense of vulnerability, which in turn leads many refugees to choose either to conceal or discard their phones while seeking asylum. The result is a deliberate self-erasure. One respondent described the whole thing as follows:

> They would ask for your phone, request your password, and check everything that you have. That includes your online presence. That is scary, and you don't want anyone to look at your phone like that….Because of that, many people prefer to go without their phones. But that has its own consequences. Many people would have to navigate the system without having a phone. You can imagine how difficult that would be. (Gere, male, 22, Tilburg)

Eritrean refugees face the dilemma of relying on digital technology for various purposes, while at the same time struggling with issues about privacy and data security in the face of institutional mistrust. Many participants expressed the challenge of needing support to execute even small tasks due to their limited digital skills. This heavy dependence on others compromises their ability to maintain privacy, as their personal information is shared with the people supporting them navigate digital or online platforms. Meron, a 49-year-old woman who talked about seeking help from her neighbors and others for her digital issues, voiced her concern as follows:

> So even for the simplest things I have to ask for help. But that doesn't make you feel good. You won't have privacy, as the person who is helping you will see and know everything—your bank or health information can be at risk. (Meron, female, 49, Amsterdam)

Dependence on intermediaries also erodes privacy, as Meron (woman, 49 y, Amsterdam) explained: "Even for the simplest things I have to ask for help. But that doesn't make you feel good…they will see everything, even bank or health information." Meron (female, 49, Amsterdam) added how one "agent" exploited this vulnerability, charging her €900 for false visa services. These accounts show how exclusion produces not only disconnection but exposure—where lack of digital access opens pathways to mistrust and exploitation. The interaction between device accessibility, privacy issues, and striving for integration holds implications for the successful integration of Eritrean refugees in the Netherlands. Digital tools, heralded as bridges to inclusion, frequently become bottlenecks. While they promise streamlined access to welfare, employment, and communication, their benefits are conditional, predicated on having the "right" devices, languages, and literacies. For Eritrean refugees, the pathway to digital belonging is often obstructed by the very tools meant to facilitate it.

4. Blind Spots of the Dutch Integration System: From Personal Biases to the "Neutral" Digital Divide

The Dutch integration system presents itself as efficient, impartial, and streamlined, powered by digital tools that promise universality. But beneath the surface of digital efficiency lies an infrastructure of exclusion. What is framed as "neutral" infrastructure often encodes social inequalities and assumptions of sameness that refugees—particularly Eritrean ones—must navigate at high cost. This section examines the overlooked gaps and *quiet violences* of a system that presumes technological access and cultural familiarity as default.

Using the lived experiences of Eritrean refugees as a lens, we explore how the integration regime's dependence on digital translation tools, automated interfaces, and untrained frontline workers reproduces

existing inequalities. Far from being passive users of a ready-made system, refugees encounter and resist its blind spots through confusion, improvisation, and fatigue. We show that integration in a digital state is not just about learning the system; it is also about surviving its failures.

4.1. Training Programs for Refugees and for the Street-Level Bureaucrats

One of the starkest silences in the Dutch integration system lies in the absence of refugee-specific digital skills initiatives and training programs. This absence is not a passive oversight, but an active form of exclusion that positions digital fluency as an assumed individual responsibility rather than a structural need. Across all interviews, Eritrean participants articulated a shared experience of navigating a digital society without adequate tools, instruction, or institutional support. No government body, NGO, or municipal partner was identified as offering meaningful, refugee-specific digital training. Instead, the burden of learning fell on informal networks, peers, or volunteers—none of whom had the mandate, resources, or pedagogical expertise to guide newcomers through the intricate architecture of the Dutch digital state. This gap is not just technical—it is relational. The absence of digital support for refugees is mirrored by the limited digital literacy and cultural sensitivity among many street-level bureaucrats. When both sides of an interaction lack the tools to bridge distance—one due to exclusion, the other due to bureaucratic inertia—miscommunication becomes routine. Integration falters not only because refugees are underprepared, but also because the system is untrained to meet them where they are.

In a complex digital environment, language access and digital skills might look like a technicality—a box to tick, a skill to acquire. Yet our findings show it functions far more as a structural filter than a neutral tool. Language barriers are not peripheral; they are constitutive of the digital communication between Eritrean refugees and state institutions. These barriers do not merely obstruct understanding—they reshape the very terms of access, expectation, and recognition. Communication with state institutions is not only about translating instructions; it is also about decoding cultural expectations, reading institutional tone, and navigating a bureaucracy that speaks in registers unfamiliar to many newcomers.

In the section that follows, we unpack how Eritrean refugees encounter these language-mediated assessments and how organizational communication practices silently structure failure into their integration process.

4.2. Digital Translation Tools

One example of how digital tools can fail refugees is the reliance on tools like Google Translate among Eritrean refugees, which poses challenges for non-European languages such as Tigrinya, a language spoken by Eritrean refugees. These systems, trained predominantly on European language corpora, misfire when encountering syntax, idioms, and contextual nuance rooted in East African speech communities. Among Eritrean refugees, the digital promise of inclusion through translation collapses at the limits of linguistic infrastructure.

The challenges stemming from language barriers among Eritrean refugees in the Netherlands are further exacerbated by the insufficiency of translation tools like Google Translate (Ma'shumah et al., 2021; Suhono et al., 2020), particularly for non-European languages like Tigrinya. While these tools can be helpful for those with an understanding of English, they need to be improved when it comes to languages like Tigrinya, especially in contexts where Dutch is the source language. For instance, essential communication such as

emails or banking information sent in the Dutch language can be difficult to understand, even when trying to translate through Google Translate. This creates a significant barrier to managing critical tasks and comprehending important information in Dutch, a language in which Eritrean refugees need to be proficient:

> Also, they would send you emails or information in Dutch; I can translate it in Google but Google Translate is not reliable. For example, my bank was only available in Dutch back then, which made it very difficult for me to check my balance, send money, or adjust settings for automatic monthly bills. (Senait, female, 33, Amsterdam)

This is further echoed by another participant, who shared her account as follows:

> A lot of my friends are actually not able to understand letters sent to them or use a translation tool. But let's say you can use a translation tool—even then, you can only get a better translation if it is English to Dutch or vice versa. Give Google Dutch text and ask it to translate to Tigrinya, and it gives you an unrelated translation. So, that is a huge challenge, I think. (Sara, female, 31, Amsterdam)

While many individuals find it difficult to interpret letters and employ translation tools, even those who have language skills face digital limitations. Sara (female, 31, Amsterdam) reflects on a challenge related to the quality of translation, highlighting how Google Translate may provide accurate translations between English and Dutch but fail when translating to Tigrinya.

The consequences of communication conducted exclusively in Dutch within administrative and service infrastructures go far beyond inconvenience—they enact a form of structural exclusion. Participants describe an enduring struggle to access critical services such as online banking, digital subscriptions, and appointment systems, all of which operate exclusively in Dutch. This language regime, embedded in state and market digital platforms, implicitly assumes Dutch fluency as a condition of access, effectively sidelining refugees whose linguistic backgrounds do not align with that expectation. The absence of native-language resources, particularly in Tigrinya, does not merely slow integration; it systematically undermines refugees' autonomy in managing everyday life in the Netherlands.

5. Conclusion

Our findings illustrate how Eritrean refugees experience the four interconnected levels of the digital divide in the Netherlands: access, skills, usage and outcomes, and agency. Access was hindered not only by the absence of digital devices but also by unstable housing situations and limited access to affordable, reliable internet services. At the skills level, participants struggled with basic digital navigation and linguistic challenges, particularly in using essential tools like email, which was both unfamiliar and indispensable. In terms of usage and outcomes, the divide manifested in stark disparities: While some individuals were able to use digital platforms to gain employment or pursue education, others missed critical housing appointments, accumulated debt, or became homeless. Finally, agency was constrained by surveillance anxieties and persistent language barriers, which undermined participants' ability to critically engage with digital systems and act autonomously online. These findings suggest that digital inequality is not a neutral gap but a relational process shaped by both refugee strategies and bureaucratic blind spots.

This article has shown how digital exclusion is a serious and ongoing issue for Eritrean refugees trying to integrate into Dutch society. While smartphones are widely used, real digital inclusion requires much more than just having a device. Refugees face many barriers—from limited digital skills to language difficulties—that prevent them from accessing essential services like housing, education, and employment. We have shown that one of the most consistent challenges is language. Most digital tools and services in the Netherlands are only available in Dutch. For Eritrean refugees who speak Tigrinya, this creates major difficulties, especially when translation tools like Google Translate fail to accurately convert Dutch into Tigrinya. Many participants explained how this barrier caused them to miss important emails, misunderstand appointments, or even fall into debt. These are not just minor issues—they affect people's ability to live safely and with dignity.

The lack of digital training of Dutch frontline workers directly affects refugees, who are not given the support they need to understand how to use digital tools. In addition, the street-level bureaucrats often do not know or do not have the resources to offer help. This creates a situation where both sides are unprepared. As a result, refugees are often left to rely on their community, which can put their privacy and security at risk, as the digital divide creates inequalities within the Eritrean community as well. Those who speak some English or have higher education end up supporting others. While the practice might indicate a sign of community strength, it also shows how the refugee inclusion system fails to provide proper support.

In an ideal world, digital inclusion would be part of integration—not as a technical detail but embedded in both the experience, training, and knowledge of Eritrean refugees and of the Dutch street-level bureaucrats. This means creating training programs for both refugees and bureaucrats, offering services and information in multiple languages, and making sure that digital systems are adapted to meet the needs of all users. Integration is not just about refugees learning how to fit in—it's also about the system learning how to serve a diverse population. Without these changes, digital systems will continue to leave people behind, and integration will remain out of reach for many Eritrean refugees in the Netherlands.

Conflict of Interests

The authors declare no conflict of interests.

Data Availability

The raw data for this study are available at the Vrije Universiteit Amsterdam databases, in line with the ethics requirements of the Research Master's programme in Societal Resilience. This article is based on the first author's MSc thesis, which is archived in the VU Amsterdam institutional repository.

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For some parts of the text, we used the proofreading tool Grammarly.

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ARTICLE

"And Only the Internet Remains…": Social Media's Role in Building Social Capital Among Migrant Students

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Abstract

This article presents a case study of students in Poland, comparing internal and international student migrants in how they form and maintain different types of social capital, including the development of trust, the maintenance of ties with their communities of origin, and the establishment of new relationships within the host society. Based on in-depth individual interviews, the study shows that strategies for maintaining transnational connections and forming local networks vary considerably across groups. The findings highlight the influence of contextual factors, such as the character of the diaspora, patterns of social media use, and proficiency in the host-country language on the ways digital practices support or hinder social capital formation. Across all groups, respondents expressed distrust toward strangers online and caution regarding new acquaintances and information encountered on digital platforms. Although participation in online groups provides a sense of community, the relationships formed within them tend to be superficial, marked by limited trust and a tendency to remain within migrant circles, which restricts the development of bridging networks with the host community. While asynchronous communication can create a temporary sense of closeness, sustaining such relationships requires active engagement and maintaining contact beyond online platforms. At the same time, ties that endured despite distance and time were often accorded particularly high value, with their ability to survive digital mediation viewed as evidence of their strength.

Keywords

educational migration; internal migration; Poland; social capital; social media; students

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1. Introduction

Social media play an increasingly important role in the lives of young people, although digital habits vary by age, gender, and socioeconomic status (Kemp, 2025; Pew Research Center, 2024). At the same time, educational migration is a growing phenomenon in Europe and Poland, where international students comprised over 8% of the student population in 2023, mainly from Ukraine (45%) and Belarus (12%; OPI-PIB, 2025), while internal mobility among Polish students is also substantial (Jończy, 2022). A review of the literature reveals that educational migration remains relatively under-researched in the European context, despite its distinct characteristics in the region (Brooks et al., 2024). Most studies focus on psychological outcomes, especially intercultural adaptation (Zhou & Yin, 2024). The role of social media in shaping different forms of social capital among migrants has received little attention, and comparative analyses of internal and international migrants in this regard are scant. Comparing internal and international students is essential because these groups experience distinct challenges in forming and maintaining social relationships. By analysing these perspectives, the study can identify both universal and context-specific mechanisms through which social media use shapes bonding and bridging social capital. This article addresses these research gaps by comparing the experiences of internal and international student migrants in Poland with particular attention to how they form and maintain social relationships in virtual spaces.

The article examines the role of social media in generating and maintaining various forms of social capital, including the development of trust, the maintenance of ties with the community of origin, and the creation of new connections within the host society. It also explores changes in virtual communication and information-seeking practices over the course of the migration experience, with a particular focus on their effects on both bridging and bonding social capital. These considerations will lead to addressing the central research question: What are the implications of maintaining social media connections with members of the host society, the community of origin, and other international students for the social capital of different groups of migrants? This analysis clarifies how social media practices influence the formation of social capital among different groups of student migrants and offers implications for universities and support organisations.

2. Literature Review

Both the concept of social media and that of social capital lack universally accepted definitions and remain subjects of ongoing discussion and evolution. Scholars rarely agree on a single definition of social media, focusing instead on its functions and uses. Based on their review, Kapoor et al. (2017, p. 536) suggest defining social media as:

> Various user-driven platforms that facilitate diffusion of compelling content, dialogue creation, and communication to a broader audience. It is essentially a digital space created by the people and for the people, and provides an environment that is conducive for interactions and networking to occur at different levels.

Similarly, social capital's analytical utility is widely debated (Arrow, 2000; Döner, 2023). The term was first explored by Hanifan (1916), Bourdieu (1986), Coleman (1988), Putnam (2000), and Putnam et al. (1993). Since then, it has been defined and categorised in diverse and evolving ways (Burt, 2005; Field, 2003; Granovetter, 1973; Portes, 2000; Putnam & Romney Garrett, 2020; Ryan et al., 2015). While the role of

social media in shaping migrants' social relationships and networks has been widely studied (Akter et al., 2024; Wen & Wen, 2020), research focusing specifically on educational migrants remains relatively new and rapidly growing (Zhou & Yin, 2024). Classical conceptualisations of social capital have also been applied to studies of social relationships and networks formed through social media. Analyses based on these frameworks have helped identify characteristics specific to the digital environment, including those relevant to migrating students. Given the broad scope of research on social capital, the following analysis will focus exclusively on studies examining the impact of social media on the social capital of international students.

International students inhabit transnational social spaces (Faist, 2000), sustaining ties offline and online across multiple countries (Gomes et al., 2014). Such connections are the form of the multidirectional linkages highlighted in transnationalism theory (Basch et al., 1994; Levitt & Glick Schiller, 2004), spanning students' home countries, host countries, and the countries of origin of other foreign students. They also exemplify networked individualism, that is, digitally mediated, dispersed relationships. Their social capital no longer stems from stable group membership but from the ability to dynamically manage heterogeneous social networks (Quan-Haase & Wellman, 2004). As a result, they may develop maintained social capital, defined as the capacity to preserve valuable social ties despite life changes (Ellison et al., 2007). This resource is crucial for adapting to new environments while sustaining previous relationships. Different types of ties play different roles in new cultural contexts. Strong ties, such as international and family ties, contribute to bonding social capital and weak ties, such as local contacts, that support bridging social capital, both influence intercultural adaptation. Local networks foster bridging social capital by facilitating the exchange of knowledge, experiences, and information, especially between domestic and international students (Chang et al., 2022; Qi et al., 2022). In contrast, international networks and ties to family and friends in the country of origin support bonding social capital by providing emotional support and a sense of belonging (Gomes et al., 2014; Hendrickson et al., 2017).

Social media transform how migrants maintain ties with their countries of origin, construct transnational identities, and enact multidimensional belonging (Aziz, 2024; Oiarzabal & Reips, 2012). They are also essential in fostering sojourners' acculturation experience and coping strategies (Pang & Wang, 2020). A systematic review of the literature confirms that social media support student migrants' acculturation by facilitating both the maintenance of ties with the home country and the development of new relationships in the host society (Pang & Wang, 2020). Social media thus become part of a transnational migratory habitus (Podgórska, 2021). They also offer opportunities for support and social connection even when offline interactions are limited (Cao et al., 2024). Social media can significantly expand migrants' networks beyond close contacts and strong ties (Beech, 2015), increasing access to diverse resources and information (Qi et al., 2022; Wong & Liu, 2024). This is especially important in culturally closed societies or when face-to-face interaction is restricted (Cao et al., 2024). In such contexts, social media provide an alternative space for building ties and exchanging information, thus fostering the development of social capital, particularly bridging capital.

Social media and the social capital built through them are considered key components of the migration infrastructure (Jayadeva, 2024), which facilitates student mobility. Their use can extend prospective students' networks beyond close contacts, potentially enabling connections with latent ties or previously unknown individuals who possess information about the destination or migration logistics (Jayadeva, 2020). An important role in fulfilling informational needs is played not only by those already abroad but also by

prospective migrants who create internal support networks for themselves and other applicants (Jayadeva, 2024). Candidates and students use social media to build support networks based on shared experiences rather than pre-existing close relationships. Even after beginning their studies, a key factor in selecting individuals to connect with online, and from whom to seek support, is their ability to understand the specific challenges related to academic life and cultural adaptation (Baines et al., 2022).

During their stay in the host country, immigrants' online networks typically mirror existing offline friendships and rarely result in new ties, despite their potential to foster bridging or latent ties, that is, technically accessible but inactive connections (Hendrickson et al., 2017). While social media can support the formation of cross-cultural networks (Cao et al., 2024), it may also reinforce co-national clustering, hinder integration, and contribute to the formation of cultural silos (Hendrickson et al., 2017; Lim & Pham, 2016). Social media use and acculturation influence each other bidirectionally. Qi et al. (2022) show that students' acculturation strategies shape their platform choices, while use of host-country platforms fosters new ties with local students (Dong et al., 2023).

In summary, social capital refers to networks, norms, and trust that facilitate cooperation and access to resources, whereas social media function as a digital tool that may influence, both positively and negatively, the interaction and exchange processes essential for its formation. However, their impact is context-dependent, and the mechanisms through which online interactions shape these forms of capital among diverse groups of student migrants remain insufficiently understood. This study explored these mechanisms by comparing how internal and international student migrants in Poland use social media to build and maintain social capital, with particular attention to group-specific and contextual differences.

3. Theoretical Framework

The research project discussed in this article is situated within the emerging field of digital migration studies (Leurs & Smets, 2018), adopting a bottom-up perspective focused on migrants' everyday digital practices. This approach emphasises not only the use of digital tools but, more importantly, how they facilitate adaptation to a new environment and the (re)construction of identity in a changing world. Technologies are seen as both shaping and being shaped by social realities (Leurs & Prabhakar, 2018). In this study, this approach was applied to interpret how students' use of social media influenced the building and development of networks, bonds, and trust. The research focuses on the role of social media, defined, following Akter et al. (2024), as communication platforms that enable users to create personal profiles, establish lists of online connections, and browse and navigate both their own and others' networks.

In this article, social capital is understood as networks, norms, and trust that individuals use to achieve goals. It typically takes two main forms: bonding social capital, which involves strong ties within relatively homogeneous groups, and bridging social capital, referring to weaker ties connecting diverse groups (Putnam, 2000). According to Putnam (2000), bridging capital is better for linking to external assets. This makes it particularly relevant for students facing a new and uncertain social situation at the outset of an important life stage abroad, often in unfamiliar cultural and social contexts. The distinction between bonding and bridging social capital is particularly relevant for analysing migrants' online activity, as social media are used both to maintain ties with the community of origin and to build new transnational connections with locals and other international students. This study assumes that bonding and bridging capital are not

mutually exclusive; individuals may hold both or neither. Table 1 presents the operationalisation of bonding and bridging social capital, grounded in Putnam's framework, applied in this study.

Table 1. Operationalisation of bonding and bridging social capital.

Bridging social capital	Bonding social capital
Networks	
Membership in online communities/groups composed of members of the host society or related to the place of study;	Membership in online communities/groups composed of members of the origin community or related to the place of origin;
Actively and positively engaging (posting, commenting) in such communities;	Actively and positively engaging (posting, commenting) in such communities;
Including host society members among online friends/followers;	Including origin community members among online friends/followers;
Searching in online groups for information on local events or issues;	Searching online groups for information on events occurring in the country or community of origin.
Requesting assistance in everyday matters from host society members.	
Ties	
Maintaining close relationships with host society members;	Maintaining close relationships with members of the origin community;
Expressing the desire to establish close relationships with host society members in the future;	Expressing the desire to sustain such relationships in the future (both online and offline);
Regular online conversations, commenting on posts/photos of host society contacts;	Regular online conversations, commenting on posts/photos of origin community contacts;
Declaring willingness to seek help from host society members in difficult life situations;	Declaring willingness to seek help from members of the origin community in difficult life situations.
Transferring online relations with host society members into offline life.	
Trust	
Declaring that online acquaintances from the host society are trustworthy;	Declaring that online acquaintances from the origin community are trustworthy.
Recommending online groups related to the host community as reliable sources of information.	

4. Methodology and Research Design

As part of the project, 22 in-depth individual interviews were conducted with first-year students enrolled in full-time bachelor's and master's programmes at various universities in Warsaw: 11 with internal migrants (Polish citizens born in Poland, residing in Warsaw no earlier than 1 September 2022, which marked the beginning of the project's first stage) and 11 with international students (non-Polish citizens born outside Poland, residing in Poland as of 1 September 2022 at the earliest). This temporal threshold was established to exclude individuals who had moved to Warsaw for reasons other than pursuing education. The categorisation draws on the UNESCO definition of internationally mobile students, which refers to individuals who have physically crossed an international border to pursue education in a country other than

that in which they obtained their upper-secondary or prior education (UNESCO, n.d.). Inclusion criteria specified that eligible participants were first-year students enrolled in full-time programmes at universities in Warsaw who declared daily use of social media. Exclusion criteria encompassed individuals enrolled solely in short-term language or exchange programmes, as well as those who had relocated to Warsaw before September 2022. Internal migrants' statements were coded as PLX, and international migrants' statements as FOX, with X indicating the respondent's number. The international participants came from the following countries: Ukraine (3), Belarus (2), and one each from the Democratic Republic of Congo, Ghana, Tunisia, Singapore, China, and Jordan. The students were enrolled in degree programmes including law, biomedical engineering, geodesy and cartography, nursing, management, social policy, computer science, and biotechnology. Among Polish respondents, the majority were women, consistent with the gender structure of the student population in Poland. All were aged 18–21, corresponding to the typical age of undergraduate students. Among international respondents, women also constituted a slight majority, but the group was more diverse in terms of age (18–32), illustrating the varied educational trajectories and experiences of migrant students. All respondents from Ukraine and Belarus were enrolled in Polish-language programmes and interviewed in Polish. Participants from other countries studied in English-language programmes, in which foreign students predominated, and were interviewed in English due to insufficient proficiency in Polish. Several of these participants also stated that they did not intend to learn Polish, citing its perceived difficulty. The sample was purposively selected to achieve thematic saturation and to ensure diversity in country of origin and field of study, while representing the typical dominance of Belarusian and Ukrainian students in the Polish context. This approach captured a range of experiences, from students in Polish-taught programmes to those in English-language programmes for international students, enabling the examination of how social media use intersects with linguistic, cultural, and institutional factors.

Respondents were recruited via the author's personal networks and through announcements posted on social media platforms related to studying in Warsaw. Interviews typically lasted slightly over one hour, ranging from 30 minutes to more than two hours, with those conducted with international respondents generally being longer due to their greater willingness to provide detailed and comprehensive accounts of their experiences. None of the participants who began an interview withdrew during the process, although there were instances where individuals agreed to take part but did not attend the scheduled meeting. The researcher drew on her personal experience studying abroad and teaching international students, to create a situation of empathetic neutrality (Kim et al., 2009) and to encourage participants to share both positive and negative experiences. All respondents who completed an interview received shopping voucher in appreciation of their time and contribution. They were informed in advance that this voucher would be provided regardless of whether interview was completed. During the sessions, participants responded to questions from an interview guide developed by the researcher and were encouraged to elaborate freely on their reflections.

Using deductive thematic coding based on the operationalisation of bonding and bridging social capital, respondents' statements were assigned to the subthemes of networks, ties, and trust. The coding proceeded in several stages: transcripts were first read in full to identify initial patterns, after which relevant segments were coded into the subthemes, and recurrent motifs and cross-case variations were compared to derive thematic patterns. To ensure consistency between the theoretical framework and the empirical material, the interview guide was organised around thematic blocks corresponding to the operationalisation (Table 2).

Table 2. Thematic organisation of interview questions.

Block	Examples of guiding questions
Respondent information	Age, field of study, social media apps used
Changes in social media usage after arriving in Warsaw	With whom participants communicate online; preference for online vs. offline communication
Information seeking	About studies in Warsaw and conditions in the place of origin (sources, frequency, topics of interest)
Networks	Membership in online groups; size and composition of virtual friends; changes in online and offline friendships after starting university
Ties	Willingness to maintain old and form new relationships; forms, strength, and quality of online and offline ties with various groups
Trust	Levels of trust in different categories of people online and offline; changes in trust after starting university

The project received approval from the University of Warsaw Rector's Committee for the Ethics of Research Involving Human Participants. All participants voluntarily provided written informed consent to participate in the study and to have their interviews recorded. They were assured that they could withdraw from the interview at any point without forfeiting their voucher. All data were analysed in an anonymised form, in line with established ethical research standards.

5. Results

5.1. Changes in Social Media Usage After Arriving for Studies

Social media are a crucial element of the migration experience, both for internal and international migrants. Almost all respondents used them during the preparation stage for departure. If an individual had acquaintances at the destination, both internal and international migrants considered them the first and most reliable source of information, through both direct and online contacts. At the same time, international migrants, whose social networks in the host country were significantly more limited, more often reported searching for both information and support on social media and rated these sources as the most reliable. The more intensive the direct contacts migrants had with other migrants and representatives of the host community, the more critically they perceived the reliability of information and the quality and significance of online communication. Respondents from the internal migrant group were particularly critical of social media, reflecting their prior familiarity with the local context and the availability of direct, in-person sources of information:

> From the very beginning, they didn't seem very credible. Why? Because the information was either exaggerated or idealised. From the start, it looked too polished, too perfect to be true. (PL5)

Only one participant, who had no acquaintances in Warsaw before starting studies, expressed a different perspective.

Respondents also emphasised the importance and credibility of official student groups created by university administration or student government on Facebook:

> If you find the right Facebook groups made specifically for students by UW students, they are the most valuable communities. The reliability of information there is over 90%. I would definitely recommend it. (PL9)

For both internal and international migrants, social media become most important during the initial stage after migration, as they simultaneously enter a new phase of life, form new connections, and maintain ties with their communities of origin. In this way, these platforms serve as a space where bridging and bonding social capital intersect, leading most respondents to spend more time online than before, using them to compensate for the lack of face-to-face contact:

> Generally speaking, since I came to Poland, I spend more time online because I still don't know many people here, so I'm mostly online. (FO9)

> I have to admit that before coming to Warsaw, I didn't spend as much time on Messenger as I do now....Before, I could meet people in person, but now that's not really possible. (PL3)

Respondents from both internal and international migrant groups reported shifting from text messaging to audio and video communication (e.g., video calls, voice messages, Instagram or TikTok stories) after leaving their place of origin. As one participant explained:

> It was a tough period because I moved and was far away from all my friends and family. I mainly communicated via Messenger video calls to vent, share how things were going here, and exchange experiences about the city. (FO8)

Another added:

> Now I use the internet more for calls, mainly talking to people via Telegram or WhatsApp. I just have video calls with them to hear voices from home. When I lived in Singapore, I didn't do this often. I just sent SMS like, "hey, can we meet this afternoon or evening," and then we met in person. (FO7)

This enabled them to maintain bonding social capital by staying connected with their communities of origin, while simultaneously sharing experiences that reinforced a sense of togetherness despite the distance.

For some international migrants, arriving in the host country meant gaining access to the internet or starting to use new applications. This resulted from lack of access in their home country (China), security concerns (Belarus), or the low popularity of these tools (Ukraine):

> In Congo, using the internet is limited....And it's very expensive....Here, the internet is very cheap. Moreover, there are many Wi-Fi options, for example, free access can be found in the city centre. In Congo, that's rare. (FO4)

I didn't have Facebook before. Actually, I had an account but didn't use it for 10 years. When I arrived in Warsaw, I reinstalled the app. Now I use Facebook to check events in Warsaw and international events. When I look for housing or something else, I usually do it there. People also often add each other as friends, so it's a big change. (FO9)

At the same time, respondents kept the apps they had used before moving. This resulted in a diversification of the communication tools and formats, which they used with different categories of people, depending on age, the closeness of the relationship, and whether the contacts belonged to the country-of-origin or host community:

When I need to contact friends from my field of study, I use Messenger. But when I need to contact colleagues from my dorm group [mainly from Belarus and Ukraine], we use Telegram. In the East, people use Facebook and Messenger less, and prefer Telegram. With friends from the East, I use Telegram, and with Poles, Messenger....Now I have to communicate somehow with the Polish community, and they prefer Facebook and Messenger, so I use the most effective tools. (FO10)

5.2. Maintaining Ties With the Community of Origin

Social media help participants maintain connections with their communities of origin, though this varies across migrant groups. All international migrants participating in the study reported maintaining close relationships with friends from their country of origin and demonstrated a high level of interest in events occurring there:

Yes, I am interested in that, so I try to find out what is happening in the country using the internet. Additionally, I talk with friends from there who tell me about the economic, political, and social situation, about what has been happening since I left. They tell me everything, and sometimes I also watch videos on YouTube because I always try to stay informed. (FO5)

All Ukrainian respondents, who arrived in Poland after the outbreak of the war, reported intensive online monitoring of events in their hometowns. They frequently used social media and messaging apps, including local Telegram groups, to stay informed and maintain ties with family, friends, and their former communities. As one participant explained:

First thing after I wake up, I think it's the same for most people from Ukraine, I check whether everything is okay in my city, whether nothing happened overnight, for example, any missile attacks. (FO1)

The outbreak of war influenced both the ways this group of respondents used social media and their perception of its role in daily life, strengthening their sense of connection to their community of origin.

Among internal migrants, attitudes toward maintaining ties with their communities of origin varied. Some emphasised the importance of staying connected and regularly following local events through social media; others treated their hometown as less central after starting a new life stage in Warsaw; still others sought a balance between old and new relationships. These differences may stem, among other factors, from the relatively greater ease of forming new connections in the home country, a condition that differs markedly from the experience of international migrants.

Respondents who maintain the closest ties with their origin communities tend to be those who do not plan to stay in Warsaw after their studies, although this does not necessarily mean they intend to return permanently to their hometowns. For them, the hometown remains a symbolic base and point of reference they do not want to lose contact with, and social media greatly facilitate this:

> I am also interested in what is happening in my city. I usually follow Facebook to see what's going on there and track various institutional pages. Most of the information about my hometown I obtain online. (PL1)

The experiences of respondents from the internal migrant group indicate that social media can serve as an important tool for maintaining bonding social capital, provided that the migrant personally values their ties to the origin community and actively seeks to sustain or develop these relationships.

Analysis of the respondents' statements leads to the conclusion that, after leaving their place of origin, both international and internal migrants experience a weakening of ties with those they have left behind. Social media use slows but doesn't halt this process; the possibility of maintaining relationships online, especially passively, such as through liking posts, often represents the last thread connecting migrants to their contacts in the origin community:

> Only the internet remains to keep these connections from fading. (FO2)

> Without the internet, these contacts would have already been lost. (PL3)

Respondents emphasised that relationships that have withstood the test of time and distance are now particularly valuable to them. Social media constitute one of the most important tools not only for maintaining these ties but also for further developing and deepening them:

> There are people from my hometown with whom these bonds are extremely close [sic]. I would say these ties have become even stronger; we talk more now and message each other more often....Such relationships recently have not only survived but even strengthened. (FO3)

According to the respondents, social media enable mutual sharing of everyday life, which helps maintain bonds and fosters a sense of togetherness despite the physical distance:

> I use TikTok to record videos that I share with my friends. They also send me clips showing what is happening in our country, and I show them what the city looks like here. (FO6)

Interviewees emphasise the importance of active social media use (Pang, 2020), such as posting updates, photos, or comments as a way of signalling that one values a relationship and wishes to maintain it:

> I think I most often comment on posts by my friends from Tunisia because I spend more time checking on how they are doing....I try to see what is happening in my hometown. I comment on what they do, sometimes I write that I would like to do something with them, or that I miss them. I want to tell them I hope to meet them soon. (FO7)

> I am their friend, so I have to comment. And when I post my photos, they have to comment. It's partly a matter of culture. (FO4)

Such activities often initiate further private conversations via social media, a pattern reported by both internal and international migrants. As one participant noted:

> Instagram is a good tool to start a conversation with someone you haven't seen for a long time...you can respond specifically to a photo, write a private message, and avoid artificial small talk. (PL11)

Another added:

> When I post a photo, friends always comment and like it, then we start talking....Sometimes they also post photos, I comment, and then we talk because of that. (FO5)

Other respondents highlight that online communication is a convenient way to maintain relationships, as it allows them to stay in touch without the need to synchronise their daily schedules.

> It's also convenient...because if my friend and I feel like sharing something cool at a given moment, we write detailed messages and wait for a reply. She might respond the next day, and that's normal for me because I know she's busy, and I usually reply when I'm on the bus or in class so as not to waste time. (PL7)

Some interviewees also note that if online communication occurs alongside other activities, it may negatively affect the quality of the relationship:

> When we communicate online, the time dedicated to the conversation becomes somewhat diluted. I'm not fully focused on the people I'm communicating with because I'm often doing other things at the same time, and it's not the same level of connection as in face-to-face conversation. (FO3)

Respondents also said that online communication can be superficial and selective, potentially creating a false sense of maintained bonds and portraying an inaccurate image of both the migrant's situation and the people they remain in contact with:

> But I see it as two sides of the same coin. On one hand, thanks to the internet, we can see each other, follow each other on Instagram, Telegram, Facebook. We see our shared photos, which strongly supports maintaining these relationships. We have virtual contact and know what's happening in each other's lives. But on the other hand, this virtual reality gives us a deceptive impression that we have a close connection. (FO3)

5.3. Building New Social Networks

Respondents report that social media mainly support existing relationships, while initiating new contacts is relatively infrequent. Migrants from outside Europe are the most open to forming new connections online, especially with other foreigners, whereas internal migrants and European international migrants rely less on

these platforms. This difference stems from linguistic and cultural barriers, which make online networks a key tool for social integration for non-European migrants:

> Building relationships here is not easy; people are reserved. That's why one has to rely on the internet. I am a member of the African community on Facebook and a church group for Africans. These groups provide valuable information and allow me to meet people like myself. In African groups in Poland, I find people from my country. I joined these groups because it was difficult to get information and meet my compatriots here. It was hard at first, so I had to join these groups. (FO5)

Online communication serves as a potential, though not always fully realised, entry point for deeper relationships, including those that may extend into the offline world. Foreign respondents expressed a desire to meet Poles; however, the language barrier remains a significant obstacle they struggle to overcome due to limited opportunities to practice Polish:

> I would really like to speak Polish; I am genuinely interested in the language, but I struggle with understanding and speaking. This is mainly because I don't have many Polish friends who could motivate me. (FO5)

Respondents reported seeking connections on social media, but primarily join groups composed of foreigners. This dynamic shifts when they begin to establish more direct contacts with Poles, with relationships transitioning into the online sphere:

> I usually meet people from Warsaw during events organised by the university or my work team. As I mentioned, social media can be distracting, so I prefer to meet people with similar interests or backgrounds. Sometimes my colleagues invite me to meet their friends. (FO8)

For migrants from outside Europe, online friendships serve as a remedy for loneliness, providing a sense of belonging and helping them find their place among "their own," people from countries distant from Poland, both culturally and especially linguistically:

> Being lonely is very, very hard. But we have the internet here, so I don't have to be lonely. (FO4)

> You all share the same struggle, meaning you don't speak Polish fluently. Then you have those people you can rely on to help each other because of this shared struggle [like, with], for example, feeling out of place. (FO7)

Foreign migrants from non-Eastern European countries with extensive virtual social networks noted the risk of an illusory sense of belonging to the immigrant community. For them, the internet is a tool for numerous but rather superficial virtual acquaintances. The ease and availability of online communication can also discourage transferring relationships into the offline world:

> Sometimes I try to talk to someone online and suggest meeting up, but often I hear: "I don't have time," "I'm busy," or someone simply avoids meeting. I feel that many people just don't want to meet. Sometimes you have no choice and must communicate online because face-to-face meetings may simply not happen. (FO4)

Respondents from non-European countries suggested that online acquaintances primarily serve as a source of social capital that connects them with other foreigners. While these relationships can be superficial and rarely extend beyond the online sphere, they remain very important for those with limited opportunities to establish other types of contacts.

In contrast, for internal migrants and individuals from Eastern Europe, membership in online groups was mainly pragmatic, limited to searching for housing, employment, or information about their studies. They emphasised that due to relatively small cultural differences, living in Poland does not pose significant organisational challenges. For them, the positive role social media play in acquiring basic cultural competencies and coping with everyday situations is considerably less pronounced than for migrants from Africa and Asia:

> I use social media to communicate with people from my field of study, to find out information related to classes, exam dates, how courses will be conducted, or other important matters….Now I have to interact somehow with the Polish community, and Poles prefer Facebook and Messenger, so I use the most effective tools available. (FO10)

> We have a Facebook group for our studies; everyone is there and essential information is shared, so it forced me to come back to Facebook because it's currently impossible to function without it. (PL7)

Students from Poland and Eastern Europe generally find it easy to form real-life friendships and report little interest in seeking new acquaintances through social media. They are also generally uninterested in local online groups related to, for example, the neighbourhood where they live during their studies, as they view their stay in these places as temporary. At the same time, they acknowledge that developing virtual networks may weaken direct relationships, although such online connections could still prove useful or beneficial in the future:

> Sooner or later, these acquaintances may become necessary. People help us a lot. (F02)

> Many students approach contacts as investments for the future, so we also add each other as friends. (PL7)

Internal migrants also join student groups on social media out of a fear of missing out on important events, information about which can primarily be obtained through participation in online communities, or from the difficulty of integrating in real life into groups that have already formed or bonded earlier. At the same time, these platforms can be a source of anxiety related to fears of rejection, social mismatch, or being uninformed:

> Yes, absolutely, I looked for a group for people from Management because it was a lesson learned from high school. When I started, I didn't know anyone and wasn't interested in contacting anyone….Over the summer, they got to know each other, and it was hard for me to break into the group. So, when I got into university, I immediately started looking for online groups, and I succeeded, which was great. It's very important to do such things. (PL7)

A distinctive feature of immigrants from Eastern Europe is their extensive intra-ethnic networks on social media, which are typical of their countries of origin:

> On Telegram, these are groups such as Belarusians in Poland or Belarusians in Warsaw. When it comes to matters related to Poland and studies, of course, Facebook is used, especially student groups like Best Biology Faculty. These are closed groups where students discuss exam sessions, tests, and lecturers….And on Telegram? Social chats, such as those for dormitory residents, used for general requests like asking for onions or events like parties, trips. (FO11)

Meanwhile, studies, work, and other forms of direct, face-to-face interaction remain the best means of integration with the host community:

> Based on my experience, I can say that the best opportunities to form friendships are in person, in the real world: meeting people at work, at university, or, for example, during social events, later in places like the library, or through mutual acquaintances. But, as I said, all of this involves forming friendships face to face. (FO1)

5.4. Trust

A critical attitude also appeared in respondents' assessments of the reliability of acquaintances met via social media and of the information obtained online. Participants across all groups reported adopting a presumption of distrust when using the internet, emphasising the need for caution in virtual relationships, especially with people unknown in real life:

> I don't trust people I meet online at all because, on the internet, anyone can be whoever they want, but in reality, they are always different. Many crimes are committed online because people trust too much. If I don't see or know the person, I cannot trust them. (FO11)

Almost all respondents stated that they had not personally experienced unpleasant situations that would negatively affect their trust levels, though many reported having heard about such incidents from acquaintances:

> I have heard many disturbing stories from my friends, particularly women, about their experiences meeting people online. I won't go into detail, but these often end in very unpleasant situations. (FO1)

The highest levels of trust, both in online relationships and in information obtained via the internet, were declared by non-European migrants, particularly those with the least developed offline social networks or support systems in their host country:

> Loneliness is hard, but the internet helps. Here in Warsaw, I don't have anyone, so when I have a problem, I look for help online. (FO4)

For some respondents, studying abroad became an opportunity to reassess the quality of their existing relationships, which was often interpreted in terms of trust toward people from their place of origin:

I think that living here changed my approach to trust in some people from back home, because the moment I moved to Warsaw was a turning point in my life....And for that reason, among others, some of my relationships faded, as our ways of seeing life started to differ. (FO3)

At the same time, participants emphasised that maintaining long-distance online contact serves as a kind of trust test for those who remained in their home communities:

Yes, I think this time in Warsaw really tested my earlier relationships...and if someone is still among my friends, it means the trust is still there. And if they're not, it simply means the trust didn't survive. (FO2)

Respondents also emphasised that their perceptions and evaluations of social media relationships, as well as the credibility of information acquired online, are shaped by the broader national context in which they currently reside. They noted that the general level and culture of trust in a host country significantly influence their experiences of online interactions, both with fellow migrants and with members of the host society:

Well, to be honest, my level of trust in Poland is a bit lower compared to Denmark, because the general culture in Denmark is more trust-oriented than here. For example, the Facebook group for foreigners here in Warsaw is far more conflict-ridden and less friendly than the same kind of group in Denmark. They argue every day, just like that. It definitely affects my level of trust. (FO8)

Where I come from, scams and scandals are an everyday thing, there's just too much of it all. (PL7)

6. Discussion and Conclusions

The study shows that the role of social media in developing and maintaining social capital among student migrants is complex and context-dependent. These effects vary in their impact on different dimensions of social capital, such as networks, ties, and trust, and manifest differently across various groups of individuals migrating for education. The findings presented in this article suggest that online social networks created by international students are highly diverse and often defy binary categorisation into local and transnational networks (Gomes et al., 2014).

Several contextual factors may influence the consequences of using social media as a tool for building or expanding social capital, including:

- Diaspora-related factors in the host country, particularly those involving individuals of similar age and migration experiences (e.g., the size of the diaspora, its activity level, forms of engagement, and openness to new members);
- Personal factors, such as the intensity of homesickness, the need to establish new relationships, the size and diversity of personal support networks, and future migration intentions;
- Patterns of social media use, including frequency of use, types of platforms employed (especially whether these overlap with or differ from those used by members of the host society), and whether engagement is active or passive;

- Language proficiency and ongoing learning motivation, encompassing both respondents' current command of foreign languages and their motivation to continue learning them, which is associated with their enrolment in study programmes conducted in different languages.

The analysis points to shared mechanisms across all groups in the use of social media for the development and maintenance of social capital. These platforms enable immigrants to maintain connections with their communities of origin (Dekker & Engbersen, 2014; Ihejirika & Krtalic, 2020), which are key resources from the perspective of bonding social capital. Particularly in the initial phase of migration, they constitute an important element of migration infrastructure (Jayadeva, 2020), facilitating the formation of new social networks while also enabling the maintenance of ties with the place of origin. They help migrants navigate both local and transnational forms of belonging and strengthen bonding as well as bridging social capital (Qi et al., 2022). Respondents' statements reveal their experience of a digital journey or digital border-crossing, adapting to new platforms and diverse information sources in the host country while maintaining resources from their country of origin (Chang & Gomes, 2017; Qi et al., 2022). It can therefore be argued that international students' use of the social media platforms commonly adopted by members of the host society fosters the formation of new ties with local students (Dong et al., 2023). However, the strength of this effect is limited. Research shows that to develop successful bridging capital, relationships must be transferred beyond the virtual sphere. Online communication alone rarely leads to the formation of strong ties. Another common feature among all groups of students studied was distrust toward strangers online and caution regarding new acquaintances and information circulated on social media. At the same time, ties that endured despite distance and time were often attributed a particularly high value, with their ability to "survive" digital mediation viewed as evidence of their strength. Finally, for some groups of migrants, the differentiation in communication tools depending on the target audience suggests that different types of social capital may be developed through using different online platforms.

Despite these similarities, the study reveals key differences between internal and international educational migrants, as well as among international migrants from Eastern Europe and from outside Europe. Internal migrants, like those from Eastern Europe, tend to use social media instrumentally and critically. Their greater familiarity with the local context facilitates offline network formation, reducing reliance on online communication for social support. At the same time, such interactions are particularly important for the bonding social capital of international migrants, given their limited alternative means of maintaining ties with their sending communities. They support what Ellison et al. (2007) refer to as maintained social capital. However, despite the frequent use of these platforms, ties with the place of origin tend to weaken over time. The ease and availability of asynchronous communication may create an illusion of closeness, though sustaining these relationships requires active engagement (e.g., commenting, reacting) and maintaining contact beyond social media.

For non-European migrants, language barriers hinder the formation of relationships with Poles both online and offline, limiting the potential of social media to generate bridging social capital. Although online groups provide a sense of community, the relationships formed through them tend to be superficial, characterised by lower trust and a tendency to close off within migrant groups, which hampers the development of bridging networks with the host community. This phenomenon is particularly noticeable among immigrants from Ukraine and Belarus, who use different media for interacting with co-nationals and with Poles: they tend to be active in platforms specific to their own communities, while remaining passive in those popular in the host country.

At the same time, students from Eastern Europe maintain strong online ties with their country of origin, even though in their everyday lives they frequently spend time with Poles and evaluate these contacts positively. However, there is a risk that online isolation may undermine the integrative effects of offline interactions, particularly in the workplace and at university.

The article's use of digital everyday life analysis as a methodological approach provides new insights into the specificities of online interactions among different groups of educational migrants, thereby contributing to the growing body of literature on the relationship between social media and social capital. However, this approach has its limitations, including the subjectivity of data interpretation, challenges in generalising results, and limited attention to the structural conditions of migration (Leurs & Prabhakar, 2018), a small sample size, potential distortions arising from the war in Ukraine, and the exclusion of short-term migrants (e.g., Erasmus+ participants). It is also important to consider the dynamic nature of technological change, which may reshape how migrants use social media over time.

This article advances the understanding of social capital among student migrants by showing that bonding and bridging social capital often coexist and are dynamically shaped through everyday digital practices. The study highlights the importance of maintained social capital, showing how international students sustain ties with their home countries while adapting to new environments. At the same time, the findings indicate that students are aware of the limitations and risks of social media, whose role in building social capital appears limited and strongly context-dependent. Differences in their use across internal and international migrants, as well as between European and non-European students, underscore the importance of contextual factors such as diaspora engagement, language proficiency, and familiarity with the host society.

These findings suggest that integration policies and university support programmes should be tailored to the specific digital practices and linguistic profiles of different student groups. The results also point to the need for more differentiated approaches that take into account the specific communicative preferences of migrant students. Universities and student organisations may consider developing targeted mentoring and peer-support initiatives, offered both online (especially prior to arrival) and offline after enrolment, together with language and intercultural communication workshops tailored to non-European students. For Eastern European migrants, it is essential to recognise the integrative potential of intra-ethnic online networks, while also addressing the risks associated with remaining in closed digital communities. In this context, NGOs, both diaspora-oriented and intercultural, can play an important mediating role. Finally, the findings underscore the importance of media literacy education aimed at fostering critical awareness of information circulated on social media and encouraging more reflective, meaningful online interactions.

Future comparative studies across countries could reveal how local contexts shape social media use and the formation of social capital. Research on emerging digital platforms could clarify how shifts in digital practices influence the development of social capital. Another important question also concerns the extent to which the variations in platform use identified in this study affect the integration of other migrant groups beyond educational migrants.

Data Availability

The full dataset generated and analysed during the current study is available from the author upon reasonable request.

LLMs Disclosure

The author used ChatGPT-4 and ChatGPT-5 language models to support the translation of interview excerpts and the initial linguistic proofreading of the manuscript.

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ARTICLE

Digital Inclusion of Migrants in Türkiye: Emotional, Linguistic, and Structural Barriers

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Abstract

This study uses a bibliometric review of international research and 27 in-depth interviews to investigate digital disparities among migrant groups in Türkiye. We aim to understand how gender, as well as emotional, linguistic, and structural factors influence digital inclusion. The interviews demonstrate how these problems manifest across Türkiye's varied migrant communities, while the bibliometric analysis identifies global themes such as digital literacy, access, trust, and language barriers. The primary obstacles, which are frequently exacerbated by gender and legal status, are monolingual e-government platforms, low digital trust, and reliance on family for online access. The results show that social and emotional aspects of digital inclusion are involved, requiring institutions to be sensitive, build trust, and ensure linguistic accessibility. The study integrates infrastructure with lived experience-based policies, proposing culturally sensitive, linguistically inclusive, and emotionally sensitive strategies. For other areas with sizable migrant populations, this strategy offers a scalable model.

Keywords

digital inclusion; digital trust and safety; language barriers; migrants and refugees in Türkiye

1. Introduction

In recent years, Türkiye has become one of the leading host countries for migrants and refugees. More than 3.4 million people from different linguistic, national, and socio-economic backgrounds now live in the country (International Organization for Migration, 2024). This demographic shift has raised significant operational and policy concerns across social services, employment, healthcare, and education. With the rapid digitization of public services and social support networks, it is more important than ever to make it easier for migrants to access and utilize these online platforms.

Digital inclusion extends far beyond mere internet connectivity; it involves digital literacy, language skills, cultural adaptation, and building trust in digital environments. Low digital literacy, monolingual e-government platforms, limited access to affordable and reliable internet, and mistrust of public institutions are among the structural and sociocultural obstacles that hinder migrants in Türkiye from effectively using digital technology. When online services are not designed with user experience and cultural diversity in mind, they often fail to serve the very populations they aim to reach.

Most existing research treats digital inclusion and migrant integration as separate issues. However, in Türkiye's context, comprehensive studies integrating bibliometric mapping with field-based qualitative inquiry remain scarce. This study fills that gap in two ways: (a) by conducting a bibliometric review of scholarly works on migration and digital inclusion to find essential themes, trends, and gaps; and (b) by conducting semi-structured interviews with migrants in Türkiye to gain a better understanding of their experiences with digital access, usage, and trust. The study provides practical insights for creating inclusive digital services and informing evidence-based policy decisions by comparing local experiences with global trends.

This research aims to address four main questions: First, it explores the dominant themes in the literature on digital inclusion and migration. Second, it investigates how usability, trust, and language barriers impact migrants in Türkiye. Third, it assesses whether local experiences align with or differ from global trends. Lastly, it looks at how insights gained can inform the development of inclusive policies and services.

2. Literature Review (Conceptual)

2.1. Rethinking the "Digital Native" Assumption

Academic research has extensively discussed the idea of "digital natives." Research by Margaryan et al. (2011), Waycott et al. (2010), and Thompson (2013) challenges the assumption that all young people are naturally skilled with technology. Their findings show that school environments often shape digital tool use more strongly than age. This raises questions about the straightforward distinction between migrants and digital natives made by Prensky (2001). Evans and Robertson's (2020) argument for a more nuanced understanding of technological skills, closely linked to socioeconomic factors influencing digital use, is thus supported by this body of research.

2.2. Structural, Socio-Cultural, and Emotional Barriers to Digital Inclusion

Among marginalized populations, the digital divide extends beyond access. It reflects gaps in digital skills, the extent to which technology is meaningful for everyday life, and structural factors such as economic status, cultural identity, and mental health.

Regarding structural barriers, studies by Guberek et al. (2018) and Bastick and Mallet-Garcia (2022) highlight the difficulties undocumented migrants face in the US. These individuals often rely on digital platforms for essential services, but they are wary of them due to concerns about being monitored. This dangerous dependence leaves them more exposed.

Regarding sociocultural barriers: Parents' lack of digital skills and limited access to technology are two of the many issues low-income Latino families face, and they significantly hinder their children's growth and education. Tripp (2011) and Katz et al. (2017) have researched this topic. Goedhart et al. (2019), in their study of low-income mothers in Amsterdam, emphasize that providing technology alone is insufficient to fully engage everyone. They underline that support networks, such as childcare facilities, language courses, and social services, are necessary to make a meaningful impact.

Regarding emotional barriers, Alencar (2020) notes that mobile technology can both empower refugees and expose them to false information and surveillance. According to Baldassar and Wilding (2020), "digital kinning" refers to the way older migrants use technology to preserve their cultural identities, feel less alone, and uphold cross-border relationships—often with the assistance of younger family members.

2.3. Health, Trust, and Social Networks in Migrant Digital Experiences

Social network strength, trust levels, and health status significantly shape outcomes of digital participation. Addressing health concerns, Kouvonen et al. (2021) found that depression and low self-rated health may limit older migrants' use of digital platforms. For culturally and linguistically diverse groups, who frequently face literacy and language barriers that make accessing digital content challenging, traditional, non-digital health information is still crucial, according to Goodall et al. (2014). Mesch (2012) investigates how various groups interact through digital platforms: Minorities often use them to create professional and social networks absent from their offline lives, whereas majority groups primarily use them to maintain existing ties.

Research indicates that achieving digital inclusion necessitates more than just having the right technology. It needs culturally aware and intersectional strategies that recognize people's experiences (Fung et al., 2025; Kouvonen et al., 2021), health needs, education, trust levels, and social networks. The findings strongly support creating policies and educational programs that go beyond simplistic notions of technology and outdated age-based perspectives. Promoting digital equity that prioritizes user needs, adaptation, empowerment, and support tailored to the diverse circumstances of various populations is urgently needed.

2.4. Global Trends, Urban Inequality, and Relevance to Türkiye

The exclusion of people from digital technology is not limited to remote and rural areas. Urban digital inequality is also influenced by systemic problems such as racial segregation, poverty, and immigration anxieties (Katz & Gonzalez, 2016; Mossberger et al., 2012). Li and Ranieri (2013) show that, in China, differences in parental involvement, educational resources, and self-worth affect children's internet use and widen the gap between urban and rural areas. A perspective on the Covid-19 pandemic is presented in McMullin (2021), who demonstrates how the rapid transition to digital integration services affected asylum seekers in Scotland and Quebec. In general, a lack of support at home, inconsistent internet access, and low digital literacy make it difficult for many people to engage online.

In exploring these issues, the present research also employed various visualization techniques in its bibliometric analysis to gain a deeper understanding of digital exclusion. These methods include text mining and bibliometric tools to generate visual outputs such as co-occurrence networks, factorial maps, thematic maps, word clouds, and trend topics (Aria & Cuccurullo, 2017). The patterns and thematic clusters identified

in the literature through these visual approaches influenced both the conceptual framing and the subsequent qualitative investigation of migrants' digital experiences in Türkiye.

3. Methodology

3.1. Stage I: Bibliometric Review

3.1.1. Data Source and Search Date

On August 16, 2025, all bibliometric data for publications from 2014 to 2025 were obtained from the Web of Science (WoS) Core Collection. WoS was chosen due to its consistent metadata and dependable indexing; however, using a single database might limit coverage of regional or non-English journals. Using the Bibliometrix package and its web interface, Biblioshiny (v5.0.1), the analysis was carried out in R (v4.5.1; see Aria & Cuccurullo, 2017).

3.1.2. Search Strategy and Query String

The WoS topic field (TS), which includes author keywords, abstracts, titles, and keywords+, was utilized for the search. The final Boolean query was: TS = ("digital literacy" OR "digital competence" OR "digital skills" OR "e-literacy" OR "digital inclusion"), AND TS = ("migrants" OR "refugees" OR "immigrants" OR "displaced persons" OR "asylum seekers"), AND TS = ("integration" OR "social integration" OR "adaptation" OR "digital access" OR "barriers to access" OR "trust and safety" OR "digital divide" OR "digital inequality").

The query was designed to capture three overlapping areas: (a) digital skills and inclusion, (b) migrant and refugee populations, and (c) integration and access-related outcomes. Synonyms were added in each area to reflect different terms used across studies. To maximize coverage across studies, the Boolean query included synonyms and plural forms specifically. The search found sixty-three publications. The composition of the dataset was unaffected by the addition of additional filters, such as "open access" and "early access." As a result, the final set displays the unfiltered results of the Boolean query.

3.1.3. Eligibility Criteria

Records were required to (a) be written in English, (b) be peer-reviewed journal articles or review papers, and (c) directly address issues of digital inclusion, literacy, skills, access, or barriers within migrant and refugee contexts. This scope guaranteed conceptual coherence and cross-study comparability of results.

The following exclusion criteria were used: (a) publications not written in English; (b) editorials, commentaries, conference proceedings, and book chapters, which frequently lack thorough peer review; and (c) records addressing digital issues in general populations without specifically mentioning migrants, refugees, or displaced groups. To preserve methodological integrity and focus the dataset on high-quality, thematically related research, these restrictions were implemented.

3.1.4. Screening, Export, and Final Dataset

Only 63 records were returned by the original WoS query. After that, the abstracts and titles were examined to ensure they met the eligibility requirements (see Section 3.1.3). Studies that did not focus specifically on migrants, refugees, or displaced persons in relation to digital inclusion and literacy were excluded from the analysis. WoS's metadata standardization minimized the risk of duplicates, and none were identified during the screening process.

A final dataset comprising 63 peer-reviewed reviews and articles that met all inclusion criteria was compiled. Both descriptive information and comprehensive lists of cited references were included in the bibliographic metadata that was exported from WoS in BibTeX format ("Full Record and Cited References"). To ensure compatibility with bibliometric tools, this format was chosen. Bibliometrix (v5.0.1) and its interface, Biblioshiny (v5.0.1), were then used to analyze the dataset after it had been imported into R (v4.5.1; see Aria & Cuccurullo, 2017). This procedure promoted bibliometric research standards, transparency, and reproducibility.

3.1.5. Data Cleaning and Pre-Processing

The Bibliometrix package (v5.0.1) and its interface, Biblioshiny (v5.0.1), were used to analyze the WoS records after importing them into R (v4.5.1; Aria & Cuccurullo, 2017).

To ensure accuracy and comparability, standard bibliometric procedures were followed during the pre-processing stage. All terms in titles, abstracts, and keywords were standardized, punctuation was removed, and special characters were converted to lowercase.

A custom stopword list excluded uninformative words such as "study," "analysis," and "impact." Spelling and variant harmonization merged different forms of terms—for example, "e-government," "e government," and "egovernment"—and standardized synonyms and hyphenated forms as needed. Similarly, keywords with minor differences, like "ICT" and "information and communication technology," were unified to improve the accuracy of co-occurrence analysis.

Critical distinctions, however, were preserved; for instance, "immigrants" and "migrants" remained separate nodes in both author keywords and visualizations, such as word clouds and co-occurrence maps. For clarity, the word "migrant" is used broadly throughout the text. By removing noise and duplicates in this manner, the reliability of bibliometric mapping was enhanced, allowing for more robust analyses through trend analysis, conceptual mapping, thematic mapping, and co-occurrence networks.

3.1.6. Bibliometric Methods and Settings

The conceptual and structural aspects of the field were analyzed using several bibliometric techniques. First, co-occurrence networks were built by examining author keywords that appeared at least three times. To measure similarity, association-strength normalization was applied, and the Louvain clustering algorithm was used for community detection; afterwards, low-weight edges were removed to enhance clarity.

Additionally, a conceptual (factorial) mapping was conducted by applying multiple correspondence analysis to the keyword co-occurrence matrix to identify the field's primary conceptual axes. Thematic mapping was also conducted, evaluating themes based on their centrality (indicating the level of interaction among themes) and their density (reflecting internal cohesion); only keywords mentioned at least three times were included. Finally, a frequency-based word cloud was created to visually represent the most prominent keywords and highlight their importance within the academic discussion. This section describes the methods and parameter choices; the results are discussed in Section 3.1.7.

3.1.7. Visualization and Reporting

The findings from these methods were presented and reported using a series of visual strategies. Key themes in the field were highlighted by clusters in the co-occurrence network, as shown in Figure 1 in Section 4.

The conceptual structure map, depicted in Figure 2, was created using multiple correspondence analysis. In this map, Dimension 1 contrasted equity and community support with access and inequality, explaining 15.27% of the variance, while Dimension 2 separated communication and work-related topics from family and community networks, accounting for 13.18% of the variation.

Figure 3 displays the thematic map, which categorizes clusters into motor, basic, niche, and emerging or declining themes, illustrating the varying levels of development and relevance across different research areas.

Figure 4 shows a bibliometric word cloud highlighting the most frequently used terms in the field. Building on this, Figure 5 presents trend topics from 2017 to 2025, demonstrating how the Covid-19 pandemic sped up debates on digital inequality and how themes such as refugees, literacy, and gender gained greater prominence. Finally, Figure 6 presents the interview word cloud, derived from qualitative transcripts, which highlights everyday language and lived experiences more strongly than the bibliometric word cloud in Figure 4. Figure 6 is discussed in more detail in the qualitative findings (Section 4.2).

3.1.8. Limitations and Considerations

The cluster structure essentially remained unchanged when the keyword frequency threshold was raised from 2 to 4, suggesting that the primary themes remained stable. There are certain restrictions, though. First, regional, non-English, and gray literature are underrepresented in the Web of Science database, potentially leading to bias. Second, the study's timeframe (2014–2025) may overlook past studies on digital literacy and migrant participation. Lastly, bibliometric approaches might overlook context-specific meanings even though they help map relationships and structures. For example, terms such as "trust" or "integration" can vary across disciplines and cultural settings.

Furthermore, concentrating on author keywords may obscure untagged, hidden themes, such as platform governance or algorithmic discrimination. By incorporating qualitative interviews (Stage II), which aid in situating and validating the bibliometric themes within migrants' actual experiences in Türkiye, these problems were resolved. Notably, the interview guide was developed with input from the bibliometric clusters of trust, language barriers, usability, and access, ensuring that local realities and global scholarly insights were aligned.

3.2. Stage II: Qualitative Interviews

This study examines those who have been forced to flee to Türkiye, including refugees and asylum seekers. Türkiye is one of the world's host countries, hosting more than 3.4 million migrants from diverse linguistic, national, and socioeconomic backgrounds (International Organization for Migration, 2024). The research aims to comprehend how migrants use digital platforms and technologies differently.

Participants who met specific inclusion criteria in line with the study's objectives were invited using a purposive sampling technique (maximum variation). Eligible participants met three criteria: (a) They were at least 18 years of age, (b) held residence in Türkiye for at least one year, and (c) self-identified as migrants or refugees, with or without legal status. To capture diverse perspectives, variation in gender, age, education, occupation, and nationality was sought. This mixed sample enabled the testing of global bibliometric trends within Türkiye's complex national context.

In total, 27 in-depth interviews were conducted with migrants residing in major cities with high migrant populations, such as Istanbul and Kocaeli. The sample size was determined by qualitative sufficiency and thematic saturation, ensuring detailed insights into digital exclusion across labor, healthcare, education, and connectivity. To accommodate participants' mobility and time constraints, most interviews were conducted online via secure video platforms, such as Zoom and WhatsApp. At the same time, a smaller number were held in person. This flexibility promoted participation while upholding ethical standards.

Although the sample is not statistically representative, findings are analytically applicable to similar socio-political settings in other refugee- or migrant-hosting countries. The goal is to explore the lived experiences of digital inequality and interpret them within Türkiye's unique cultural, institutional, and technological environment.

Participant demographics, including age, gender, occupation, nationality, residence, and year of arrival, are provided in the Supplementary File, Table A, to facilitate the interpretation of the qualitative data.

The qualitative component consisted of 27 semi-structured interviews with migrants living in Türkiye. To identify themes and gaps in the literature, bibliometric analysis was employed to develop the interview guide. Key themes from past research influenced the interview design, which focused on several critical areas: low literacy, language barriers, access to ICT, concerns about online privacy and trust, digital literacy, and the cultural relevance of the content.

The interview protocol consisted of open-ended questions addressing topics such as access to and use of digital devices and services, digital skills and self-directed learning, online communication with organizations and personal contacts, the benefits and challenges of digital engagement, and both structural and personal barriers to digital inclusion.

To contextualize responses by age, gender, education, immigration status, and length of stay, a demographic section was also included. Pilot interviews were conducted to refine the language and ensure cultural and linguistic relevance.

Ethical standards—such as informed consent, voluntary participation, and confidentiality—were followed. Approval was obtained from the Social and Human Sciences Ethics Committee at Kocaeli University on June 19, 2025 (E-94094268–050.04–795364).

MAXQDA was used to code, transcribe, and anonymize the data. Recurring themes and patterns were found through systematic coding, and MAXQDA also offered visualization tools, such as the word cloud shown in Figure 6. This method generated evidence-based insights into how digital inequality affects migrant integration, service accessibility, and daily life in Türkiye.

4. Results

4.1. Bibliometric Findings

This bibliometric analysis offers a diagnostic perspective on how studies of migration and digital inequality conceptualize problems similar to those experienced by migrants in Türkiye. Six complementary visualizations are used to present the findings, illustrating temporal, conceptual, and structural dynamics. When taken as a whole, they reinforce the article's qualitative insights and highlight parallels and discrepancies between migrants' everyday lives and global scholarly debates.

Figure 1 shows the co-occurrence map, revealing the core structure of the literature. Key nodes, including the digital divide, migration, the internet, technology, and digital skills, highlight a strong focus on structural barriers to access. The clusters reveal more specific themes: Blue relates to migration, integration, and refugee experiences; red highlights the digital divide, technology, and inclusion; green encompasses digital skills, social media, and socio-demographic differences; and purple reflects digital literacy and learning processes. According to these clusters, digital inclusion is closely related to identity, social adaptation, and other sociocultural elements in addition to technical access. The field's dual nature is reflected in this clustering, where socio-cultural elements (such as language, trust, and gender) emerge as secondary yet related themes, while structural issues (like the digital divide and access) take center stage.

The results of the Turkish interviews align with this framework. Participants discussed the difficulties they faced in navigating culturally unfamiliar systems, as well as connectivity issues. Earlier studies, such as Katz
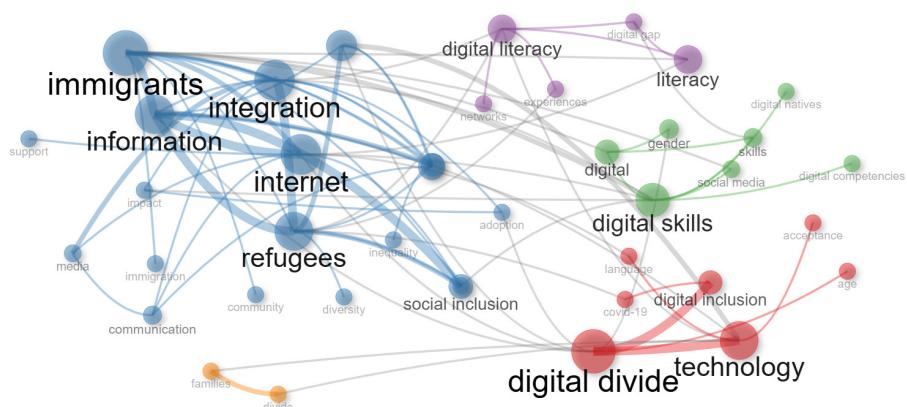
Figure 1. Co-occurrence map.

and Gonzalez (2016) and Guberek et al. (2018), show that digital inequality goes beyond access. It also involves barriers such as bureaucracy, language difficulties, and concerns about safety and trust.

Figure 2 presents the conceptual structure of the literature via a factorial mapping. The primary emphasis on digital inclusion is indicated by the central blue cluster, which connects concepts such as the digital divide, digital literacy, migrants, refugees, integration, inequality, and technology. Two peripheral zones emerge around this core: The green cluster emphasizes digital equity, immigration, families, support networks, and community, highlighting the importance of relational and collective factors in digital inclusion. The red cluster, in contrast, focuses on digital transformation, communication, media, workplace practices, and social integration.

The axes of the map show how academic debates connect experiential and social factors—such as workplace engagement, empowerment, and community support—with structural factors like access, equity, and technological change. Interestingly, the differentiation between central and peripheral themes highlights the importance of an intersectional approach. This result is consistent with qualitative data from Türkiye, where participants stressed that for meaningful digital participation, language accessibility, institutional trust, and cultural familiarity are equally important as internet connectivity.
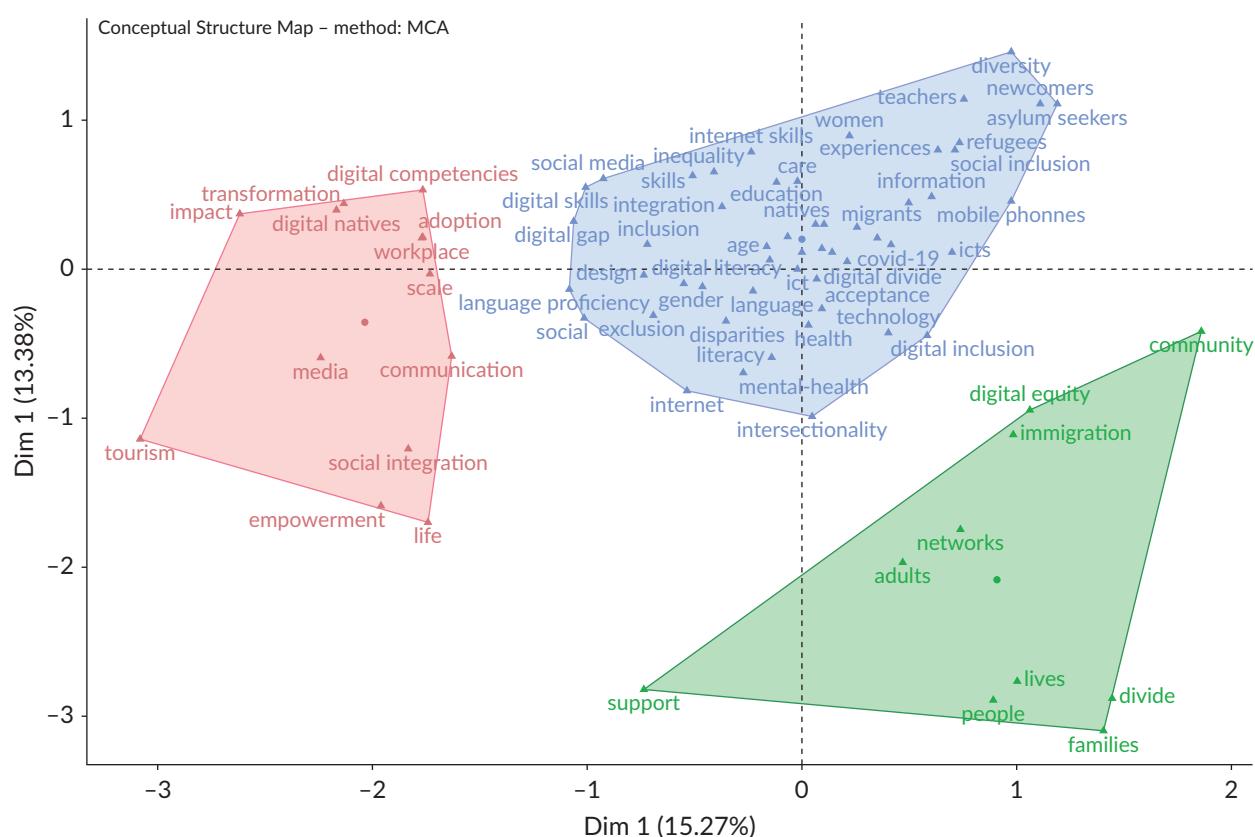
Figure 2. Factorial map.

Figure 3 displays the thematic map, which groups clusters by centrality (relevance) and density (development). The motor themes include the digital divide, the internet, and integration, emphasizing their crucial and well-established roles in the field. The basic themes—such as migration, refugees, refugee

integration, digital literacy, and networks—are highly relevant but still lack comprehensive theoretical development, indicating areas that need further conceptual work. Niche themes, such as exclusion, inclusion, workplace, tourism, and digital natives, represent specialized discussions that are significant yet less connected to the broader field. Examples of new or declining themes that highlight gendered and life-course issues that are either becoming more or less significant include refugee women, internet skills, ICT, women, care, and pregnancy. This classification illustrates the relationship between caregiving responsibilities and digital exclusion, which validates the qualitative findings. Many female participants in Türkiye reported relying on family members for digital mediation.

The thematic map reinforces the study's main point that achieving digital equity involves recognizing interconnected vulnerabilities related to gender, age, and social status (Alencar, 2020; Olsson & Bernhard, 2021). The thematic map confirms the presence of both well-established (motor) themes and emerging, less integrated topics such as refugee women and caregiving roles, which remain peripheral but highlight potential directions for future research.
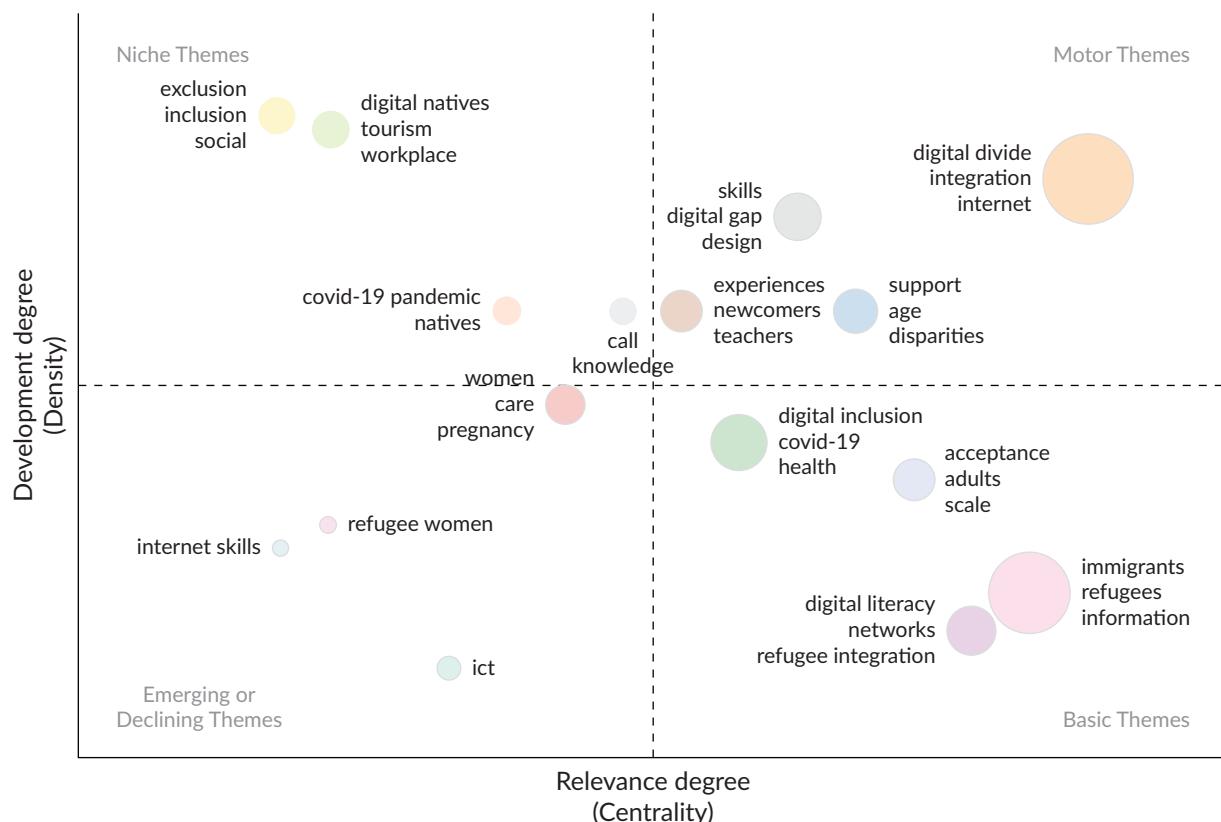
Figure 3. Thematic map.

A word cloud of the most commonly used terms in the literature is shown in Figure 4. Notable ideas that demonstrate their centrality in academic debates include the digital divide, immigration, refugee issues, integration, the internet, technology, digital skills, and digital inclusion. Also prominent are terms such as education, social inclusion, literacy, gender, language, and Covid-19, highlighting the ongoing relevance of socio-cultural and contextual issues. Asylum seekers, families, networks, care, and disparities are some of the less prevalent but equally significant terms that illustrate how structural problems influence identity,

vulnerability, and day-to-day existence. This lexical overview is consistent with both qualitative and bibliometric findings: women reported gender-specific barriers to digital participation, while participants in Türkiye highlighted linguistic difficulties on monolingual e-government platforms. The word cloud supports the idea that digital inclusion policies should go beyond infrastructure to address cultural, linguistic, and gender inequalities.

Figure 4. Word cloud.

The evolution of trend topics from 2017 to 2025 is depicted in Figure 5. Although the dataset spans 2014–2025, trend analysis begins in 2017 because relevant keywords were not used frequently enough before that year. Between 2017 and 2019, debates on migration and access barriers intensified, with a focus on immigration, digital inclusion, internet use, digital skills, and the digital divide. In the period between 2020 and 2021, concerns about digital inequality increased further during the Covid-19 pandemic, bringing migration and the digital divide into sharper focus.

This shift highlights how global crises, such as the Covid-19 pandemic, can drive research in areas like digital disparities in access to public services. As interest in how various groups experience digital inclusion has grown since 2022, new themes such as gender, digital literacy, and refugee experiences have received increased attention. Recent migrants also emphasized the importance of language accessibility, institutional trust, and culturally sensitive digital services, despite significant access barriers remaining. These trends align with the qualitative findings.

When creating Figure 5, trend topic labels were standardized by removing suffixes and unnecessary punctuation (e.g., "digital literacy-" was corrected to "digital literacy"). We also unified spelling variations—for example, "Digital Inclusion" and "digital inclusion" were combined for consistency.

The five visualizations collectively demonstrate the intersection of global academic discussions with the daily digital challenges encountered by migrants in Türkiye. The factorial and co-occurrence maps demonstrate the continued importance of structural barriers—such as those related to access, digital equity, and technological gaps. Thematic and trend analyses highlight understudied issues such as gendered caregiving roles, literacy, and language accessibility, which are gaining importance. By linking structural and sociocultural elements, the word cloud also demonstrates how identity and vulnerability influence digital inclusion.
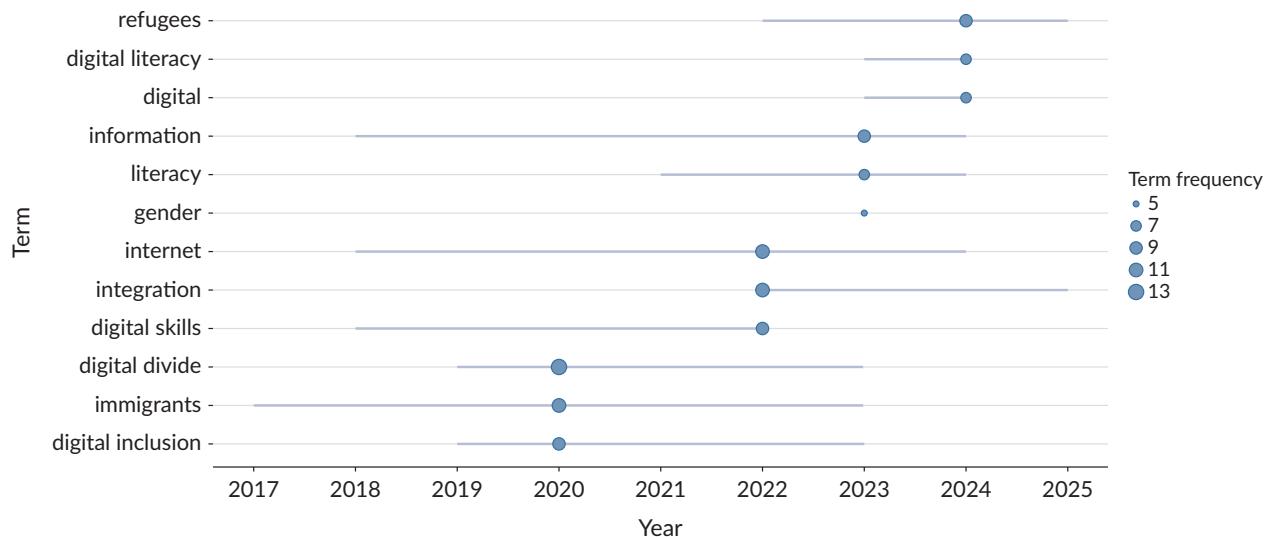
Figure 5. Trend topics over time.

These findings, when paired with qualitative data, suggest that policy initiatives should prioritize cultural adaptation, multilingual accessibility, and trust-building on digital platforms in addition to infrastructure provision. Effective digital inclusion for migrants requires strategies that recognize intersectional vulnerabilities and the socially embedded nature of digital experiences, according to this conclusion, which also supports earlier research (Alencar, 2020; Baldassar & Wilding, 2020; Olsson & Bernhard, 2021). When taken together, the bibliometric evidence (Figures 1–5) supports the study's two-stage design. It supports the qualitative findings and charts the conceptual and structural aspects of digital inclusion.

4.2. Qualitative Findings

The qualitative findings broaden and enhance the bibliometric analysis by providing a foundation for international discussions on migrants lived experiences in Türkiye. Bibliometric mapping (Figures 1–5) highlighted structural and conceptual themes, including language barriers, trust in institutions, digital literacy, and integration. The interviews provided concrete examples of how these issues manifest in everyday life. The coding process identified five themes: digital competency, trust and safety, access and usage, barriers to access, and impact on integration. Refer to Supplementary File, Table B, for the complete coding scheme.

4.2.1. Access and Usage

Many participants reported using digital devices and services daily for communication, education, news, and official transactions. The bibliometric co-occurrence map (Figure 1), which shows "access," "internet," and "communication" as central nodes, is consistent with this pattern. Codes like "frequency of use" and "intended use," which highlight the significant reliance on digital tools, also support this (see Supplementary File, Table B). A 25-year-old male student from Palestine, residing in Kocaeli since 2018, noted:

> I use the internet and digital devices nearly every day—social media, daily news, official transactions, and educational websites. (M1)

A 34-year-old female journalist from Chechnya, living in Konya since 2015, also stressed the importance of digital tools for both professional and personal needs:

> I use it a lot, for social media, news, and work. (M8)

The factorial map (Figure 2) placed "communication" and "education" as key concepts in the field, and the interviews confirm that migrants rely on these functions in daily digital practices. The interview word cloud (Figure 6) shows participants' everyday language, in contrast to the bibliometric word cloud in Figure 4. Frequently mentioned terms include "digital, use, access, communication, internet, services, safe, problems, and language." Personal pronouns, place names (such as Istanbul, Kocaeli, and Türkiye), and words like "family," "student," and "job" also appear frequently, highlighting the experiential and emotional dimensions of digital inclusion. These elements complement the bibliometric findings by grounding global themes in migrants' everyday experiences. For detailed theme definitions and codes used in the analysis, see Supplementary File, Table B.

Figure 6. Interview word cloud.

4.2.2. Barriers to Access

Significant connectivity problems persisted despite high engagement, which corresponds to the thematic map's "barriers" cluster (Figure 3). Approximately 50% of the participants reported experiencing financial difficulties, power outages, or internet connectivity issues. A 20-year-old female student from Bulgaria, living in Istanbul since 2023, explained:

> I can't use the internet because there is no signal in some places. (M4)

A 28-year-old female student from Syria, who has resided in Istanbul since 2020, added:

> I live in a student apartment, so the internet speed is not that good. (M5)

Similarly, a 39-year-old female student from Kyrgyzstan, living in Istanbul since 2013, remarked:

> Depending on the service provider, network breakdowns and power breakdowns. (M12)

These limitations included "internet access problem," "electricity outage," and "financial distress," as listed in the Supplementary File, Table B, under "barriers to access." These obstacles align with global studies on the unequal growth of digital infrastructure and its impact on social inclusion (Alencar, 2020; Ortega, 2017). The results demonstrate that socioeconomic status, housing, and geography—factors that are often overlooked in international bibliometric analyses—have a significant impact on access inequality. However, some participants reported encountering "no barriers at all." Related codes for access barriers are detailed in Supplementary File, Table B.

4.2.3. Trust and Safety

A great deal of attention was given to privacy, surveillance, and data security, which is consistent with the bibliometric focus on trust. Terms like "safe," "feel," "personal," and "data" all relate to this theme in Figure 6. These terms show how migrants often see online engagement as risky and vulnerable, highlighting emotional and technical barriers to participating digitally.

A 34-year-old female housewife from Turkmenistan, living in Izmir since 2018, explained:

> I don't feel comfortable giving my personal information. (M6)

A 34-year-old male overseas export sales manager from Kyrgyzstan, residing in Kocaeli since 2011, stated:

> No site or social site is safe—your account can be hacked, your information shared. (M15)

Similarly, a 35-year-old female journalist from Azerbaijan, who has lived in Istanbul since 2005, remarked:

> Revelations of privacy intrusions make me nervous. (M17)

With codes such as "self-confidence," "anxiety," and "not feeling safe," Table B in the Supplementary File categorizes these issues under the heading of "trust and safety." This is consistent with past research that demonstrates the psychological, emotional, and technical impacts of digital exclusion (Guberek et al., 2018). The qualitative data also shows a strong correlation between migrants' use of digital platforms and their perceptions of risk and vulnerability. See Table B for code definitions under the "trust and safety" theme.

4.2.4. Impact on Integration

The use of digital tools by participants also reflected bibliometric themes like "integration" and "education." Many said they were crucial for cultural engagement, social adaptation, and language acquisition. Nine participants reported better environmental adaptation, eight reported improvement in language skills, and fourteen reported enhanced communication skills. These effects are evident in participants' accounts:

A 25-year-old male student from Palestine, living in Kocaeli since 2018, explained:

> Technology assisted in adjusting to the new country, keeping up with the news, acquiring Turkish, and communication. (M1)

A 20-year-old female student from Bulgaria, who has resided in Istanbul since 2023, noted:

> Online platforms have helped me a lot in learning and communication. (M4)

Similarly, a 26-year-old male student from Palestine, living in Kocaeli since 2017, stated:

> Language learning programs, job postings, and communication software accelerated my learning. (M13)

With codes like "adaptation to the environment," "developing language skills," and "making daily life easier," Table B in the Supplementary File categorizes this finding under the theme of "impact on integration." Additionally, "integration" is identified as a motor theme with high centrality and density in thematic mapping (Figure 3). This is corroborated by the interviews, which demonstrate the direct role that digital tools play in linguistic, economic, and cultural integration. The theme structure and code list for integration impacts are provided again in Table B.

4.2.5. Digital Competence and Structural Challenges

The majority of participants expressed confidence in their digital abilities, but many expressed anxiety with institutional barriers and system design. This reflects the bibliometric theme of "digital literacy" while adding an important point: competence depends not only on individual ability but also on system usability.

A 33-year-old female beauty expert from Turkmenistan, residing in Kocaeli since 2018, noted:

> My digital skills were okay, but not the system. Many things cannot be done online, and one must make time-consuming face-to-face visits. (M9)

A 28-year-old female journalist from Kazakhstan, living in Istanbul since 2014, added:

> Websites did not have languages other than Turkish initially. (M11)

Similarly, a 26-year-old male student from Palestine, who has lived in Kocaeli since 2017, explained:

> Digital skills were required since I live alone. I struggled initially due to language and not knowing the systems. (M13)

This result is categorized under "digital competence" in Table B in the Supplementary File, which also includes sub-codes for "language deficiency," "system problems," and "lack of information." The word cloud in Figure 6 shows a similar pattern, with frequent mentions of "language" and "problems."

These examples illustrate how weak system reliability and the absence of multilingual design contribute to digital exclusion, regardless of an individual's skills. Additionally, they show how bibliometric concepts of "digital literacy" can exaggerate individual flaws while ignoring more significant systemic issues.

These findings served as the foundation for a deeper investigation into how linguistic, emotional, and structural obstacles interact to influence digital inclusion, which is further explored in Section 5. All things considered, the qualitative results contextualize and validate the bibliometric maps. The interviews demonstrate how these difficulties are felt within Türkiye's migrant communities, even though Section 4.1 focused on global issues of digital access, literacy, trust, and integration. The difference between "access" and "barriers" in the bibliometric maps is reflected in the participants' experiences with connectivity. Their worries about "fear" and "trust" allude to broader anxieties, but the emphasis on "integration" is directly connected to language acquisition and adaptation.

The study also shows that digital inclusion depends not only on infrastructure but also on emotional factors, connecting global debates with local lived realities. Testimonies from migrants confirm that addressing digital inequality requires developing multilingual, culturally aware, and reliable digital platforms, as well as enhancing infrastructure and training.

Together, the qualitative and bibliometric results indicate that factors beyond infrastructure contribute to digital inclusion. Three themes recurred: (a) linguistic accessibility, particularly the difficulty of monolingual e-government platforms; (b) structural access, including affordability and internet connectivity; and (c) emotional trust, including concerns about safety and surveillance. The bibliometric maps present these issues in abstract form, while the interviews reveal their everyday impact on migrants in Türkiye. Together, these findings highlight the need for digital policies that are multilingual, culturally sensitive, and trust-oriented. Operational definitions of "Digital Competence" sub-codes are summarized in Table B in the Supplementary File.

5. Discussion

This study uses a two-stage design that combines bibliometric analysis with in-depth fieldwork to assess digital inequality among migrants. The bibliometric phase constructs a thematic model based on global research, while the qualitative phase tests and applies it through MAXQDA analysis of 27 interviews in Türkiye. This approach is particularly relevant for digital governance, where linking international perspectives with local realities is crucial to inclusive policymaking. Sample characteristics that may shape these findings (e.g., age, gender, length of stay) are summarized in Table A in the Supplementary File, and the whole coding scheme used to derive themes is provided in Table B.

Among the numerous themes that interview analysis empirically supports in the literature are language barriers, worries about safety and trust, usability problems, and emotional exhaustion. The participants' experiences indicate broader concerns that, despite opportunities for inclusion, digital technologies may exacerbate existing disparities in access, literacy, and trust (Katz et al., 2017).

One important finding from both domestic and foreign research is that the complexity of digital systems, especially e-government platforms, may further exclude disadvantaged users. The MAXQDA analysis revealed

that individuals with limited Turkish language skills, digital abilities, or financial means faced challenges with bureaucratic digital interfaces. These local problems are supported by international studies from Katz and Gonzalez (2016) and Bastick and Mallet-Garcia (2022), which emphasize that difficulties with interfaces and learning costs disproportionately affect disadvantaged users.

Both the bibliometric and qualitative phases revealed gendered patterns of exclusion. Olsson and Bernhard (2021) found that Swedish female entrepreneurs experienced stress when managing digital transformation through informal learning. A similar pattern was seen in Türkiye, where many female respondents—mainly housewives or older women—relied on family members for digital tasks. While family members were willing to help, their support was constrained by resource scarcity and prevailing gender norms. These results are consistent with worldwide patterns that indicate social roles and expectations, education, and income all influence online behavior (Paccoud et al., 2021).

Undocumented status made digital use even more difficult, regardless of gender. Similar to findings among undocumented Latino migrants in the US, migrants without legal status demonstrated greater vulnerability and expressed worries about government websites, surveillance, and information access (Bastick & Mallet-Garcia, 2022; Guberek et al., 2018). Despite being aware of the risks, many did not take precautions, reflecting a widespread sense of technological fatalism.

Language exclusion is a common thread across many contexts. Ortega (2017) describes this as "inequitable multilingualism," which is evident among Arab-, Persian-, and Russian-speaking migrants in Türkiye, who frequently identify language as the primary barrier to accessing digital public services. Although some services are becoming more inclusive, Turkish-only content dominance excludes non-Turkish speakers and creates barriers in healthcare, legal proceedings, and employment access.

Digital inequality, as this study and the literature demonstrate, extends beyond mere access to technology. Support networks, family environment, and local infrastructure all play crucial roles in shaping one's life. Katz and Gonzalez (2016) showed how family and community mediation shape the use of digital tools in the US. This was confirmed by interviewees in Türkiye, who mentioned that they frequently used family, ethnic groups, or peer networks to navigate platforms.

This research emphasizes that the process of digital inclusion is both social and technical. The Covid-19 pandemic exacerbated global digital disparities. According to Vergara-Rodríguez et al. (2022), even among professionals with high digital proficiency, the abrupt transition to online systems revealed digital gaps and increased psychological stress. Parents in our sample, particularly those who were less tech-savvy or had no support, also reported feeling exhausted and perplexed when juggling digital health services or remote education.

In conclusion, digital inclusion is intersectional when comparing domestic field observations with international literature. Migrants in Türkiye experience similar types of exclusion as in other high- and middle-income nations, especially those who are undocumented, have low incomes, or are female users. The impact of Türkiye's unique institutional, linguistic, and legal context varies. Policies should prioritize community-based digital literacy programs, culturally sensitive training, multilingual platforms, and accessible interfaces to sustainably reduce structural inequalities. The overlap between Turkish and international findings underscores the need for policies grounded in real-world experiences.

This study also demonstrates the benefits of integrating bibliometric analysis with qualitative verification. While maintaining their local relevance, this approach can help shape international standards for digital inclusion. User experience, emotional security, language accessibility, and trust—all of which are frequently disregarded but are essential for democratic digital participation—must be at the core of any successful strategy.

6. Conclusion

This study examines digital inequality among migrants through a two-stage design that combines bibliometric analysis with in-depth interviews. The bibliometric phase mapped global themes and debates, while the qualitative phase, based on 27 interviews in Türkiye, provided practical insights into how these issues are experienced locally.

The findings show that language barriers, gender roles, undocumented status, and trust in institutions are key factors shaping digital inequality. Although digital technologies can promote inclusion, they may also exacerbate existing disparities when platforms lack cultural sensitivity, are limited to a single language, or involve complex procedures.

The policy implications are obvious. Digital inclusion cannot be ensured solely by infrastructure. Multilingual, user-friendly, culturally aware, and backed by community-based networks are all essential components of successful solutions. This study also demonstrates the importance of integrating qualitative research and bibliometric analysis to connect local realities with global discussions. This two-stage approach should be applied to various migrant groups and contexts in future research. To ensure that migrants are not left behind in the digital transformation, strategies for addressing digital inequality must be both locally grounded and globally informed.

Conflict of Interests
The authors declare no conflict of interest.

Data Availability
The data supporting this study's findings are available from the corresponding author upon reasonable request. Due to ethical reasons, interview transcripts cannot be shared publicly.

LLMs Disclosure
The authors used LLMs as a proofreading tool while preparing the manuscript. However, all analyses and interpretations are the sole responsibility of the authors.

Supplementary Material
Supplementary material for this article is available online in the format provided by the author.

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ARTICLE

Digital Tactics of Refugee Women: Towards an Inclusive Framework for Digital Literacies

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Abstract

This article examines the complex relationship between online and offline inequalities for shaping refugee women's experiences during resettlement. Refugee women have unique challenges during resettlement, yet the role of gender in shaping refugees' experiences of inclusion, exclusion, and associated risks is often overlooked. Research into the role of digital technologies in refugees' resettlement is fragmented, spread across disciplines, and therefore lacks analytical focus. Motivated by a research field that is fragmented and lacks a gender analysis, we conducted a scoping review to (a) consolidate studies across disciplines on refugee women's digital practices during resettlement and (b) propose tactics as an analytical approach to the study of the relationship between online and offline inequalities. Through the analytical framework of tactics, we review three thematic areas of the outcomes of digital technology use for refugees: social connectedness, access to information, and self-presentation. We find that outcomes of refugee women's ICT use are heavily shaped by gendered norms, expectations, and structural exclusion, and there is a strong need for a better understanding of the role of digital technologies in the lives of refugee women. This study has also demonstrated the use of tactics as an important analytical tool in pluralising understandings of digital literacies as a practice, and that tactics have a strong gendered component. Using tactics as an analytic tool illuminated that, while offline inequalities can inform outcomes of digital technology use, the same inequalities can shape the reappropriation of digital platforms to mitigate the risk of the practices, while gaining access to the outcomes. This study demonstrates that tactics offer a valuable conceptual framework to foreground refugee women's situated agency in digitally mediated contexts.

Keywords

diaspora; digital inclusion; digital literacy; digital migration; ICT; refugee women; resettlement; tactics

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1. Introduction

1.1. Reconsidering a Gendered Research Approach

Women make up an increasingly large proportion of those seeking asylum in the EU (Teodorescu, 2024). Notably, they are undertaking migration independently of male partners and children, driven by their own motivations (Teodorescu, 2024). Positioned at the intersection of gender-based marginalisation and precarious legal status, they frequently experience compounding inequalities in their country of origin, during transit, and in their arrival destinations. Upon arrival, women refugees may encounter structural disadvantages, including lower levels of education, limited language proficiency, family obligations, childbearing responsibilities, restricted social networks, health challenges, and reduced access to integration support (Liebig & Tronstad, 2018). These factors significantly shape their experiences of resettlement (Teodorescu, 2024). Consequently, refugee women have unique experiences and specific challenges in accessing essential resources, education, protection, social support, language acquisition, labour market opportunities, and participation in decision-making processes (Albrecht et al., 2020; Deacon & Sullivan, 2009; Teodorescu, 2024).

Nevertheless, research on refugee resettlement processes often adopts a gender-neutral approach, overlooking the role of gender in shaping resettlement experiences and associated risks (Hennebry & Petrozziello, 2019). Research tends to present refugees as a homogeneous, non-gendered group, or when gender is present—typically within humanitarian discourse—refugee women are depicted as passive victims devoid of agency (Berg, 2022; Smith, 2025). Consequently, such research has failed to describe the nuanced ways in which refugee women actively engage with their own resettlement. In recent years, scholars have increasingly emphasized the urgency of incorporating gender as a critical analytical lens in this context (Ponzanesi, 2021; Saïd, 2021).

The widespread use of digital technologies has had a profound impact on the experiences of refugees. Research has emphasised the important role of ICTs for refugees at all stages of the migration process. Scholars point to the importance of the smartphone pre-migration, during flight, and upon arrival (Alencar, 2020). During resettlement, refugees' use of digital technologies has been found to be hugely salient in their daily lives. Refugees use communication technologies for maintaining and creating transnational and local ties (Veronis et al., 2018), accessing vital information to help with decision-making and integration procedures (Borkert et al., 2018; Dekker et al., 2018), learning and educational content (Anderson & Daniel, 2020), as well as leisure and entertainment (Anderson & Daniel, 2020; Awad & Tossell, 2021).

While these findings suggest the important role of digital technologies in the lives of refugees, literature calls for further research on the specific experiences of more marginalised refugee subgroups (Anderson & Daniel, 2020; Potocky, 2022). Moreover, literature on the relationship between offline inequalities and digital exclusion is seemingly paradoxical. Critical scholars have argued that digital technologies offer limited benefits at best, have the potential to reinforce existing inequalities, and in some cases create new forms of stratification (Saïd, 2021). Fung et al. (2025) emphasise the paradox of ICTs to offer potentially equal opportunities, while at the same time enlarging inequality. Baum et al. (2014) refer to the "digital vicious cycle": As offline inequalities lead to digital exclusion, digital exclusion can simultaneously increase offline inequalities. Bastick and Mallet-Garcia (2022) outline that while digital technologies can be a means for

marginalized groups to get access to social networks, resources, and information and services, such communities often have unique needs and vulnerabilities, thus experiencing the risks of such tools in unique ways. Nedelcu and Soysüren (2022) describe the "empowerment-control nexus," outlining the complex entanglement between migrants' emancipatory practices enabled by ICTs and the constraints created by the use of technologies on their mobility, such as heightened surveillance and the digitalisation of border regimes. Thus, refugees, increasingly living a digitally mediated life, experience a complex negotiation between risks and opportunities when engaging with digital technologies (Bastick & Mallet-Garcia, 2022). However, there is little research on how specific refugee subgroups, such as refugee women, who have unique experiences and specific needs from their use of ICTs, may negotiate these risks and opportunities or the entanglement of empowerment and control differently. A gendered lens is essential for expanding and deepening a plural understanding of refugees' digital practices and literacies.

1.2. The Context of a Fragmented Research Field

The emerging interdisciplinary field of digital migration focuses on the relational interaction between migration and digital technologies. It thus investigates how ICTs shape migration and how migration is shaped by ICTs. Although the topic as a thematic area has been prevalent across a range of different disciplines, the need to clarify and establish a common field comes from the challenges of a lack of dialogue between disciplines (Leurs, 2023). Mancini et al. (2019, p. 2) argue that digital migration studies remain "fragmented, unsystematic, and lacking an analytical focus, especially for what concerns migrants based in Europe." Scholars have identified several factors that hinder the development of the field (Leurs, 2023; Mancini et al., 2019). These authors, along with others (Lythreatis et al., 2022; Marwick & Boyd, 2011; Potocky, 2022; Vuningoma et al., 2020), have made forward steps in addressing the fragmented field by conducting important literature reviews, carving out and clarifying a shared research agenda for digital migration studies. However, what remains lacking is gender as a key point of analysis, with notable exceptions of several small-scale and exploratory studies (Berg, 2022; Witteborn, 2018).

2. The Present Study

2.1. Research Approach

Motivated by the gender-neutral and fragmented nature of the research field, a literature review has been conducted with the key aim of (a) consolidating studies across disciplines on refugee women's digital practices during resettlement and (b) proposing an analytical approach to the study of the relationship between offline and online inequalities for marginalised groups. To achieve this, we pull feminist migration scholarship into conversation with media, communication, and forced migration literature. We argue for a gender analysis of existing literature on refugees' use of digital technologies, to explore and illuminate the unique digital practices of refugee women and how they interact with their experiences of marginalisation. In this way, gender provides a useful analytical tool to weave together the fragmented research landscape. This review, therefore, responds directly to calls for the inclusion of marginalisation studies in communication science research (Bastick & Mallet-Garcia, 2022) and nods to the shortcomings of the literature in using a critical and in-depth comprehension of gender as a social relation in its approach (Saïd, 2021).

We have employed a scoping review methodology, which allows us to address exploratory research questions, while highlighting key themes, concepts, and gaps in the field (Logan et al., 2024) and is particularly useful to map literature on emerging topics (see also Mak & Thomas, 2022). Following Mak and Thomas (2022), the composition of the research team was developed to ensure diverse expertise. Then, the specific scope was selected, with a preliminary search of the literature to determine the breadth of the topic and what reviews have been conducted. It was found that gender was absent in all existing reviews of the field. This gap further justified our approach, as a gendered perspective remains largely absent from reviews on refugees' digital practices during resettlement. Next, search strategies were employed, such as including varied terminology to target different disciplines and keeping in line with the aims of the research. Keyword combinations ("refugee" OR "migrant") AND ("ICT" OR "digital" OR "digital technology" OR "social media") AND ("gender" OR "women" OR "female") were used to search across several scholarly databases. Results were then sorted upon consultation with the team according to the inclusion criteria. These criteria included: being relevant to the research question; being published in English; being peer-reviewed; and being in the field of media, communication, migration, or gender studies. Due to the scattered debates across fields, it was decided that no rigid time frame for inclusion or exclusion criteria was established, as this would ultimately undermine the goal of uniting fragmented research lines. To avoid the "categorical fetishism" of refugees (Crawley & Skleparis, 2018), some literature focusing on other migrant groups was included upon consultation and shared agreement among the team as to its relevance. The resulting articles were then collated, summarised, and synthesised for common themes, trends, and gaps.

This article draws on existing literature across fields that contribute to the topic. Our discussion is structured around three key themes that emerge from the broader literature on refugees' use of social media and ICTs: social connectedness, access to information, and self-presentation. Within each theme, we provide an outline of the key research and debates, although we acknowledge that the themes are not mutually exclusive, and some literature may overlap and spread across categories. Where empirical research on refugee women is lacking, we refer to other migrant groups to explore potentially relevant themes. Rather than providing a complete overview of all literature on these themes, we aim to assess the effectiveness of our analytical lens and highlight key gaps in the literature and potential avenues for further research.

2.2. Theoretical Framework: Digital Literacies and Tactics

2.2.1. Conceptualising Digital Literacy

Due to the fragmented research field (see Section 1.2), literature on marginalised communities' use of digital technologies takes a broad range of different approaches and frameworks. In the following section, we outline key approaches in the existing literature and advocate for a more holistic and context-based understanding of the approach of research on refugee women's experiences of ICTs and digital exclusion. This article does not argue for a move beyond digital literacy, but rather a pluralising of digital literacies to incorporate a contextualised understanding of the broad multiplicity of both offline and online practices that contribute to a relationship between use and outcomes of digital technologies, in relation to an individual's structural position.

Initial scholarly discussion on digital exclusion developed around the term "digital divide" (Antonio & Tuffley, 2014; Lythreatis et al., 2022; Scheerder et al., 2017; van Deursen & van Dijk, 2019). The term originally

referred simply to the uneven distribution of *access* to the internet and was based on the dichotomous distinction of being "connected," i.e., on the right side of the digital divide, or being unconnected, on the wrong side of the divide (Scheerder et al., 2017). This is now commonly referred to as "the first level digital divide." As internet use and access to devices became more prevalent, the focus of the digital divide discourses shifted to digital skills, which became part of the "second level" of the digital divide (Scheerder et al., 2017). This level focuses on the *use* of digital technologies. With regard to specific subpopulations of excluded groups, the focus on use, often framed as "digital skills," is prominent in humanitarian and supra-governmental organisations (Antonio & Tuffley, 2014). Initiatives such as the UNHCR Innovation Service and the UN Agency for Digital Technology demonstrate a strong policy focus on the development of digital skills to increase the social inclusion of excluded groups. The development to consider not just access to but also use of digital technologies has added nuance to the binary distinction, but still garners criticism, for wrongly framing specific groups as digitally excluded, or being on the wrong side of the digital divide (Leung, 2020). This can result in the framing of particular groups as "digitally low literate groups" and often overlooks a person's ability to manage literacy tasks in their everyday lives (Smit et al., 2024). More recently, scholars have termed a "third level" digital divide, which focuses on the *outcomes* of digital skills and internet use (Scheerder et al., 2017). Digital exclusion, therefore, refers to situations when the possession of digital skills and internet use do not lead to beneficial outcomes (van Deursen & van Dijk, 2019) While this provides a useful development for the study of refugee women's experiences with digital technology, this framework can fall into the trap of assuming the needs of a specific population and assessing their use of digital technologies against those assumed needs (Anderson & Daniel, 2020). Due to a lack of empirical research on refugee women, this is a particular vulnerability of this approach.

Scholars working with migrant populations criticise digital divide approaches and argue that refugees develop skills in a specific context, shaped by vulnerability (Georgiou et al., 2024), and therefore their skills cannot be understood outside of this context. To acknowledge their situated contexts, some scholars have relied on frameworks developed specifically for refugee integration (Ager & Strang, 2008) and adapted them to explore the role digital technologies have held in this process (Alencar, 2018; Anderson & Daniel, 2020; Potocky, 2022). These approaches—focusing on refugees' use of technologies to meet specific needs—have been criticised for reinforcing a utilitarian approach of digital technology use, which ignores or makes invisible the contradictions in their use, in particular, the cultural and gendered context (Awad & Tossell, 2021). In response, Awad and Tossell (2021, p. 12) argue: "[We] tried to avoid simplifying refugees' experiences and to situate technology, gender, and forced migration...in their sociopolitical, legal, and historical contexts." Thus, the importance of understanding refugees' use of ICTs in their context is particularly important for looking at subgroups such as refugee women, to pay attention to their specific and nuanced structural positionalities.

In accordance with understanding the situated context of digital literacy, some digital media scholars advocate for understanding digital skills and practices as not separate and distinct from the material world, but seeing the interweaving of digital lives with everyday lives, in what has been termed the "everyday digitally mediated migrant life" (Candidatu & Ponzenasi, 2021, p. 4). Candidatu (2021) argues for the benefits of this focus specifically for intersectional research, as the focus on "everydayness" can be used to circumnavigate some of the intersecting gendered, classed, and generational relations often overlooked in digital studies. Borkert et al. (2018, p. 4) critique digital literacy as theorised as "a 'thing' or competence to 'possess, lack, need and acquire,'" with digitally illiterate people being perceived as vulnerable and passive. In addressing this critique, they expand Street's definition of literacy to the digital, by understanding "literacy

as social practices and conceptions of reading and writing" (Street, 1984, as cited in Borkert et al., 2018, p. 4). Their broadening scope acknowledges the many different ways that people engage with technologies, in different contexts, and how refugees in their study become both consumers and producers of content, and active agents in their digital practices. This framework is thus particularly useful in counteracting the passive framing of refugees' use of digital technologies, in which gender plays an important role (Awad & Tossell, 2021). Similarly, Tour et al. (2023) draw on the theorizing of traditional literacy to emphasise the importance of understanding literacy as having pluralities, rather than being singular and universal. Building on Snyder (2009, as cited in Tour et al., 2023), they approach the study of digital literacy practices as culturally and socially shaped ways of using, producing, and understanding information found using digital technologies. They therefore understand digital literacy as a process and focus on what enables and constrains digital literacy practices. Likewise, Smets et al. (2021, p. 5) argue digital literacies should be understood as "relational conditions, situated in socio-cultural practices, instead of purely neutral and/or technical tools to navigate the digital." Georgiou et al. (2024) extend this argument to argue that recognising vulnerability as a productive force, beyond simply context, is essential for understanding the "emergence, limits and lack of skills among vulnerable young people facing risks online and offline" (p. 2). These approaches demonstrate a move away from supposedly objective measures of digital exclusion to a more holistic approach, which calls for a framing of "differentiated uses" (Leung, 2020), most adequate for capturing specific marginalised groups' experiences of digital practices and the impact on their lived experiences.

2.2.2. Tactics

We propose that the concept of "tactics" can provide the basis for a framework for understanding the digital technology use of refugee women. Our framework of tactics builds on theoretical foundations laid by de Certeau and Rendall (1984), who introduced the conceptual distinction between "strategies" and "tactics." De Certeau suggested analysing everyday urban life through the interplay between top-down "strategies" employed by urban planners to organise the city and the bottom-up "tactics" used by city dwellers as they carve out a living, thereby adapting their own routines and navigating the urban environment in their own ways. We argue that a focus on tactics has the potential to situate forms of agency demonstrated by refugees in their digital literacies in the context of structural constraints and has a strong gendered component, which complexifies the discussion in the case of refugee women. Schelenz (2023) explores the appropriation of technology by marginalised groups through the lens of a dialectic of oppression and resistance. Invoking this, she argues, allows space for counteracting victimhood narratives by emphasising users' expressions of agency through ICT use, whilst recognising structural disadvantages. Tactics can acknowledge that the way that individuals reappropriate digital technologies to meet their specific needs is rooted in their own experiences of marginalisation and digital exclusion, as argued by Bastick and Mallet-Garcia (2022). Smit et al. (2024) opt for the use of the term tactics rather than strategies as the latter, in their study, is used to draw out the mechanisms through which power manifests itself, through institutional and technological structures that exert power over subjects, and the former are ways in which individuals appropriate the affordances of ICTs to express agency. Likewise, Udwan et al. (2020) argue that, in the context of refugees, strategies can be considered operating within the top-down integration apparatus and tactics are tools of "making do" in a structurally disadvantaged position. Miellet (2022) emphasises that digital tactics can serve as a "coping mechanism" for refugees, in a vulnerable and constrained situation of uncertainty, to regain control and exercise agency, although often "conditionally" and "minimally." Tour et al. (2023) use assemblage theory to describe the way refugee and migrant

communities make use of a combination of specific personal, material, social, and spatial resources to overcome barriers in their daily digital practices. Wood and Eagly (2015) describe "gendered tactics" as the communication strategies and behaviours individuals use that are shaped by the cultural expectations of gender. Witteborn (2018) shows how women negotiate creative tactics to navigate ICT use, while invoking gendered logics. These findings echo Collins' (2000) understanding of the dialectic of oppression and resistance. Despite the lack of research focusing on refugee women's use of tactics to overcome digital exclusion, due to refugee women's unique and specific challenges during resettlement and therefore the gendered nature of negotiating the affordances and risks in their digital practices, there is strong support for a gendered approach to engaging with tactics to manage this negotiation. Thus, in this article, we understand certain practices, both online and offline, as a form of tactics employed by individuals in their use of digital technologies to manage the risks and affordances of ICTs to access outcomes. Through this, we argue that gender shapes the tactics employed in digital literacy, and, therefore, the outcomes of digital literacy practices are heavily influenced by gender. This perspective deepens the call to understand refugee women's digital practices through the lens of situated agency and structural positioning, rather than against a normative model of successful digital use.

Understanding refugee women's digital practices through the lens of tactics helps us interpret their everyday engagement with ICTs, a perspective that shapes the empirical findings below. In the next section, we explore existing literature using tactics as an analytical framework.

3. Findings

3.1. Social Connectedness

Refugees may experience disconnection during their resettlement and rely on ICTs to create and maintain social ties. Refugees are geographically disconnected from social networks from their home country, and from local communities through housing (Pozzo & Nerghes, 2020) and the workplace (Alencar, 2018). Research shows that even the street can be a space of reproducing separation (Huizinga & van Liempt, 2024). Thus, migrants and refugees make extensive use of ICTs to establish and maintain social ties, with vast transnational networks, and are often at the forefront of innovative use of ICTs due to their dependency on such for connection (Madianou, 2016; Madziva, 2016). Social connectedness is reported as a key motivation for refugees' use of digital technologies (Anderson & Daniel, 2020) and is well documented as one of the most important outcomes of use (Mancini et al., 2019; Vuningoma et al., 2020), with clear benefits during resettlement (Alencar, 2018; Udwan et al., 2020). While gender has been found to significantly impact resettlement experiences, research on the gendered differences of refugees' use of ICTs for social connectedness remains sparse (Anderson & Daniel, 2020). Literature on the use of digital technologies for social connectedness during resettlement tends to distinguish between the maintenance of social ties in the country of origin and migrants' use of ICTs to create new social ties with communities in their host country, with some frameworks suggesting that such uses are in opposition or tension with each other (Leurs, 2023). Contrary to this, and in line with the work of Diminescu (2008), who argues for a move beyond binaries and to acknowledge the complexities of simultaneous belonging to multiple territories and networks, this article takes the approach that migrants use ICTs for investing in different forms of social connectedness, and that all are part of the same process of identity formation (Candidatu, 2021).

Udwan et al. (2020) use the framework of digital resilience tactics to understand how social networks maintained over distance using digital technologies allow refugees in the Netherlands to become resilient—providing the ability to create networks of shared support and providing stability through constant, routine communication. However, Udwan et al. (2020) found this came with limitations, as their participants described limiting their sharing of emotions to mostly positive emotions, through fear of worrying or hurting those left at home facing other challenges. Participants described the conscious emotional management that takes place in these interactions, expressing guilt or shame when sharing negative emotions with those remaining at home and intentionally suppressing them in their online communication. These feelings may be intensified by gendered expectations of family. Transnational studies suggest there is a heavy burden on women associated with staying constantly connected to family members via digital technologies, rooted in ideas of gendered roles of motherhood (Veazey, 2021). Madianou (2016) describes the uniqueness of migrant transnational families, arguing that the convergence of transnationalism and communication technologies enables and transforms the role of the family. However, Witteborn (2015, p. 351) argues that "mediated sociality became an opportunity for transnational family intimacy but also a challenge, as people were held accountable for meeting family expectations in virtual interactions." Zontini (2004) makes use of the concept of "kin work" to describe labour that migrant women do to contribute to the development and maintenance of transnational family and communities. She describes the gendered expectation that migrant mothers maintain feelings of family "togetherness" despite distance, through financial remittances, sending of parcels, and constant communication. Candidatu (2021) draws on the work of Geldalof (2009, cited in Candidatu, 2021) to argue that the maintenance of migrant and family communities in the digital diaspora is a form of cultural reproduction. Parreñas (2014, p. 425) explored the way ICTs have created expectations of transnational mothers to be "here and there," "absent and present," and "always available," thus reproducing rather than deconstructing gender ideologies around female domesticity. She also notes a lack of literature on transnational fathering, despite the focus on men's migration in existing literature—a finding supported by this review—arguing this is because fathering from a distance does not interrupt normative gender behaviour, but rather abides by gender norms of male breadwinners (Parreñas, 2008). While transnational family studies literature focuses on labour migration, the findings remain salient to refugee women, despite their structural exclusion from the formal labour market. Madziva (2016), in her study of Zimbabwe asylum-seeking women in London, discusses "mothering through remittances," a common practice for transnational parents, which was almost impossible for asylum-seeking mothers due to integration regimes' restrictions on work and led to feelings of helplessness and powerlessness. In line with Parreñas (2008, p. 8), Madziva highlights the gendered expectation of remaining in close contact with family members, emphasising that the ability to nurture and maintain close ties with their own children under any circumstances was the "proper identity of the African mother." In contrast to the burden of this kind of labour, Greene (2020) describes that her participants mediated family practices as a "tactic of hope" during the period of waiting they experienced in a refugee camp in Greece. She observed how her participants used ICTs to, together with their loved ones, fantasize about family life to remain hopeful for the future, during periods of separation.

Leurs (2019) finds the paradox of "asymmetrical emotional intimacy" in transnational migrant networks. He uses the term "digital care labour" to describe the tactic of impression management work that young migrants do online, similar to the practices found in Udwan et al. (2020). Leurs (2019) finds examples of digital care labour, such as having multiple social media accounts for kin networks in their homeland and friends locally, or withholding negative feelings online, demonstrating how young migrants tactically make

use of platform affordances to practice care in the context of vastly divergent material conditions. Likewise, Madianou and Miller (2013) introduce the concept of "polymedia" to explore how, as different forms of communication technologies become accessible to broader segments of the population, choices about which medium to use become ingrained in social, emotional, and moral dimensions. They argue that individuals navigate an environment of polymedia, making tactical decisions in their choice to manage the potential risks of the communication.

In line with other scholarship, this article encourages a move away from a utilitarian understanding of migrants' use of digital technologies (Awad & Tossell, 2021) and binary distinctions of connectivity (Diminescu, 2008) to understand the entanglement of transnational and local social connectedness. This is supported by Georgiou (2013), who argues that transnational social connectedness provides migrants with the "ontological security" needed to flourish and grow in a local context, as supported by Alencar (2018). These scholars, and others, emphasize the two-way exchange of connectedness. Smets et al. (2021), in their study of one temporary refugee shelter in the Netherlands, found that asylum seekers used social media to develop social relations with local communities in receiving countries. The study focused on two Facebook groups set up by local residents, which created a space of communication and exchange of goods and resources between local residents and newly arrived asylum seekers in the area. Likewise, Veronis et al. (2018) found that social media serve as a contact zone between communities, with the potential to facilitate transcultural communication. They suggest that social media become a borderland to bridge cultural differences and aid in the negotiation of a sense of belonging between virtual and physical spaces. Although in their initial study, gender did not appear to have noticeable effects on refugees' use and experience of social media as a mechanism of transculturalisation, a more in-depth study of gendered practices is needed to explore this further. Both Minchilli (2021) and Candidatu (2021) explore the gendered nature of the relationship between refugees' engagement with transnational communities online and the impact it has on local engagement. Candidatu (2021) explored the "multi-sited embeddedness" of the Somali diaspora community between local, national, and transnational spaces and found the central role of motherhood practices in bringing together Somali migrant women. She found that, along with the strong embeddedness of her participants in transnational family networks using ICTs, the same technological affordances allowed them to create and maintain ties between Somali women in their local communities in Amsterdam (Candidatu, 2021). These connections were facilitated by their childcare responsibilities, such as maintaining connections with mothers from school. Thus, it is seen here that gendered expectations of migrant motherhood not only emphasise social connection with children and other family members left behind, but also encourage new connections between mothers in the diaspora living abroad. Minchilli (2021), in her comparative study of different generations of Somali refugee women living in Rome, also explored the tension between refugees using ICTs to build local weak new ties and maintain their strong existing ties through transnational communication. She found that the younger generation of Somali women, more recently arrived refugees, with generally lower literacy levels and a lack of cultural, social, and economic resources, focused their attention on maintaining stronger transnational relationships. She argued that their vulnerability pushed them to prioritise relationships with family and friends at home, or with people they had met on their journey to Europe, rather than those living locally (Minchilli, 2021). This means their online interactions were not coupled with offline encounters, and they highlighted a common experience of social isolation on a local level (Minchilli, 2021). This suggests that layers of vulnerability play a vital role in the extent to which refugee women can engage with the use of digital technologies for local and transnational social connectedness.

Some research describes marginalised groups evoking tactics to the burden of being constantly connected through disconnection, and this too may have a strong gendered component. Chib et al. (2021) found four tactics invoked by marginalised communities through their digital media use: discretion, disguise, disengagement, and disconnection. Discretion involves selective sharing and careful management of information, disguise entails altering one's digital identity to conform to societal expectations, disengagement involves withdrawing from certain digital platforms or interactions to avoid harassment, and disconnection refers to completely withdrawing from online tools or platforms. Chib et al. (2021, p. 823) argue that digital (non)use should not be understood as externally imposed and, therefore, devoid of agency, but as an expression of situated agency, which "on the surface may suggest compliance," but in reality "hides subtle strategies of resistance." However, Cascone and Bonini (2024), when researching the differing disconnection practices of refugees and other migrants, argue that this practice is structured by layers of privilege and cannot be employed by all migrants equally. They demonstrate how asylum seekers in Athens, due to the familiar expectation of being constantly connected, are unable to engage in absolute non-use, and are more likely to engage in contextual non-use (Chib et al., 2021).

There are a few studies that use the framework of tactics to study the digital literacy of so-called digitally excluded groups. These studies find that the relationship can indeed be reversed: Social tactics are used by individuals to overcome challenges in digital spaces. This points to the entanglement of offline and online practices, as discussed above. Worrell (2021) finds that "digital brokering" is a common form of intergenerational support for migrant families in Australia; that is, young people helping their parents use smartphones, social media, and video-calling apps to maintain relationships during resettlement. Likewise, Marler and Hargittai (2024) found that older adults often rely on social digital support from partners and are motivated by, among other things, a desire to avoid burdening other network members. Smit et al. (2024) find that low-literate Dutch adults make use of informal and formal offline support structures, as well as digital affordances like non-written communication, translation software, and optical character recognition to overcome digital barriers. These show a strong role of the use of social connections to tactically overcome digital challenges. The extent to which these are used by refugee women, who are more likely than male refugees to arrive through family reunification, remains unstudied, but raises interesting debates on whether this tactic supports or discourages dependency.

The research discussed above shows that refugees may experience disconnection, relying on their use of ICTs to increase social connectedness, both within transnational diaspora communities and among local communities, with well-documented benefits to resettlement. However, these uses come with risks, like asymmetrical emotional intimacy and being overburdened with being constantly connected, which likely are felt more by women due to gendered roles and kin labour expectations. Refugees employ tactics to manage these burdens, including digital care labour and contextual non-use as a disconnection strategy, although this is informed by different privileges. Offline social connection can be a tactic for overcoming online challenges, like digital brokering, but the gendered effects of this remain understudied.

3.2. Access to Information

Refugees have unique and specific information needs during resettlement, operating in a challenging and precarious information landscape "where receiving poor or false information can most severely cause death, loss of family, or financial ruin" (Borkert et al., 2018, p. 2). Information seeking is cited in research on

refugees' use of digital technologies as an important motivation, including accessing information on the asylum process, the current situation in their home countries, important local information for new refugees, information to help find jobs and establish a network in a new city, and national and international news (Anderson & Daniel, 2020). Wall et al. (2015, p. 1), in their study of Syrian refugees in Jordan, use "information precarity" to describe "the condition of instability that refugees experience in accessing news and personal information, potentially leaving them vulnerable to misinformation, stereotyping, and rumours that can affect their economic and social capital." They identify five areas of information precarity, namely: access to information; the prevalence of irrelevant, dangerous information; refugees' lack of control over their image in the media; surveillance and phone monitoring; and refugees' disrupted social support. Women refugees may be more vulnerable concerning information precarity, having more specific information needs and an increased lack of access to relevant information due to exclusion from formal information streams (Berg, 2022; Liebig & Tronstad, 2018). Likewise, Berg (2025a) argues that women refugees experience "relational information precarity": They experience disconnection from local knowledge systems due to emotional and cultural detachment in their host country, for example, a distrust of local mainstream news outlets. Due to their differing experiences of information needs and precarity, women refugees may therefore rely more heavily on informal information-seeking tactics (Mena Montes & Boland, 2025).

To address the challenges of information precarity in resettlement, refugees make use of informal information-sharing tactics. Critical migration scholars have proposed the term "mobile commons" to refer to "the invisible knowledge of mobility that circulates between the people on the move…but also between transmigrants attempting to settle in a place" (Papadopoulos & Tsianos, 2013, p. 191). While knowledge-sharing through the mobile commons emerged through word-of-mouth, Dekker and Engbersen (2014) demonstrate how social media have transformed this practice through cementing and expanding social networks. For example, Udwan et al. (2020) described "digital health tactics," that is, community members setting up Facebook groups to share experiences and feedback on navigating health infrastructure, particularly noting the affordance of geolocating services to find tailored, local support. Dekker and Engbersen (2014) and Miellet (2022) argue that these tactics are a form of resistance against restrictive immigration regimes. However, informal information-sharing tactics are not neutral. Angulo-Pasel (2018) demonstrates how the mobile commons are based on gender-neutral assumptions about migration and information needs, and knowledge found there can reproduce gendered power imbalance. Likewise, the labour that is required to produce the mobile commons is often not a site of examination and may well reflect gendered differences. For example, Veazey (2021) terms "gendered digital labour" as the often overlooked emotional and relational labour that migrant mothers invest in maintaining online communities, engaging in what she describes as meta-maternal practices of creating online groups that provide emotional support during migrant resettlement. This demonstrates that informal information-sharing tactics are intertwined with the politics of care.

There are risks associated with relying on information sharing as a digital tactic, which may impact women more due to a higher reliance on informal information. Reliance on information found online presents the risk of dis- or misinformation, and refugees employ knowledge validation tactics to assess the reliability of information found via the commons. Dekker et al. (2018) and Borkert et al. (2018) reported participants' lack of trust in the information they found online. Borkert et al. (2018) found that people employ "information mediaries" to help search and evaluate information found online. Generally, friends (49%) and other refugees (23%) were reportedly the most frequently used, and it was the social ties to persons who

successfully migrated that respondents considered most trustworthy. Berg (2022) found that women prefer to receive information from information mediaries, despite expressing an awareness that some of this information is not accurate. Dekker et al. (2018) highlight four knowledge validation strategies used by refugees to verify the trustworthiness of online information. Strategies included checking the source of information and characteristics of the specific platform or group; validating or cross-checking information with trusted social ties; triangulation of online sources with other online or offline sources; and comparing information with their own experiences. In general, they found that existing offline ties were very important in the access to and trust in information found online. This is supported by the findings of Borkert et al. (2018).

Both Berg (2022, 2025a, 2025b) and Witteborn (2014) explore gendered barriers to information seeking using digital technologies, and explore the tactics women refugees employ to overcome such barriers. Berg (2022) found that for young refugee women living in Germany, precarity was shaped by access to internet connection. She reports that while her participants had access to a mobile phone and the sufficient digital literacy required, differing living conditions meant participants had differing access to unlimited and stable internet connections. Likewise, Witteborn (2014) found the affective barrier of shame to limit women's access to internet rooms in shared temporary accommodation for refugees. She found that shame, brought about by gendered norms around promiscuity and upheld by a culture of community surveillance in the shared accommodation, prevented women from producing, sharing, and circulating information on topics such as health, law, and migration and asylum policy (Witteborn, 2014). In this sense, the gendered experience of shame transformed such rooms into spaces of disconnection, therefore "mirroring, reduplicating and amplifying the isolation of the institutional setting" (p. 79). Berg (2025b) refers to this as "digital othering": the exclusionary practices, not just physical but also social and cultural, within digital spaces that limit access. Both authors found participants' use of gendered tactics to manage limited internet access; Berg (2022) described how her participants chose to forgo their entertainment needs—for example, watching shows from their home country—in order to save their limited internet data for information needs. Participants reported that access to this information made them feel more in control. Witteborn (2018) described the "gendered persuasion tactic" of participants using "charm" to access a phone contract with unlimited internet, despite not having the documentation necessary. Wall et al. (2015) also noted that older women refugees often rely on their sons and grandsons for access to the internet, which raises questions about dependency. Recently, Berg (2025a, p. 2454) introduced the concept of "digital sacrifice" to describe how gendered household expectations shape use of technology, describing "a form of negotiation in which women deprioritize their own digital needs to support others." Here, Berg (2025a) demonstrates how shared technology within households is shaped by caregiving responsibilities and family dynamics.

This strand of literature shows that women experience heightened information precarity during resettlement, and, consequently, both invest in and heavily rely on informal information sources found through their use of digital technologies. Accordingly, they employ digital tactics to overcome or manage the risks of unreliable information, often relying on information intermediaries, although the gendered differences in the use of these tactics remain understudied. Research also suggests that women refugees experience gendered barriers in accessing information online through digital technologies, including affective barriers of shame, community surveillance rooted in gendered norms, and gendered family dynamics. However, some research shows refugee women make use of gendered tactics to overcome this.

3.3. Self-Presentation

Refugees often face significant challenges in asserting agency over how they are represented in mainstream media spaces. Existing research into refugees' media representation suggests that they are frequently subjected to reductive and often negative narratives (McLoughlin, 2023; Rothenberger & Schmitt, 2024). This struggle for representational agency is especially pronounced for refugee women, who are frequently depicted through a lens of victimhood and passivity, which has concrete adverse effects, as it sets the stage for paternalistic policies (Rothenberger & Schmitt, 2024). Potocky (2022), in their review of research on the role of digital skills in refugee integration, concluded that research highlights digital expression as "a medium for producing and disseminating counter narratives to host societies' negative discourse about refugees" (p. 98) and points to this as an important avenue for further research.

Some literature on refugees' self-presentation emphasizes refugees' choice to tactically politicise their identities online. Cascone and Bonini (2024) compared the digital media use of refugees to other migrants in reception centres in Italy and found that while other migrants post content related to their private lives, asylum seekers always addressed the public sphere—usually the diaspora. They commented and discussed political issues, sharing news articles and following political activists, but rarely shared posts with a self-narrative purpose. Godin and Doná (2016) also found that politicising identity plays an important role in refugees' public self-presentation online. They examined a case study of two artistic projects by young Congolese refugees in London—and described how the projects, using social media, added multiplicity to refugee representation in two ways: (a) through repoliticising refugee experiences and thus making community voices more active, and (b) through heterogenising refugee voices, rather than a singular refugee voice. By contrast, Witteborn (2015) found that participants in her study did not always engage with politicising their identity. She describes incidents of being "imperceptible," that is, purposefully distancing their online presentation from the stigmatised label of asylum seeker in order to emphasise their other qualities and parts of their identity, and, oppositely, of choosing to embrace the label of refugee to aid in political mobilisation. In both cases, refugees use the affordances of digital technologies to allow for self-presentation, some to politicise their experiences and identities *as* refugees, and others to move beyond their refugee identity to emphasise the existence of multiple identities.

The opportunity to tactically engage in self-presentation online is even more complex for refugee women. Mevsimler (2021) found that second-generation Somali women in London, the children of refugees, used social media as a space to construct new forms of being a Somali woman, beyond conflict and fleeing. Witteborn (2018) reported, in her case study of refugee women in Germany, that learning to use digital technologies represented a process of "unbecoming: both unbecoming refugee and a female corseted in norms and rules imposed on her in the name of naturalised gendered ways of acting" (Witteborn, 2018, p. 26). She also describes that the materiality of the digital that gave women the agency to control how they represent themselves online opened up an imagined space to feel "free" and connect with other women who were trying to move beyond disciplining gender roles. These cases highlight how digital technologies are used by refugee women to exert agency over their representation by creating collective identities, renegotiating their identities shaped by gender and diaspora identities.

There are well-documented risks associated with self-presentation online, particularly for marginalised communities, and people employ digital tactics to reduce the impact of such risks. Schelenz (2023) found

that Afghan women in Germany have privacy and safety concerns associated with being visible online, both from a high awareness of state surveillance and also from gendered norms around visibility. Wall et al. (2015) describe tactics that refugees use to manage risks of state surveillance, such as using coded language with relatives at home, but it is unclear how gendered norms around visibility play into this. Another risk experienced by visibility online is context collapse. Borrowed from media studies, Marwick and Boyd (2011, p. 114) identify "context collapse" as "social media technologies that collapse multiple contexts and bring together commonly distinct audiences," contrary to the distinctions made in the literature above. For some people, they argue, social media are particularly challenging as there is a need to navigate the expectations of different audiences on one platform. This is particularly felt by refugee women, who are subjected to different gendered expectations from audiences in different contexts and cultures. These risks are heavily informed by the social, cultural, and material contexts (Cassidy, 2018; Dhoest & Szulc, 2016; Fox & Warber, 2015). Literature suggests that refugees employ digital tactics to manage context collapse, demonstrating ways in which such communities tactically use the polymedia environment to mitigate the heightened risks of platform affordances, while making use of the opportunities. Udwan et al. (2020) describe their participants as engaging in complex and multifaceted digital identity resilience tactics online. Participants used online platforms to claim their right to express themselves, while actively negotiating between sometimes contradictory expectations and obligations. They engaged in "technology-enabled code switching," sometimes even having completely separate social media accounts for different audiences. Almenara-Niebla and Ascanio-Sancez (2020) explore this in the gendered context. They found that the context collapse of digital technologies fuels transnational gossip, which serves as a disciplining gendered control and enforces strong ideas of gender roles. The authors describe two tactics to manage digital gossip and the challenges of context collapse: Participants have different Facebook accounts for different audiences, or they have one Facebook account but make use of privacy settings to manage what content is seen by what audiences. The use of these tactics is found in research on other marginalised migrant groups (Cascone & Bonini, 2024; Dhoest & Szulc, 2016; Leurs, 2019). Dhoest and Szulc (2016) emphasise that the use of such tactics is related to factors such as digital, physical, and economic proximity to conservative family members and ethno-cultural community; economic self-sufficiency; linguistic proficiency and literacy; psychological and physical safety; and internet access. Therefore, the use of tactics to manage the heightened risks of context collapse faced by precarious groups is not equally used by all community members, thus exposing those more marginalised to even more risk. This has the potential to reproduce existing inequalities, for which further research is needed on refugee women.

Refugee women struggle for agency over their representation in mainstream media. Through their use of ICTs, they are able to engage in tactics to regain agency over their self-representation, some through politicising and others through depoliticising their refugee identities, getting access to new gendered ideals, and using online platforms to carve out new diaspora identities. However, visibility online comes with risks, particularly under the constraints of rigid gender roles, such as privacy and context collapse. Refugees employ tactics in their use of digital technologies for self-representation to manage the associated risks, although their use of these tactics is informed by other vulnerabilities.

4. Conclusion

This article had two key aims: first, to consolidate research on refugee women's digital literacy practices during resettlement, which was thus far fragmented across disciplines, and second, to propose tactics as an

analytical approach to the study of the relationship between offline and online inequalities, in particular of refugee women. With respect to the first aim, this study demonstrates a clear need for a better understanding of the role of digital technologies in the everyday lives of refugee women. While refugee women experience structural inequalities in their resettled societies, digital technologies offer the potential to help meet their specific needs. However, outcomes of such technologies are not evenly distributed, nor are the benefits they promise; heavy reliance on ICTs increases the risks of digital technology use, shaped by conflicted gendered roles and expectations, and the potential to exacerbate the precarity felt by refugee women in their resettlement. With respect to the second aim, this study has demonstrated the use of tactics as an important analytical tool in pluralising understandings of digital literacies. Using tactics as an analytic tool has illuminated that while offline inequalities can inform outcomes of digital technology use, the same inequalities can shape the re-appropriation of digital platforms to mitigate the risk of the practices, while gaining access to the outcomes. Yet these tactics are heavily impacted by gender. For social connectedness, refugees maintain social networks as a form of digital resilience tactics; however, due to gendered expectations around family, women are burdened with the labour of maintaining such networks, and likely do more work to manage their emotions within such networks. Additionally, while refugees may use online spaces to facilitate connection with local residents, for women, this is often limited to being facilitated by gendered roles such as motherhood and childcare. For access to information, migrants and refugees use information commons, but again, the maintenance of such networks often falls on women, and the information found there can be less relevant, and women have a preference for receiving information through information mediaries. Likewise, some research suggests that material and affective barriers to access, rooted in traditional gendered roles, increase information precarity for women. Refugees use tactics to engage with their own self-presentation online, but for women, the identity work involved is more complex and the privacy and safety risks of online visibility and context collapse are starker, under the constraints of rigid gender roles. Thus, this study demonstrates that tactics have a strong gendered component, and exploring gendered tactics offers a valuable conceptual framework to foreground refugee women's situated agency in digitally mediated contexts.

By structuring the review around three core themes, this article has sought to provide conceptual clarity on the outcomes of digital technology use in line with existing understandings of the digital divides, while remaining attentive to the fluidity of digital practices. This approach has elucidated that individual tactics often span multiple thematic categories. For example, practices like disconnection can simultaneously be a tactic to mitigate the risks of the burden of feeling constantly connected, and of the surveillance risks of self-presentation. Thus, tactics do not directly relate to only one outcome of digital technology use.

The review also draws attention to the eurocentrism present in much of the research, reflecting Leurs' (2019) argument that the field's agenda has been shaped by the political framing of the so-called refugee crisis. This results in the contested categorising of refugees often present in research. Although we acknowledge the unique position of refugees in the EU due to their specific legal categorisation and positioning in migration regimes, we also realise that this is less relevant in the case of some research; therefore, in this literature review, we have made use of research on other migrant groups where relevant. Additionally, the review shows that current research focuses on social media use; therefore, social connectedness as a theme is more developed with more empirical support, as reflected in this literature review. Research often neglects other critical digital tools such as translation apps, platforms for digital governance, or technologies that mediate access to public services such as health, schooling, and education. As governments continue to digitalise service delivery, this

oversight is particularly concerning, as the ability to navigate these tools becomes increasingly important for healthcare, social benefits, employment, and housing for refugees. The impact this has on women, who face unique resettlement conditions, has the potential to exacerbate their precarity.

This review is not exhaustive, and several important themes fall outside its immediate scope. One such area requiring urgent attention is refugee women's engagement with the digital economy, particularly through platform-mediated service delivery, such as delivery or domestic work and screen-based remote labour. Emerging literature points to the growing relevance of digital labour platforms in refugees' access to the labour market. Reports from the UNHCR (2024) and the ILO (2021) underscore the potential of online work to circumvent some legal and social barriers that are experienced by refugee women, offering access to income opportunities. However, these benefits also come with significant risks. Digital workers often lack basic protections and reinforce existing gender disparities, as shown in studies like Mansour-Ille and Starks (2023), who document persistent challenges such as limited digital literacy, poor connectivity, and inadequate regulation. The digital economy may appear promising, especially for groups such as refugee women who are excluded from formal labour markets, but gendered dynamics may play an important role in shaping the outcomes of labour platform use, as well as vulnerability to risks. As digital labour becomes an increasingly prominent source of income for refugee communities, future research should engage with its complex implications, particularly how benefits and risks are shaped and distributed by existing inequalities.

We propose that future research would benefit from the interdisciplinary approach taken here, using digital tactics as an analytical tool to examine the relationship between offline and online inequalities. Future research must attend to this tension and explore how refugee women navigate the risks, constraints, and opportunities of digital technologies under existing intersectional inequalities.

Conflict of Interests
The authors declare no conflict of interests.

Data Availability
Due to the nature of the research, data sharing is not applicable to this article.

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No AI-based generative technology was used in the preparation of this manuscript, nor in the execution of the research that the manuscript reports upon.

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ARTICLE

"My Phone Is Like My Office": Refugee Women's Social Media Entrepreneurship in Dar-es-Salaam

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Abstract

In this article, we explore the cases of two Congolese refugee women who have pivoted their social media engagements to entrepreneurship to offset their immobilization resulting from the Tanzanian asylum regime. The fear of losing access to mobile communications amid the introduction of biometric SIM card registration highlighted the critical importance of mobile telephony to the livelihoods of urban refugees in Dar-es-Salaam. Based on ethnographic research, including qualitative interviews, focus group discussions, and (digital) observation, we look at the entrepreneurial opportunities facilitated by social media. While highlighting how virtual mobility and connectivity provide an already marginalized group with essential workarounds, our findings also underscore how these online encounters do not substitute for the need for offline connections. We argue for a nuanced reading of technology's potential to resolve disparities, as we also observe how this potential can reinforce intersectional discrimination based on gender and precarious legal status.

Keywords

ICT4D; informal livelihoods; social media; technology in Africa; urban refugees; virtual mobility; women's entrepreneurship

1. Introduction

Following the introduction of compulsory biometric SIM card registration in January 2020, millions of SIM cardholders in Tanzania were locked out of their mobile phones. The added registration process required fingerprints and National IDs of all SIM cardholders. This obligatory registration brought the connection between access to basic services, such as mobile communication, and proof of legal status to the foreground.

Certain groups, such as urban refugees, asylum seekers, and other undocumented individuals, were unable to meet the newly introduced requirements and were hampered in their access to mobile communications and thus excluded from the right to communicate (De Bruijn et al., 2009). Losing this access meant losing contact with friends and family near and far; for many, it also meant being deprived of their livelihoods.

According to Tanzanian asylum law, asylum seekers and recognized refugees are required to live in refugee camps. In other words, legally registered refugees are physically immobilized through an encampment policy (Kamanga, 2005). As only a few obtain official permits for residence and work outside of the camps, moving to the cities leads to the de facto illegalization of urban refugees. This narrow asylum regime informs other economic and social aspects, forcing many refugees in the city to live "in limbo" (Wilson et al., 2021). Nevertheless, many refugees seek to build a future life in the city. While much has been written on camp refugees, refugees in Dar-es-Salaam have received less scholarly attention (exceptions include Mann, 2008; O'Loghlen & Bwami, 2018; Sommers, 2001). This article contributes to studies of the latter category. We use the term "urban refugees" not only in relation to the legally recognized refugees in Dar-es-Salaam, but also to designate people who were forced to leave their country and live in the city, and especially those who self-identify as refugees (Wilson et al., 2021).

Being connected to social media was key for many in finding alternative and creative ways to make a living in limbo. The biometric SIM card registration requirement highlighted the critical importance of mobile telephony to the livelihoods of these refugees in Dar-es-Salaam. Laura, a Congolese urban refugee in her early 30s, put it very clearly: "My phone is like my office." Based on Laura's and her compatriot Hazina's stories, this article explores how mobile phones and social media are lifelines for the many immobilized refugee women in Dar-es-Salaam. Because "formal" employment opportunities in Dar-es-Salaam are accessible only to a small section of the population, informal economic activities "remain the most vibrant economic sphere in the city" (Malefakis, 2020, p. 28). Most urban refugees try to make ends meet by working in the informal economy. In Tanzania, as elsewhere, men are more likely to find work in formal and secure employment (National Bureau of Statistics, 2015, p.41). Even within the informal sector, gender remains a key determinant of labor market discrimination, and women are constrained to working in lower income groups. Hence, not only are urban refugees forced to compete with their Tanzanian counterparts, but also refugee women need to navigate the informal economy's gendered division. Technology, however, has facilitated excluded women's participation in the informal economy. In this article, we examine how virtual mobility and connectivity play out in transcending the refugee women's barriers to participation in the informal economy. In a context shaped by the Tanzanian asylum regime and its enforcement through biometric SIM card registration, we ask the following question: How is virtual mobility leveraged to access and sustain livelihoods within gendered informal economies?

The focus of this article is on informal entrepreneurship via social media (henceforth, social media entrepreneurship) rather than on institutionalized e-commerce. Our analysis is grounded in a case study from East Africa, a missing and much-needed perspective within the field of digital migration (Moran, 2022). Griet Steel defines female online entrepreneurship as the ensemble of bottom-up practices of e-commerce that generate new socio-economic opportunities for urban women in Africa (Steel, 2021). Social media acts as an alternative market space that has opened new paths for vendors with limited access to more general online entrepreneurship and offline commerce. Social media entrepreneurs are united in their recognition of social media's popularity, availability, and user-friendliness, and of its facilitation of easy entry into

commerce without cumbersome registration processes or the prerequisite of having a physical store. On platforms such as Instagram, WhatsApp, and Facebook, informal vendors can effortlessly display their products or services to attract prospective buyers. Social media's commonality connects consumers with producers and suppliers in a casual yet direct manner. As the barriers to women's engagement in (online) commerce outside social media are manifold and range from legal, temporal, financial, and spatial to gender-related constraints, social media entrepreneurship is not peripheral but appears in different modes worldwide; it is practiced by people across different social strata, including by urban refugee women. In this article, we describe and underline the opportunities offered by social media, though we do so with caution.

The article is structured as follows: In the following section, we present the main argument's conceptual framework, which is found at the crossroads of debates on transnationalism, media studies, informal networks, and feminism in (forced) migration studies. While many studies focus either on the nexus of migration and media or on gender and media, we choose to situate our article at the crossroads of all three: migration, gender, and media. We adopt an intersectional feminist approach to the experiences of migration (Savaş & Dutt, 2023), understanding the experiences of refugee women as shaped by the co-constitution of legal status, social class, migration trajectories, and gendered power relations. Focusing on women who have been forced to leave their homes and who live in Dar-es-Salaam as refugees, we illustrate the intersection of both (non-)citizenship and gender in relation to the use of media in the informal economy. Moreover, our purpose in approaching technological innovation within the Global South is to reiterate the importance of Africa's place on the map of global e-commerce (Steel, 2021). In Section 3, we discuss the methodological opportunities offered by social media, particularly messengers such as WhatsApp, but we also reflect critically on the platforms' limitations, including concerns around data security. We then dedicate Section 4 to the case studies of two Congolese women living in Dar-es-Salaam who engage in social media entrepreneurship: Hazina and Laura. We selected these two cases because their trajectories capture recurrent patterns of social media entrepreneurship, while their differences provide analytical leverage. In other words, their stories are ethnographic examples that illustrate themes that reappeared across the wider group of participants in our study, while also underscoring the heterogeneity of the women's trajectories and strategies. Their stories also help us to scrutinize the potentials and limitations of mobile telephony in navigating immobilization in Dar-es-Salaam. In Section 5's discussion, we contextualize the two cases in relation to the requirement for biometric SIM card registration. In this section, we also critically engage with and nuance essentializing discourses on social media and on ICT for development (ICT4D) optimism. The article ends with a conclusion.

2. Social Media Entrepreneurship in Transnational Africa

Hazina and Laura's stories are situated in debates that touch upon informality, transnationalism, and media studies from an intersectional perspective: As African migrant women in legally precarious conditions (Savaş & Dutt, 2023). The emergence of mobile phones in Africa opened new social, political, and economic opportunities (De Bruijn et al., 2009; Poggiali, 2017). Through the creation of virtual spaces, traditional notions of spatiality became continuously challenged. These new forms of connectivity enabled the compression of space, distance, and time and thus facilitated social coordination (McIntosh, 2010). While physical marketplaces continued to exist, their position came to be challenged by online marketplaces after the uptake of internet-based ICTs. In recent years, e-commerce, characterized by sales between third parties that are mediated through internet platforms such as Amazon, Alibaba, and Jumia, has grown exponentially,

especially during the Covid-19 pandemic. Notwithstanding the barriers that e-commerce places before entrepreneurs in the informal sector, informal trade has extended to social media—not necessarily as a replacement for physical trade but as an addition to it. Practices in the informal sector have also been digitalized. The mobile phone's potential for instantaneous connectivity thus demands an examination of informal economic opportunities generated through social networks in the digital age.

Not having a legalized status excludes refugees from seeking official employment. The need to circumvent and avoid surveillance also shapes refugees' economic mobility (Glick Schiller & Salazar, 2013). Without the legally required papers, refugees are relegated to the informal sector for subsistence. Refugees who trade in the informal economy instrumentalize personal ties and social capital spanning large distances, extending across borders, and to their home countries and beyond. As we shall see later, these networks are turned into valuable resources that foster the resilience of urban dwellers, including urban refugees (Etzold et al., 2019). In other words, network capital extends into the digital spheres of the "connected migrant" (Diminescu, 2008).

Building on Bourdieu, Urry (2012) proposes the concept of network capital in the mobile age as the ability to initiate and maintain social relations with people who are not in the physical vicinity. Within the informal economy, traders in different African settings instrumentalize personal ties and social capital (Steel, 2021; Trefon, 2004). These relations provide practical, financial, and emotional benefits, usually with the involvement of networking technologies. Migrants' and refugees' social networks are not only local but also transnational (across national borders) and translocal (across different locales and other non-national boundaries). Whereas transnationalism has been criticized for falling prey to methodological nationalism (Glick Schiller & Salazar, 2013), translocalism (Brickell & Datta, 2011) does not draw a sharp distinction between locations across national boundaries. In a way, the digital space becomes another locale within translocalism. Transnationalism and translocalism continue to capture the processes in which migrants live in one place yet maintain ties with their societies of origin (Bakewell & Landau, 2018; Brickell & Datta, 2011), also in the digital sphere. Urban refugees living in Tanzania, for instance, maintain ties, and capitalize on them, with family and friends in the Democratic Republic of the Congo (DRC). These ties are turned into assets and are not limited to these two countries, as many have family members and friends who live in distinct locations across Tanzania (within and outside refugee camps) or have moved to third countries (within and outside Africa).

In the last decade, after the so-called 2015 refugee crisis in Europe, the combined field of media and migration studies has received increased attention (Leurs, 2023; Smets et al., 2019), acknowledging the vital role that ICTs play in the maintenance of transnational relations (Wilding & Gifford, 2013; Witteborn, 2015). One criticism of this recent literature, however, touches upon its infatuation with the "refugee journey," which tends to overshadow other issues related to (temporary) settlement and integration with local populations (Leurs & Patterson, 2020). A second criticism relates to its Eurocentric focus. Indeed, most studies focus on the role of mobile technologies in resettlement processes in Western countries (Alencar, 2020; Mancini et al., 2019), despite the scholarly work combining forced mobility and technology in other contexts, including Africa (see for instance Bardelli, 2021). Third, notwithstanding an existing literature on online resistance against the reinforcement of gender categories (Daniels, 2009), a gender perspective regarding online female entrepreneurship and its emancipatory possibilities remains underexplored (McAdam et al., 2020; Ughetto et al., 2020). As we shall see, women face gender-specific barriers in setting up businesses, including gender norms, expectations, and limited access to funding.

Street vending, the epitome of the informal economy, requires physical mobility and leads to different forms of harassment, especially for refugee women. This leads to a de facto immobilization that further complicates the refugees' participation in the informal sector. Virtual mobility, as a substitute for physical mobility, offers a way out (Kenyon, 2006). Unlike digital mobility, as discussed by Ullrich (2017) in the context of migration journeys, which highlights how smartphones can enhance geographical mobility, and unlike mediated mobility, which examines how media technologies manage and regulate movement (Keightley & Reading, 2014), we foreground virtual mobility as the substitution or supplementation of physical travel through digital communication. This perspective emphasizes how connectivity can mitigate social exclusion by offering alternative forms of access and participation under conditions of restricted mobility. As a response to the multi-faceted barriers to engaging in e-commerce via online sales platforms, Bangladeshi women, for instance, have leveraged social media as an alternative way of engaging in online commerce (CGAP, 2019). Likewise, Kenyan and Sudanese women engage in social media commerce from any intimate sphere (Mukolwe & Korir, 2016; Steel, 2017, 2021). Social media commerce's compatibility with other responsibilities can widen the navigation space between gender role expectations, including substantial amounts of unpaid care work, personal (educational) ambitions, and engagement in economic activities (Steel, 2017). Despite the restrictive measures placed on female merchants in Sudan, for instance, the digital sphere grants female entrepreneurs novel flexibility and mobility. In Khartoum, it has offered women a new space to navigate and in which to engage in commerce successfully (Steel, 2021). Also, in Dar-es-Salaam, this form of digital entrepreneurship has become increasingly attractive to people from all walks of life—young and old, citizen and non-citizen, affluent and impoverished—who are faced with juggling multiple roles and demands. The digital context, as such, may offer women "opportunity spaces" (Ughetto et al., 2020) for social media entrepreneurship.

Finally, while we acknowledge the transformative power of ICTs to contribute to bottom-up development, we invite scholars to be equally critical of the ICT4D paradigm. Digital technology is indeed not a one-size-fits-all solution and cannot offer a blueprint for empowering those navigating the margins (Daniels, 2009). To start with, governments, ICT4D, and technological enterprises can and do determine accessibility to the internet (Pype, 2021). In fact, they are at times even implicated in exploitative practices, as they allow power holders to extract personal data and exert control over the livelihood means of their citizens (Pype, 2021). Leurs and Patterson (2020), moreover, underline that constant connectivity makes refugees with no legal status vulnerable, as it facilitates their surveillance and traceability. The digital labor market can also reproduce and exacerbate existing inequalities and even lead to further exploitation (Easton-Calabria, 2019). As long as social inequalities and local power relations persist, ICTs' development potential remains limited (De Bruijn, 2019). The use of mobile phones and ICTs can potentially surpass spatial, temporal, physical, and structural boundaries; yet, as Wallis (2011) emphasizes for rural China, they do not erase limiting conditions and eliminate *all* boundaries. To understand these subtleties, studies on the use of ICTs and social media need to be contextualized. ICTs and digital media (including social media) are not the same everywhere. Different people use technologies differently, and media are transformed as their use shifts from one context to another (Morley, 2017). For Mavhunga (2017), for instance, technology is not a universal inbound instrument that solves African problems; rather, Africans' use of technological tools contributes to dealing with their own challenges while changing mobile technology in the process. Hence, despite the risks, urban refugee women in Dar-es-Salaam contribute to molding social media as they make use of it. We will elucidate this by means of the stories of Hazina and Laura, to which we will turn after discussing our methodology.

3. Methodology: "Smart" Methods

Many academic articles dealing with digital methods start off by stating (rather redundantly) the omnipresence of the digital in our daily life (e.g., Hjorth et al., 2017). While we acknowledge the "methodological opportunity" (Kaufmann & Peil, 2020) that smartphones offer, we must not lose sight of the enduring link between the analogue and the digital. The analysis presented here was part of a larger research project that looked at how transnational, translocal, and local networks, as well as mobility, are used as resources by displaced people to manage their everyday lives (Etzold et al., 2022). Within this broader framework, this article focuses specifically on the social media usage by vulnerable migrants in a refugee-like situation by selecting relevant cases from a corpus of data that consists of 41 detailed case studies of urban refugees aged 18 to 65 from the DRC, Rwanda, and Burundi. The data were collected in collaboration with colleagues in DIGNITY Kwanza at intervals between 2019 and 2021, using qualitative and ethnographic methods, including interviews, informal conversation, focus group discussions, and (participatory) observation. All these methods were conducted online and offline. In most cases, interviews were conducted in pairs and took around two hours. However, the interviews were not delimited by the start and the end of the recording and included phone calls before the visit itself, commuting from one side of the city to the other, meeting acquaintances of the interviewee, and having several small-talk conversations with third parties. The seven focus group discussions, which included between 6 and 10 individuals each, were held at DIGNITY Kwanza's premises. These discussions were held primarily in Swahili, organized by age and gender, and covered different topics touching on the experiences of urban refugees in Dar-es-Salaam.

Even though the use of social media was one of the themes in the research design, we did not think of social media entrepreneurship prior to our research. From early on, however, we particularly noticed women's engagement in social media entrepreneurship. The introduction of biometric SIM card registration in 2020 brought social media entrepreneurship's relevance unexpectedly to the fore. Guided by the principle of serendipity, we embraced its saliency in our analysis (Rivoal & Salazar, 2013). Among the 41 detailed case studies (mentioned above), 15 stood out for their practice of social media entrepreneurship. This engagement occurred at different points in time during the research and with varying frequencies of use of social media; and 10 of the cases involved women. Some posted daily, while others did so weekly, and yet others only sporadically. To understand how social media entrepreneurship worked in context, we chose the two women digital entrepreneurs who were the most active and avid social media users and who did not belong to the same business sector. Furthermore, our choice was guided by a gendered focus as well as by quality above quantity. In order to better ground our argument, describing the context in which these two women navigated is important. Their stories, however, do not stand alone; they are embedded in wider (digital) observations on social media use, which included refugee men and Tanzanian women.

The ethical clearance of the research was obtained from the EU funding organ. Additionally, we strictly followed the advice of colleagues in DIGNITY Kwanza. The names of research participants have been anonymized, and obvious identity markers have been removed. Our analysis did not follow a strict software-assisted qualitative content analysis with coding procedures; we employed an ethnographic approach grounded in close engagement with the research participants. Hence, we produced detailed transcripts and memos capturing both the contents of the interviews and additional observations, which later became the basis for our iterative offline and online team discussions.

Three social media platforms were used: WhatsApp, Instagram, and Facebook. We particularly focus on WhatsApp and its use on three levels: (a) as a tool for private communication; (b) through its status update feature; and (c) as a platform for coordination, discussion, and collaborative reflection among the authors. Regarding the first level, WhatsApp provided an informal channel for communicating with participants, many of whom used the app regularly in their daily lives. It enabled us to approach participants casually in a comfortable conversational atmosphere that encouraged open communication (Kaufmann & Peil, 2020). Successful WhatsApp conversations and online ethnography were possible only once trust had been established through prior and repeated in-person meetings. This mode of communication proved especially valuable during the Covid-19 lockdown, but it was equally convenient for checking in with participants at a later stage.

Second, WhatsApp's status update feature caught our attention the most. This feature allows users to share text, audios, photos, videos, and GIF updates that disappear after 24 hours (WhatsApp, n.d.). While the authors Catherina and Mira were initially unaware of this feature, they soon noticed that refugees and Tanzanian colleagues posted goods for sale on their statuses. Smartphones seemed to offer an additional means of following participants (Zijlstra & van Liempt, 2017); and in our case, we followed interlocutors online through their changing statuses.

Third, as part of the collaborative writing process for this article, we set up a group chat among ourselves as authors. This group served multiple purposes: It enabled logistical coordination (e.g., scheduling Zoom meetings and sharing updates), but beyond that, it facilitated and stimulated a joint, informal, yet analytical space for discussion and reflection, while ensuring that no sensitive data were shared. This ongoing online conversation between the authors was enmeshed in the digital spaces that we were analyzing, and thus we came to realize that the process was part of the analysis itself. Two specific features contributed to establishing this discussion: First, the possibility of creating a group to which all authors had simultaneous access helped us in "reconstructing meanings and practices in co-productive data elicitation"; second, the possibility of sharing thoughts through voice messages motivated us to engage "in inventive, more meaningful ways to co-produce knowledge" (Kaufmann, 2019, p. 169). While we highlight here the methodological opportunities offered by digital tools, we return in our Conclusion section to critically reflect on their limitations and ethical implications.

We drafted this article combining emic (DIGNITY Kwanza) and etic (Catherina and Mira) perspectives. Were it not for the collaboration with DIGNITY Kwanza, Catherina and Mira would not have been able to create bonds of trust with Congolese refugees. Furthermore, DIGNITY Kwanza's knowledge of the legal and local context was invaluable. However, being a Tanzanian organization, DIGNITY Kwanza was still an outsider to the refugee community. Here, Catherina contributed with knowledge from previous work and firsthand experiences with Congolese within and outside the DRC. While DIGNITY Kwanza communicated in Swahili with the refugees, Catherina conversed with many in Lingala and French. In some cases, this led to complementary data. As an MA student enmeshed in digital culture, Mira could relate to many of the young women as peers, rather than as *dada* (the Swahili term for big sister), which led to another sphere of confidentiality. Finally, the physical constraints related to the Covid-19 pandemic forced us to use digital methods more avidly. During the pandemic, we lost contact with some participants, while we could communicate with others and, in some instances, assist with basic needs. What started out as a necessity turned into a tool. Being forced to rely on our smartphones eventually sparked the idea for this article.

4. Case Studies: Social Media Entrepreneurs

4.1. Hazina: Mobile Beauty Entrepreneur

In the mid-2010s, Hazina and her brother (15 and 8 years old at the time, respectively) found themselves forced to flee their home in eastern DRC after losing their family to the atrocities of the war. Upon arrival in Dar-es-Salaam, Hazina tried to reach out to an uncle in Europe. After trying different communication channels, she managed to track him down:

> I remembered that Facebook had helped me to find someone. It was very easy for me to find him [her uncle] and get help…so I saw how important social media was for us. Because if it were not for the internet, maybe if there was no Facebook, I would not have been able to find that man [her uncle]. (Hazina, 10 March 2020)

Hazina managed to reconnect with her father's younger brother through Facebook. Having had this first positive experience with social media, Hazina identified it as a potentially helpful tool. After her uncle's attempts to have Hazina and her brother join him in Europe failed, Hazina, still underage, had to assume the responsibility for herself and her younger brother. While financially supporting the two, their uncle asked Hazina to come up with ideas regarding livelihood prospects. Having experience in braiding hair and manicure for many years, though not as a paid service, she decided to try the beauty sector.

Hazina had come to Tanzania seeking refuge but did not register as a refugee; instead, she decided to regularly renew a tourist visa. Unlike recognized refugees, who the law forces to remain in refugee camps far away from the city, tourists and migrants enjoy some degree of freedom of movement. However, as a migrant, Hazina could neither own nor run a business unless she applied, and especially paid, for costly resident and working permits, which are out of reach for most urban refugees (Wilson et al., 2021). Confronted with all these barriers to setting up a physical salon in the formal circuit, Hazina created her own Instagram page and started posting pictures of hairstyles, polished nails, and make-up. She thus leveraged social media to promote *à domicile* beauty services. This was not without risk; to do her work, she even displayed her private number publicly. She explained: "I was working everywhere you are. I was going to the person. I remember I was working mobile. So everywhere you are, you can just call me, fix an appointment, and I will come" (Hazina, 10 March 2020).

Social media enabled Hazina to promote her services and be mobile by offering her services door to door, yet mediated through her phone. As her business grew, so did the distances from her clients, and she began to experience physical mobility constraints while moving from one customer to the next. Not only were the distances in Dar-es-Salaam long, but the urban infrastructure did not support the city's urban growth well. This resulted in nerve-racking and time-consuming traffic jams. Moving around was also expensive: Paying several bus fares involved consuming financial resources and many lost hours on the road. For Hazina, this mode of operation did not make for a lucrative business in the long run. Indeed, cutting travel costs has frequently been cited as the mobile phone's most critical value for entrepreneurs (e.g., Kwami, 2016). However, in Hazina's case, the mobile phone could not substitute for her physical presence, as she could not deliver her services without her physical presence. If she wanted to stay in business, Hazina had to develop alternatives to moving around. If she could not go to her clients, then her clients had to come to her.

Hazina's social capital, including her work relations with new clients, proved to be a vital asset. It was through investing in these relationships that she managed to open her own beauty parlor in 2018 through one of her Tanzanian clients. Their collaboration worked as follows: On paper, the Tanzanian owned the beauty parlor. Hazina ran the parlor entirely by herself but played the role of an "employee" instead of an "owner." This collaboration resulted in a "win-win situation" for both. Hazina could run her own business, while for the Tanzanian, having a salon in her name benefited her image. As an employee, however, Hazina was not respected by her colleagues, who often came in late to work and made disdainful comments to her. As she could not address their behavior as their boss, Hazina did not feel respected (Wilson et al., 2021). Her business grew, her online reputation strengthened (her page counted over 98,000 followers in 2020!), and she used her Instagram page to expand her business and display other products. She explained:

> I post it [the product] on my page. So, if you want some, just call me through my phone. You say, "I saw the picture on your page, I want one." You send the picture to my WhatsApp number, and I can see it. If I still have it, I'll tell you the price, and you'll buy it. Finish....I thank the man who created the internet and social media [laughs]. I really thank him! (Hazina, 10 March 2020)

Hazina branched out by running a side business through her social media channels: selling bags, textiles, jewelry, and other accessories. This business started after a *vitenge* (colourful African print) and bag vendor from Lubumbashi (the DRC's second-largest city) contacted Hazina through Instagram and proposed working together. Their partnership worked as follows: Hazina's Congolese partner sent her pictures of various products, which she then showed to people in her personal network—for instance, the beauty salon clients or fellow churchgoers. As the new customers made orders, Hazina communicated them to her partner. Then, her partner sent the ordered goods on a daily bus connecting Dar-es-Salaam with Lubumbashi. Finally, Hazina paid her partner via Western Union. At times, Hazina was physically involved in showing pictures to potential customers, but she was not required to walk around carrying the products. In fact, Hazina "carried" the products by mediating them through social media on her mobile phone. Her posts on WhatsApp and Instagram made them circulate virtually. The entire process (offering products, negotiating, taking orders, and making payments) ran via mobile communication, yet it could not be fully detached from the offline world.

4.2. Laura: Online Transnational Dalali

Like Hazina, Laura was born and raised in eastern DRC. Against the backdrop of an ongoing conflict and the accompanying risks for girls and women, Laura's parents decided she should leave for a "safer place" (Laura, 20 February 2020). After graduating from university with academic degrees in economics and development, she moved to Dar-es-Salaam, where her older sister resided. Laura crossed into Tanzania with a single-entry visa via Uganda. This 90-day visa did not allow Laura to reside or work officially in Dar-es-Salaam, where economic uncertainty and idleness shaped her life situation: "Here in Dar-es-Salaam, I was just at home, doing nothing. Sitting at home every day, without getting anything" (Laura, 20 February 2020).

Idleness, boredom, and hopelessness have been identified among the most frequent and pervasive challenges refugees face (Betts et al., 2019; Grayson, 2017; Wilson, 2019). As described above, informal livelihoods function as significant workarounds, as they allow refugees, who are legally barred from formal employment, to circumvent permit requirements and to work. In Laura's case, however, her sister's

relocation to a neighborhood on the outskirts of Dar-es-Salaam further complicated her own entrance into the informal working world. As Laura explained:

> When she went to her place in Kitunda, it was far. If I wanted to come to town, maybe walk the streets and meet somebody, maybe a customer, if I didn't have transport fees, it was difficult. So, I decided to stay with my friend, my Kenyan friend. (Laura, 20 February 2020)

Compared with other refugees, Laura's physical mobility in the city seemed less restricted, in the short term, because her regularly renewed visa entitled Laura to move around legally. However, after some time passed, being unable to work legally because of the lack of a work permit immobilized Laura economically. At the same time, her attempts to create a livelihood by circumventing permit requirements were impeded by her being physically distant from the city center (when she moved with her sister to the outskirts of Dar-es-Salaam): She could not afford to pay daily transportation fees. In fact, Laura's economic and physical immobility in the city reinforced one another. Only when she decided to move in with a Kenyan friend to remain physically close to the city center did things start to change. Closer to downtown, she could network and connect to others more easily.

Slowly but surely, Laura turned into a *dalali*. *Dalali* are sales transaction intermediaries. Often considered as unemployed men, *dalali* are known to hang around a *kijiweni* (or a hangout spot), waiting to run into opportunities. While intermediaries are not unique to Tanzania (see Nzeza Bilakila, 2004, for a Congolese example), little attention has been given to their practices in online spaces. Whereas Laura was initially forced to run into her customers on the streets of downtown Dar-es-Salaam by accident, she soon started "chasing" people in the virtual space. As such, Laura translated the *dalali* practices to the digital sphere, which then enabled her to extend them to the DRC: "I took my phone and started interesting people from my home [Congo], 'You know I am doing this now. Can you give me your documents so that I can do it for you?'" (Laura, 20 February 2020).

Being landlocked, the eastern provinces of the DRC are dependent on East African ports (Mombasa, Dar-es-Salaam) for the importation of manufactured goods. Through her mobile phone and social media, Laura created a niche for herself by guiding fellow Congolese with their shipments entering Tanzania. She lived off commissions, and the mobile phone facilitated connectivity over large distances, allowing communication with her clients in the DRC. When Laura started her *dalali* trajectory in 2011, she worked with a simple mobile phone and visited internet cafés to access her emails. With a smartphone, she no longer relied on being in specific physical places to access the internet; she could work from anywhere, and the smartphone granted her the mobility that her permit did not. Just as the *kijiweni* was reconfigured spatially, "the phone" became "the office."

Due to the volatility of earnings as a *dalali*, Laura also tried to find regular employment. She managed to secure an informal position in an auditing company. However, when the firm leadership changed and Laura's new boss discovered that she was Congolese, she was abused and fired without a salary:

> Laura: [The old boss] knew that I am Congolese. So, I was working with him without any problem. But when the company collapsed, the new boss took me without knowing that I was Congolese, not Tanzanian….He did not want to see any documents.

Mira: You mentioned him finding out that you were Congolese. What happened?

Laura: Ahhh. Heeeh. It changed. I was exhausted, and he was abusing me, and at the end of the day, he told me, "Today, leave my company." And I said, "Okay, thank you. Thank you for the time I was here, bye-bye."….Till now, he hasn't paid me. (Laura, 20 February 2020)

Despite the financial uncertainty, Laura decided to resume working as a *dalali*, mediating between a Tanzanian company and Congolese customers wanting to ship goods through Dar-es-Salaam's harbor. While Laura's past forced mobility mainly restricted her opportunities, in the context of activating and navigating a transnational network with Congolese clients it became an asset.

5. Discussion

Despite the openings social media brought about, the above cases show how the virtual mobility and connectivity enabled by the smartphone cannot substitute for everything. While allowing Hazina to coordinate and promote her beauty services, her physical (offline) presence was still required. Despite the risks, Hazina successfully navigated the business opportunities she encountered among Dar-es-Salaam's residents. She translated online encounters into offline appointments. Social media served as mediation. This illustrates that in gendered and feminized service economies such as beauty, virtual mobility primarily supplements rather than substitutes. Social media may provide visibility, support marketing, and facilitate logistics, but the embodied labor of braiding, make-up, and manicure remains non-substitutable and must take place physically. In contrast, Laura could mostly work from anywhere and even connected virtually with her clients in the DRC. Her case shows how virtual mobility can substitute for core brokerage functions, traditionally practiced in public, male-dominated spaces of interaction. The use of the mobile phone enabled Laura to perform brokerage without needing to enter those spaces physically. For a woman with a precarious legal status, virtual mobility thus lowered barriers to entry and reduced exposure to unwanted visibility as well as the costs of commuting in the city. Nonetheless, Laura would not have realized her *dalali* business if not for her Tanzanian partner. It is precisely the trusted local Tanzanian connections, who know their refugee identity, that Laura and Hazina have in common. Their offline connections with Tanzanians facilitated them in circumventing legal restrictions and enabled the use of mobile phones as offices.

Taken together, these cases underline that virtual mobility alone is insufficient. Its potential rests on connectivity that is sustained through trusted social relations offline. Two things follow from this: First, online and offline encounters are inseparably intertwined; second, the trusted Tanzanian connections played a crucial role in realizing the potential of mobile communication and social media to navigate livelihoods in Dar-es-Salaam. Generally, it is notable that many urban refugees tend to keep their circle of insiders small (Wilson et al., 2021). The chosen, trusted few are important. However, the path towards a trusted relationship is bumpy: Many refugees seeking business opportunities in the informal sector, including Laura, reported falling victim to fraud by alleged business partners and not having options for action because of their legal status. Here again, women are more prone to abuse than men. One pregnant refugee woman, unable to walk long distances, reported asking a Tanzanian man to deliver clothes to her customers in her place. The man ended up running off with her goods. This intersectional discrimination became more evident in the context of the compulsory biometric SIM card registration in 2020. Without the necessary documents, all unregistered phone lines were closed after Tanzania hit the final deadline in January 2020. As a large

segment of Tanzanian society was in fact affected by the lockout, registering a SIM card under somebody else's National ID became a widespread practice, even though it was an act that could be legally prosecuted (see Tanzania Communications Regulatory Authority, 2020). Nonetheless, most refugees, like Laura and Hazina, were able to circumvent the lockout or reopen their lines with the help of Tanzanian citizens. While this certainly pointed to the existence of trusted relationships between refugees and Tanzanians who were willing to help refugees not lose access to mobile communication, there were other instances where the biometric SIM card registration reproduced and reinforced social and structural inequalities.

Young refugee women were particularly vulnerable to exploitation, as some Tanzanian men did not shy away from demanding some form of intimacy in return for their registration favors. During one focus group discussion, for instance, a young refugee woman explained that she had to pay 7,000 TZS (about three euros at the time of writing) to get her SIM card registered via a Tanzanian. When this person understood she was not Tanzanian, he wanted her to sleep with him to "help" her out. Another participant explained that when she wanted to repair her phone and the repairer discovered she was a refugee, he asked her to sleep with him, implicitly suggesting that refugees do not have money to spend on repairs. Smartphones not only facilitate mobility, but they can also place women in vulnerable and exploitation-prone situations (Easton-Calabria, 2019). Therefore, it is essential to see how gender and legal status intersect in the context of vulnerable women in refugee-like situations.

6. Conclusion

Seeking safety, Hazina and Laura fled their homes in the DRC. In order to circumvent physical immobility in the refugee camps, both women chose not to register as refugees but to live on regularly renewed tourist visas in Dar-es-Salaam. They were not refugees in the legal sense, even if they might self-identify as such. At first glance, the visas provided enough safety to roam around in the city. Nevertheless, a tourist visa did not allow the women to seek formal employment or register their businesses, which would have required them to apply for costly residence and work permits. In spite of this, the broad spectrum of Dar-es-Salaam's informal economy offered them opportunities to circumvent permit requirements and to make ends meet.

In this article, we approached technological innovation within the Global South to reiterate the importance of Africa's place on the map of self-organized, social media entrepreneurship. Hazina and Laura identified social media as a valuable tool for navigating the challenges of being unregistered migrants. Both women relied on their phones to make a living. Although the experience of discrimination and the high costs of commuting in a bustling city complicated participation in informal livelihood activities, social media platforms opened avenues for entrepreneurship. In Dar-es-Salaam, women urban refugees used their smartphones to get around permit requirements and avoid exposure to discrimination. Social media entrepreneurship was nothing peculiar to refugees; a large section of Tanzanian society engaged in it too. But, as economic navigation space was limited, refugees, even more so than others, depended on these alternative ways of engaging in business.

While social media brought about new opportunities, the state-controlled access to telecommunications, as enforced through biometric SIM card registration, reproduced female urban refugees' marginalization and vulnerability. Women urban refugees in Dar-es-Salaam, however, managed to circumvent being locked out of their SIM cards and to maneuver within the society they lived in by collaborating with locals. While ICTs and social media enabled refugee women in Dar-es-Salaam to search for a living in safer spaces, their use

did not make them unsusceptible to abuse. The biometric SIM card registration and stories of sexual abuse reveal how access to mobile technologies can be difficult for refugee women. As such, even if we acknowledge the potential of digital connections to circumvent barriers and access opportunities, we caution against the general euphoria surrounding the potential of virtual mobility to resolve *all* disparities. The politicization of mobile telephony can inversely lead to critical disconnections. In their attempts to avoid disconnection, women can find themselves in risky situations that reproduce old and even create new inequalities. More than merely celebrating the potential of virtual mobility to resolve unequal access, our goal is to nuance the value of these digital connections, as the latter can also become a source of immobilization themselves.

Our analysis drew on two detailed case studies that served as ethnographic examples to provide depth to broader dynamics of gendered and sectoral differentiation in social media entrepreneurship, especially in contexts of precarious legal status. Although we cannot claim generalizability, we believe these insights are useful for other contexts too. Future research might expand this focus by examining the effects of biometric SIM card registration beyond the case of refugees—for instance, among excluded citizens without formal identification, whose lack of recognition in fact heightens their risk of being stateless. Underlining the link between communication access and biometric registration sheds light on the vulnerability of groups already at the margins. Digital connectivity should be treated as a basic right. When access to identity and registration systems depends on digital connectivity, this principle should inform the design of inclusive rather than exclusionary systems. Policymakers should evaluate whether securitization measures help to achieve inclusivity or to reinforce inequalities. Moreover, mindful of the intersectional approach applied in this study, programs and organizations collaborating with women or legally precarious groups should anticipate their exposure to higher risks and aim to promote and provide safer ways of access for marginalized and minority groups.

The digital euphoria includes the use of WhatsApp, which also raises critical ethical considerations. At the time of the research and writing of this article, public and academic scrutiny of WhatsApp's role in data extraction, metadata collection, and platform ownership by Meta (formerly Facebook) was less pronounced than it is today. Despite WhatsApp's vaunted end-to-end encryption, we exercised caution back then and did not share any sensitive data via the platform. Given the heightened ethical scrutiny surrounding digital platforms today, it is likely that our approach to digital communication, particularly to the use of WhatsApp, will be more critically assessed in the future.

Conflict of Interests

The authors declare no conflict of interests.

LLMs Disclosure

As non-native English speakers, the authors used ChatGPT by OpenAI to assist with language editing and text refinement.

Data Availability

Research data were stored by the Bonn International Centre for Conflict Studies (BICC) for a delimited amount of time.

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ARTICLE

Materialising Digital Borderscapes: Examining the Effects of Digital Systems on Asylum Seekers and Refugees

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Abstract

Digitalisation is increasingly adopted in the public sector in South Africa. The country's Department of Home Affairs has a significant digitalisation project that aims to improve its efficiency in service delivery. Despite this project, it was the Covid-19 pandemic that saw the introduction of a digital interface to manage the bureaucracy of asylum seeker and refugee administration. This article examines the impacts of this asylum seeker and refugee permit extension online system. The article traces how the online system works to refigure how asylum seekers access the state and the possibility of securing documentation. We demonstrate that this online system has effects far greater than simply improved efficiency; instead, it fundamentally refigures the borderscapes navigated by asylum seekers and refugees. Here, digitalisation shifts bureaucratic responsibility to the asylum seekers and refugees, and in so doing, distances them from the state. We show this by paying attention to how the online system changes the materialities of asylum seeking; the spaces in which protection is sought; as well as the practices thereof, where actors other than the state are called on for assistance. In the world of technological interventions, this online system for permit renewal is a seemingly mundane example of digitalisation; yet its effects on the possibilities for social, legal, and even economic inclusion of asylum seekers and refugees are significant.

Keywords

borderscapes; bureaucracy; digital mundane; digitalisation; migration; South Africa

1. Introduction

In 2021, a year into the Covid-19 pandemic lockdown, South Africa's Department of Home Affairs (DHA) launched an online system through which permit-holding asylum seekers and refugees could renew their

documentation. The implementation of a digital response to a governance challenge is not surprising; digitalisation is increasingly being adopted in the public sector in South Africa. Like in many places around the world, shifting governance and decision-making practices to digital forms is often justified for its possibilities for improving state efficiency, increasing transparency and accountability in decision-making, and more generally, appealing to assumptions around what "modern" governance looks like in the contemporary period. Furthermore, the country's lockdown associated with the Covid-19 pandemic catalysed the use of digital tools to make up for limited in-person engagements. This article explores one such example of a crisis-driven digital response, in this case, the digital management of permit renewals for asylum seekers and refugees.

South Africa's legal framework and constitutional protections for migrants make the country a desirable destination for many. The country's bureaucratic administration of migration is considerable, and while migration to the country is sometimes posed as a crisis, the crisis that this article examines is rather the crisis of the management of migration, particularly in relation to asylum seekers and refugees. The DHA, the national department that is mandated to deal with citizen registration, international migration, and refugees, has a number of projects that seek to address this crisis. Many of these are digital in nature, from the online booking of appointments for certain services for citizens, to the outsourcing of particular visa administration to companies like VFS Global. However, the administration of asylum seekers and refugees remained, prior to the Covid-19 pandemic, strictly managed through face-to-face engagements. The Covid-19 pandemic, however, necessitated a shift in the way the DHA dealt with permit-holding asylum seekers and refugees, and in particular, the renewal of their documentation. Throughout this article, we use the terms "permit" and "visa" interchangeably. Under the original iteration of the Refugees Act (No 130; Republic of South Africa, 1998), recognised refugees and asylum seekers were issued "permits" as forms of legal documentation. Subsequent amendments to the Act have renamed these permits "visas." As many practitioners and refugees themselves still refer to documentation as "permits," we use these terms interchangeably throughout the article.

This article draws on academic debates that centralise digitalisation processes in urban governance. Particularly, we are inspired by calls to examine the "social relevance of digital data and digital technologies in various domains of society" (Büchner et al., 2022), looking beyond those that are considered to be exceptional or novel or successful, and instead focusing on any digital intervention with social relevance. To do this, we borrow from Leszczynski's (2020) exploration of the digital mundane. She calls for paying attention to the everyday, taken-for-granted aspects of the digital, the "seemingly ordinary and routine sites, objects, data productions, and networked practices of everyday life" (Leszczynski, 2020, p. 1194). In the world of technological interventions, the digital intervention that this article follows is of the mundane variety, a system seemingly so simple that it sits on the cusp of even being considered a digital intervention. Yet, the online system operates as a "pervasive digital [mediation] of the spaces and practices of daily life" (Leszczynski, 2020, p. 1195). For many asylum seekers and refugees, the introduction of a digital system changed how they could interact with the state. In the refugee space, the challenges of navigating a wholesale shift to a digital tool are significant. The DHA's adoption of a digital tool as a crisis response demanded that permit holders have access to smartphones and data, apps that can scan documents to PDF files, knowledge of how to attach files and how to respond to a template form, and be savvy to check spam folders. While the nature of the digital intervention—an email system—is mundane, the social relevance and implications of its introduction are significant.

In tracking the online system and how it works, we pay attention to how the online system changes the materialities of asylum seeking, from who to contact for assistance to the form of the documentation that they need to produce to be recognised and comply with the online system. We track the shifting spaces in which asylum seekers and refugees and the state meet, from long queues for face-to-face engagements at reception centres to a digital mediation through an email address, where the interaction often happens in intimate home spaces or with the help of intermediaries at internet cafes or community organisations. We examine the shifts in the practices of asylum seekers and refugees engaging with the DHA—for some, a welcome relief to be spared long queues in often hostile conditions, to an online engagement, but for others, having to figure out an online system that is unfamiliar and requires particular technological tools and know-how, and thus turning to actors outside of the state for assistance.

Through this tracking of asylum seekers and refugees' experiences of this tool, the article demonstrates and argues that this ostensibly online system fundamentally refigures borderscapes, extending these into a digital realm. A digital tool that could easily be argued as merely a tool of efficiency for improving state practices, a careful examination of the effects of the online system demonstrates striking effects for an often vulnerable group of people. We argue that the online system shifts bureaucratic responsibility to the permit holder, and that the digital borderscape becomes embodied by asylum seekers and refugees who navigate the process of seeking the protection of the state through a digital interface.

The article proceeds as follows: In the following section, we consider the proliferation of digital tools in the realm of migration governance. We propose that smaller digital interventions are underexamined, and make the case for exploring the impacts of seemingly banal digital tools at work in migration spaces. We then turn to explaining the context of the case and presenting the methodology through which this research was undertaken. The following section unpacks the effects of the DHA's deployment of the online system for permit renewals, and finally, we conclude by arguing that even mundane digital tools can have significant effects.

2. Digitalising Borders and the People That Traverse Them

In recent years, border control processes have increasingly moved to the digital realm. No longer simply clear, fixed lines of separation at the territorial edges of nation states, the concept of the border has thickened, and is now understood to be a process, as mobile, and as "dispersed a little everywhere, wherever the movement of information, people, and things is happening and is controlled" (Balibar, 2004, p. 1). As Dijstelbloem (2021, p. 57) explains:

> Borders shape networks of circulation, instituting both crude and refined selection mechanisms to sort people. But alongside the deployment of barbed wire, ID systems, databases, and patrol boats, borders are bringing something else into motion: the machinery of governing, decision-making, risk assessment, and coordination.

The deepening of the border through data-driven decision-making and artificial intelligence is changing the ways in which people encounter and engage borders.

The "borderscape" concept provides a useful lens to account for the multiplicity of border processes and through which to view how the border is displaced, negotiated, reproduced, and represented, and the myriad processes, actors, and scales involved (Perera, 2007). It draws on the work of the anthropologist Appadurai (1990) on "scapes" (the global flows of people, information, technology and ideologies), and, in combining borders with scapes, it conceptualises borders as dynamic and operating differentially in relation to different actors, creating liminal spaces (Rajaram & Grundy-Warr, 2007). The concept seeks:

> To express the spatial and conceptual complexity of the border as a space that is not static but fluid and shifting; established and at the same time continuously traversed by a number of bodies, discourses, practices and [internal and external to the state] relationships. (Brambilla, 2015, p. 19)

Increasingly, borderscapes are also traversed by digital tools for migration governance. Godin and Donà (2021, p. 3278) use the term "techno-borderscapes" to "shed light not only on the complexities and dynamics of borderscapes (territorial, geopolitical and symbolic) but also the ways in which digital encounters between actors in transit spaces shape migrants' trajectories and their transnational social networks." Techno-borderscapes, or digital borderscapes as we refer to them, are increasingly experienced by migrants in their everyday negotiations with migration governance.

In relation to border security, Glouftsios and Scheel (2021, p. 124) note that "digitisation is intrinsically linked to the rise of pre-emptive, discriminatory logics of control that call for the anticipation and pro-active addressing of 'risks' associated with international mobility." They show how digitisation of borders has three implications for border management, namely the "interconnection of an array of previously largely unconnected actors enacting border controls;…the emergence of an operational logic of control that revolves around the traceability of mobile subjects; and…restrictive effects on migrants' and border crossers' capacity to subvert control practices" (Glouftsios & Scheel, 2021, p. 125). It is these three aspects, individually and entangled, upon which much of the digitalisation and migration debate focuses, and how we structure our engagement with the overlaps between borders and digitalisation.

For example, the traceability of migrants and their mobilities are made visible to the state and other actors through complex digital interventions, what Tazzioli (2018, p. 273) refers to as the "digitalisation of the frontier," where:

> Migration movements are simultaneously the objects of an archival function, real-time monitoring and future-oriented risk analyses: migrants are spied upon, tracked and archived through mapping monitoring software in order to open up future spaces of intervention to make migration a governable phenomenon.

Digital bordering practices prioritise efficiency (Leese & Pollozek, 2023), and are therefore interested in surveillance in the moment as well as the potential for planning interventions in the future.

More intimately, migrants are traced through the state's adoption of biometric technologies. Amoore (2006, p. 338) has described how biometric borders "extend the governing of mobility into domains that regulate multiple aspects of daily life." Processes of digitalisation also work restrictively, minimising the possibility of migrants subverting control. Digital tools invoked at the border make migrants "knowable" across systems

(as Glouftsios & Scheel, 2021, demonstrate in relation to a migrant's registration and database conflict) and increasingly, the use of neural networks for undertaking processes of bordering creates what Amoore (2024) refers to as "the deep border," where "deep learning algorithms are reordering what the border means, how the boundaries of political community can be imagined, and how borderwork can function in the world" (Amoore, 2024, p. 2). Now, migrants are traced and restricted by digital tools before they are even personally identified, regardless of inherent biases in such technologies (Aradau, 2023).

One aspect of scholarship on this topic focuses on how interconnections in technology are used to improve border security. Another aspect, although not the focus of Glouftsios and Scheel (2021), has shown how digital tools are critical for migrant and refugee place-making in cities and while in flight from conflict and persecution, becoming essential components of migrant infrastructure providing "digital passages" (Latonero & Kift, 2018). In Bangladesh, for example, Hussain and Lee (2021) found digital resources to be critical components of Rohingya refugees' livelihoods, configuring power relations amongst the refugee community itself as well as with the humanitarian actors and infrastructure in the camps, despite the government's limitations on their access and use of digital tools for control. In the South African context, Meyers (2022) shows how female migrants use digital technology as a tool for transformative agency before, during, and after migration. And also in South Africa, in the negotiation of everyday experiences of migration, digital tools are a critical force of mobility to navigate the various layers of immobility confronting Somali refugees (Brudvig, 2019), and for finding what Antenucci and Tomasello (2023) refer to as urban digital citizenship (even if citizenship in relation to migrants is broadly defined), through which borders are produced and reproduced.

Sitting somewhere between the digitalisation of border security and digital tools supporting the agency of migrants is the implication of the state's neoliberal turn to managing refugees and asylum seekers. Ilcan and Rygiel (2015) trace the transformation in humanitarian responses with respect to refugee camps, where, following neoliberal interventions, responsibilities are shifted to individuals. And yet despite the appearance of having more agency in their asylum journeys, the neoliberal shift promotes "government at a distance" (Abrahamsen, 2004, p. 1459, as cited in Ilcan & Rygiel, 2015, p. 336), which ultimately disempowers the refugee. Here, what looks to promote agency instead normalises the refugee experience, promotes resilience to it, and decreases the impetus for contesting the status quo of settlements. The implementation of technical interventions in relation to the mediation of access to resources is not an unusual or unprecedented move in South Africa, where, in other contexts (particularly water and electricity meters), residents are required to adapt behaviours in relation to technical devices that mediate their access to resources (see von Schnitzler, 2017). In such examples, residents find ways to circumvent, adapt, and re-tool these devices, and in so doing, side-step the state and its expectations of residents. Although digital interventions may be trickier to re-tool, von Schnitzler's (2017) narrative accounts for everyday agency in response to neoliberal agendas. Agency is therefore critical to consider in relation to holding the state accountable despite its best efforts to shift responsibilities to asylum seekers and permit holders.

Tracing, restrictive effects, and interconnections are key themes that emerge in relation to the digitalisation of borders. There are many digital tools at work in the realm of bordering with wide-ranging effects on migrants, all of which warrant academic attention. However, there are other digital interventions that work at smaller scales with equally notable effects on migrants. Even the implementation of a seemingly "mundane" digital intervention (Leszczynski, 2020) has considerable effects on the borderscapes navigated by migrants, and particularly, often vulnerable groups like asylum seekers and refugees.

Here, we have shown that the increasing adoption of digital interventions in migration governance has wide-ranging effects on migrants in general, and asylum seekers and refugees in particular. Using Glouftsios and Scheel's (2021) distinction in the work of these digital tools, we show how migrants are traced, surveilled, segmented, and channelled across systems and spaces, and paradoxically simultaneously restricted and made responsible for their documentation by digital tools. We also show how other digital interventions can be used to foster interconnections needed to find place and community while navigating borderscapes. In the following section, we describe the context in which this research was undertaken.

3. Setting the Context: Post-Apartheid South Africa and Refugee Protection

South Africa presents an interesting case to unpack the effects of law, policy, and digitisation on refugee governance and inclusion. Prior to the democratic transition in the early 1990s, the country was considered refugee-producing and had no formal legislation or policy for refugee protection. During the democratic transition, agreements with the United Nations High Commissioner for Refugees (UNHCR) governed specific refugee flows from Mozambique. Along with the country's embrace of international human rights law, a new Constitution was drafted that proclaimed that South Africa "belongs to all who live in it" and the core civil and political rights in the Bill of Rights were extended to "[e]veryone" regardless of nationality or immigration status (Republic of South Africa, 1996). Formal refugee protection followed shortly thereafter in 1996, with the accession of the 1951 Convention Relating to the Status of Refugees, and promulgation of domestic legislation in the form of the Refugees Act (Republic of South Africa, 1998), establishing an individualised urban refugee regime based on local integration, a significant departure from the refugee camp paradigm prevalent on the continent. The legislation development process was heavily influenced by the international human rights framework, international legal experts, and South African civil society organisations, often at tension with government officials and concerns over "illegal immigration" (Handmaker et al., 2008).

The system as devised envisaged asylum seekers would lodge applications at Refugee Reception Offices (RROs) established in the major urban centres of the country. While individuals underwent refugee status determination processes—initial application forms, status determination interviews, and reviews or appeals for negative decisions—documentation would be issued as proof of legal status. This documentation, in the form of A4-sized permits, has evolved in form but has generally been valid from one to six months, depending on the individual's place in the process, and would require the individual to renew these documents by reporting to the RRO where they lodged their application upon expiry. These permits were to be re-issued until the asylum process was completed, either with the claim being recognised or rejected after appeals. Once recognised as a refugee, a refugee permit would be issued that would generally be valid for four years, which could be renewed on expiry if conditions in the country of origin persisted.

Remarkably ambitious, South Africa's refugee system was touted by the UNHCR as "one of the most progressive in the world" (Rulashe, 2007). However, in practice, the system is considered to be rife with problems and one that "fail[s] to fulfil its primary purpose—identifying those individuals in need of protection" (Amit, 2012a). For the purposes of this article, in this section we hone in on two challenges in the asylum system preceding the Covid-19 pandemic: first, the challenge of accessing RROs and receiving documentation, and second, the "disabling" nature of that documentation and lack of recognition throughout daily life.

6

Accessing RROs has proven difficult over the lifespan of the Refugees Act. The literature is replete with descriptions of overburdened offices with interminable queues, dysfunctional practices, and corruption (Amit, 2012b, 2015; Amit et al., 2009; Lawyers for Human Rights, 2020; Vigneswaran, 2008). Simply accessing an RRO is often a long, arduous process with survey data collected in 2011/2012 showing 53% of respondents slept overnight outside an RRO to improve their chances of accessing it, with only 35% of individuals accessing the RRO on their first visit, and 2/3 did not receive a permit on their first visit; on average, respondents required three visits to an RRO to have an administrative issue resolved. Many applicants reported that officials did not effectively communicate the process to them, with roughly half of respondents stating they did not understand the purpose of the information requested of them (Amit, 2012b, pp. 10–12). Similarly, research demonstrates that corruption in queues and to access services is a significant obstacle for many (Amit, 2015; Lawyers for Human Rights, 2020). Many of our own respondents had similar stories to share, of queuing overnight, of feeling unsafe, of having to return without knowing why.

Once obtained, the form of the documentation issued has presented its own unique challenges for asylum seekers, and to a lesser extent, recognised refugees. In the early 2000s, permits were issued on white paper, containing a picture of the applicant attached to the paper, their personal details, a case file number, and the conditions of the permit holder—the permits featured no security details and were often altered by ballpoint pen by DHA officials (Belvedere, 2007, pp. 61–62). Later versions contained barcodes and were issued on security paper, but informal practices of manual extension and alteration remained common (Scalabrini Centre Cape Town, 2016, pp. 14–15). The documentation itself does not resemble identity documentation issued to citizens, posing both technical and practical challenges as these permits are often not recognised when accessing healthcare, education, or when applying for bank accounts (Landau, 2006). The lack of recognition and acceptance has led the Refugees Act documentation to be labelled as "disabling" (Belvedere, 2007).

For the most part, these systemic challenges of the DHA have remained unaddressed, and the process is continuously imperfect. The Covid-19 pandemic prompted a new approach to undertaking permit renewal for asylum seekers and refugees, and later, new applications. We shift now to contextualise the implementation of the online system.

4. Examining an Ambitiously Named Digital Intervention

Simply an email address, the "online system" is almost too banal to be considered a "digital intervention," and yet the social relevance of this intervention is significant and critical to examine. Leszczynski (2020, p. 1194) calls examples like this the "digital mundane." She acknowledges the tendencies to focus on what she calls "the spectacularism and exceptionalism of the new" in debates on digitalisation and proposes instead that we should not neglect the "on-the-surface, taken-for-granted, seemingly ordinary and routine sites, objects, data productions, and networked practices of everyday life" (Leszczynski, 2020, p. 1194). The focus of this article perhaps started off as an examination of something new—the online system was indeed something new, something unprecedented in South Africa for asylum seeker and refugee permit extensions. And yet it quickly became apparent that this online system was far from "spectacular" or "exceptional." It is simply an email address that the DHA called, somewhat ambitiously, an "online system."

Despite the banality of the system, the effects were staggering for asylum seekers and refugees seeking to renew their permits. We focus here on the experiences of asylum seekers and refugees who were forced to transition to the online system. Ten migrants were interviewed. Respondents were selected through the assistance of a migrant advocacy organisation. Individuals were selected based on having experience with the online system, and respondents reflected a range of legal statuses, length of time in South Africa, and digital and English literacy. These variations were intended to provide a means to understand how different groups interacted with the system and its challenges. Respondents came from African countries including Cameroon, Congo Brazzaville, Democratic Republic of the Congo, Kenya, Rwanda, Somalia, Uganda, and Zimbabwe, and hold different permit types (Section 22 "asylum seeker" visas, Section 24 "refugee" visas, and Zimbabwean Exemption Permits), which have different demands of their holders and offer differing rights to stay in South Africa. Respondents' personal details were anonymised to ensure their privacy. In addition, eight interviews were undertaken with key informants who work in the field of migration governance, either in an advocacy role, as a researcher, or part of a civil society organisation. An interview with an official who worked within the DHA was also conducted. While the official's primary duties did not involve the online system, they were familiar with its roll-out, operations, and documentation. We also undertook two participant observation sessions at a migrant advocacy organisation that assists with the online system, which gave insights into the types of challenges experienced by people, as well as the documents and the process of assistance offered by the organisation. Interview transcripts were analysed for stories about the experiences of interactions with the DHA, both in person and online, as well as reflections on the materialities of documentation past and present, and the practices of renewing documentation through the online system. Key insights were pieced together to tell a compelling narrative about asylum seekers' and refugees' experiences with the online system. Through these methods, this article unpacks the implementation of the online system initiated by the DHA. It explores the nature of the online system, its promises and its materialities, its practices, and its effects. In so doing, we make an argument for why we need to look at the everyday effects of digital interventions.

5. Digitalisation Out of Crisis? The Establishment of the Online System

South Africa's response to the Covid-19 pandemic included a national disaster declaration, the closure of all ports of entry, and the introduction of a national lockdown limiting mobility. In terms of the refugee regime, all RROs were closed, and the DHA announced that any refugee or asylum documentation that expired during this time would be considered valid through a departmental directive (DHA, 2020). As the pandemic wore on, subsequent directives extended expired documentation. In April 2021, the DHA began to implement the online system as a means to address the now sizeable backlog and reduce public health concerns. While the DHA has a broader project of digitalisation, the shift to an online system for refugee and asylum permit renewals was responsive to the pandemic, and therefore implemented without the guidance of policy directives for rolling out a system with considerable implications for permit holders. The statement by the Minister outlined the process:

> With the online extension, a holder of an asylum seeker visa (section 22) or a refugee status (section 24), is able to request an extension of visa validity through email, without having to physically go to a refugee reception office. (DHA, 2021)

The visa extension directive briefly outlined a process where visa holders should email the office where their visa was granted, in order to request an extension (see Figure 1). Following this email, they should receive

the template to complete and a list of required documents, including a template form requiring basic information on the applicant, a proof of address such as a utility bill or a sworn statement, and a copy of the previous or expired visa. Once these have been submitted to the correct email address, the applicant receives communication regarding the DHA's decision regarding the extension request.

Request for extensions must be sent to the refugee reception office where the last extension was done.

Refugee Reception office	Asylum Seeker (section 22) visas	Refugee (section 24) visas
Desmond Tutu Refugee Reception Centre	dtrrc.extension22 @dha.gov.za	dtrrc.extension24 @dha.gov.za
Cape Town Refugee Reception Centre	ctrrc.extension22 @dha.gov.za	ctrrc.extension24 @dha.gov.za
Durban Refugee Reception Centre	durbanrrc.extension22 @dha.gov.za	durbanrrc.extension24 @dha.gov.za
Musina Refugee Reception Centre	musinarrc.extension22 @dha.gov.za	musinarrc.extension24 @dha.gov.za
Gqeberha (Port Elizabeth) Refugee Reception Centre	perrc.extension22 @dha.gov.za	perrc.extension24 @dha.gov.za

Figure 1. The implementation of an email permit renewal process.

At this stage, the asylum seekers and refugees were to email the RRO where they had lodged applications. The initial iteration of the system did not speak to efficiency enhancements or any gains of a digital switch, and in 2021 the DHA announced it would introduce staged "walk-in" services along with the email extension process, introducing email addresses to schedule appointments at each RRO (UNHCR, 2021). As of June 2021, the DHA had processed 9,788 refugee visa extensions and 28,249 asylum seeker visa extensions; however, a number of issues were reported, such as a lack of capacity, unanswered emails, and exploitation at internet cafes (Mutandiro & Washinyira, 2021). Across the first seven months of 2022, the online system processed 43,155 Section 22 visas and 15,032 Section 24 refugee status visas, while 10,555 requests required "additional information to be emailed" and 13,406 requests resulted in the applicant being referred "back to the office" (DHA, 2022).

6. Shifting Materialities of the Online System

In this section we consider the shifting materialities prompted by the introduction of the online system and the ways in which the online system impacts how asylum seekers and refugees attempt to integrate into social spheres. The online system's move from physical interactions at RROs to the digital realm has produced a new form of intangible digital limbo, and with the digital visas, a new form of intangible documentation. The digital shift, while pronounced as a panacea to all challenges in refugee governance, has not addressed key structural issues within the refugee regime nor introduced a fully functional digital system. An overarching effect of the online system has been the shifting of these challenges and responsibilities to asylum seekers and refugees themselves, diminishing the visibility of these challenges at RROs. In this section we focus on the effects of

what respondents referred to as the "offline stop and start" (DHA respondent, 12 September 2024) or "up and down" (Somali Association of South Africa respondent, 21 June 2024) online system and intangible forms of digital waiting, the materiality of the online system digital visas, and how the system distances asylum seekers and refugees from rights and entitlements as well as the state. We show how these shifts have significant ramifications for social inclusion and daily life.

6.1. From Queues to Digital Limbo?

The online system presented a very different materiality to the way of renewing visas previously. To start with, the quintessential queue that all asylum seekers and refugees are familiar with no longer existed. When asked about the digital system, respondents compared it favourably to the long queues that snaked around buildings and demanded early arrival. Recollections of sleeping overnight in queues were recurrent (respondents 102, 29 May 2024; respondent 103, 9 July 2024; and respondent 105, 30 May 2024).

For the digitally literate, the system seemed like an obvious and welcome approach to managing the documentation extension process. One respondent, fluent in English, said the online system was clearly laid out: "It was just straightforward" (respondent 105, 30 May 2024). She remarked that the online system was inevitable; that digitalisation is to be expected. She felt that it was safer for her to submit her extension online, without her having to visit DHA offices: "That's the best thing, like I don't have to wake up early, go queue in some places and that's not even so safe, you know….It's faster….Because everything nowadays is digital" (respondent 105, 30 May 2024).

Another respondent was similarly impressed by the system. He sent an email to the online system to request the template and received an automatic response very promptly. The next day, the template that he needed to fill in was sent to him. He found this speedy response, albeit an automated one, reassuring:

> I thought this is very good….The next day I received the [template] form. In the beginning, before you send [your permit extension request], when you email them you request the form [known as the template] and when they send it you go out and print it, and fill it in. And then you go to the police station, get your affidavit of proof of address, and then…you take your expired paper, you scan and then you send to Home Affairs. (respondent 107, 30 May 2024)

He understood the online system's process and followed the instructions to the letter. Another respondent explained that the online system "reduces stress, it reduces the crowds, but it's not being done effectively" (respondent 110, 14 May 2024). The online system's inconsistent responses were a major cause of concern for many, and she recalled hearing someone emailing over 20 times hoping to get the auto response (respondent 110, 14 May 2024).

Respondent 113 recalled getting an auto response, but that a substantive reply took about two months to come through:

> Yeah, so I keep on sending it because after the auto respond, that was it. But still I waited, but nothing came so I kept on sending, sending, sending that email. I sent it almost every week, maybe like five times. Yeah, every week I would send it; every week or so; it seems like five times. So those messages would

pile up. So I stopped them after, like, uh, another four weeks. And…then I received it. (respondent 113, 5 June 2024)

This demonstrates the uncertainty generated by the digital system, which does not allow for any interactions with officials throughout the renewal process. Interviews with community groups and NGO staff revealed similar challenges experienced with the system, with the predominant issue being slow turnaround times and an opaque system. The waiting that is synonymous with the DHA therefore remains, but is intangible—the limbo is experienced digitally. This kind of waiting with no end in sight was a source of frustration and concern for many.

6.2. The Effects of Bureaucracy: From Analogue, to a Pandemic Pause, to a Digital System

While for some this online system may have seemed a simple-enough approach, the new system had a "hard launch" with no pilot implementation, phasing-in process, or assistance for those less technologically proficient. Given the timing of its implementation as a crisis-driven workaround, the online system could not be introduced slowly. A researcher who works closely with migrants was critical of the timing of the implementation of the online system. She noted:

> Home Affairs, they took advantage of Covid to digitise things. And the question we ask is how many migrants are able to read and write? We know that when there is a crisis somewhere, the most vulnerable pay the price….Not everybody is techno-literate. (migration researcher respondent, 21 November 2023)

The digital system required learning and sometimes assistance from others. The aspects with which people needed help were several, as a spokesperson for a community organisation outlined: "Knowledge of language, the knowledge of the online thing and also the lack of a good phone. Like, the lack of a good device to apply" (Congolese Civil Society respondent, 24 June 2024).

The challenges span the applicants' ability to read and understand formal English, their technical know-how not only of how to send an email with attachments but also how to do this in the format that the DHA required, as well as having access to the technology to do this—a smartphone with email and decent camera for document scanning purposes. One respondent stated that in providing assistance with the online system, they came to understand that many did not know they had an email application on their phone or understand how to attach documents (Somali Association of South Africa respondent, 21 June 2024).

The online system, while on the surface just a number of email addresses, required a structured interaction that seemed to become knowable only through trial and error. A respondent recalled that she discovered, from an NGO that assisted her with her application, that "you cannot write 'dear DHA' in the email" (respondent 110, 14 May 2024). She explained that many people simply don't know how to apply and often have some computer skills, but not to the specifications that DHA requires; the online system's rigidity did not accommodate deviations. One respondent, an NGO worker, detailed how attaching multiple PDF documents, as opposed to a single PDF, could result in the system not picking up the attachment (NGO respondent, 28 June 2024).

Other respondents ran into trouble with the system further into its use. The system was supposed to send an automatic response as proof of receipt of all emails. Many, however, did not receive this automatic response and so sent their extension requests repeatedly—with the effect of further overwhelming the system. The recourse for lack of hearing back from the DHA was not clear. A respondent pointed out that "there is a big difference because if you apply online, and they didn't reply to you...you can't see anyone. You can't complain, you can't say anything. Once the paper [email] goes, it goes quiet, went quiet. You get nothing" (respondent 104, 23 May 2024).

And while the email system alleged to make renewal simpler, another respondent reflected on the irony of not being able to engage with the process of the online extension:

> Do this to this and then send it to this email. And then they'll respond. But that's the funny part, most of the time they don't respond, when you email them they don't respond. So it might take you a while to see it, the results. (respondent 113, 5 June 2024)

The challenges with the online system lie in the rigidity of the structure of the emails and how they should be sent, and the lack of a mechanism to check on the progress of an application, other than sending it again. Those who had submitted extension requests but heard nothing back were, in effect, stuck. We return to this point later in the article, where we turn to the spaces in which asylum seekers and refugees sought assistance with the system.

6.3. Tangible Materialities in a Digital Age?

The materiality of asylum seeker and refugee permits is important for accessing services from both within and beyond the state. South Africa has a long and fraught history of biometric registration, the outcome of which is in part the reliance on identity documents to enable claims to be made on the state. While different in form and entitlements, asylum seeker and refugee visas act in a similar way as a means to open and maintain bank accounts and to prove identity when applying for drivers' licences, schooling, healthcare, and so on. The significance of this document became particularly apparent during participant observation at an NGO, where a variety of documents were seen, from those protected by plastic sleeves, kept safely with other documents in a document wallet, to those folded up to fit into a pocket, frayed around the edges; the permits are clearly important documents that are carried with people at all times.

Renewing their permits through the online system meant that, when successful, applicants received an email with a password-protected PDF of their extended visa. This visa had a Covid-19 watermark, but was otherwise devoid of the usual signs of a legitimate visa—the DHA's security paper, for one. The materiality of the visa is important for its use beyond the DHA, in other state and non-state environments. A respondent pointed out how, when questioned, the emailed visa became something of a challenge to officials who were not necessarily familiar with the DHA's new online system:

> The thing is, when you pull it [the printed visa] out, most of the times they'll tell you it's a photocopy, they want the original. But you tell them that it's the original, they'll never agree with you. It's like original in another way. So when they ask for it, and you try to tell them, "Okay. I don't have the printed copy here, but I have the original on my phone. Can I show you?" They will disagree and tell you it's not original, it

is on the phone. So that's always the issue. In the banks, then they tell you they have to go verify. Yeah, but so far when it comes to using [it], I've been able to open a bank account. (respondent 113, 5 June 2024)

The respondent found that actors who require a visa, but were not DHA officials, required proof of its legitimacy:

They keep telling you, "It is not original. That is a photocopy." Traffic department. The same thing: "That is a photocopy." They need the original, even if you tell them that that's original, it's like you're making a fool out of them. I'll just end up explaining myself that these things, they send them by email and so you have to print it, then I'll show them the email that they send me....So you have to go print it. You can't do anything else. There's no special paper that you can print on because you go [to a printing shop] to print it on A4 paper....So, most of the times, I just do a colour copy...because if you make it black and white, it will just be worse for you. (respondent 113, 5 June 2024)

Similarly, members of the Somali Association of South Africa stated that in their experience, traffic departments were generally difficult, with variability between branches. One metropolitan branch required "proof" of the document's origin, i.e., the original email from the DHA along with the visa:

There are people that came in who lost the email that the permit was sent to them with, even if they have the copy of the permit. So the traffic department says, "No, we want the email that is proof that they sent this to you." (Somali Association of South Africa respondent, 21 June 2024)

The Somali Association were aware of people driving long distances to find traffic department branches that would assist with issuing licences to holders of digital permits. The materiality of the actual permit is now digital; but in these accounts, the tangible materiality of it is still required for everyday life. The materiality of the visa, its look and feel, contribute towards its apparent legitimacy. This new digital version of the visa does not offer institutional intersectionality or universality, but instead, demonstrates differentiated understandings of the DHA's shift to the digital and, through this change, the production of digital visas.

Here, we have shown how the online system has shifted the materiality of visa extensions. For some, this has been a welcome change; there is no need to stand in a long queue or deal with xenophobic officials. But the online system presumes technological access and digital capacity to engage with it. And, the materiality of the visas has changed, prompting new ways for migrants to prove their legal status. In the following section, we turn to the spaces where refugees learnt about and sought assistance with the online system.

7. Mundane Digital Systems, Significant Effects?

In the preceding sections we have shown how a simple, unremarkable email address, framed as a digital system, required a significant change in the practices of many asylum seekers and refugees in a very short period of time.

The research demonstrates how the digitalisation of permit renewals fundamentally reconfigures how asylum seekers and refugees encounter the state, shifting these encounters from physical interactions at RROs to

digital mediation through the email-based system. In doing so, the system transfers bureaucratic responsibility to the service user. There is nothing remarkable about the online system itself—it is an email address, the epitome of the digital mundane (Leszczynski, 2020). And yet, in this article, we focus on the user experience of this digital intervention. For those who have some technological know-how, we see positive interconnections from digitalisation (Glouftsios & Scheel, 2021), where people can make community in new places through digital means. In this case, the change to an email address seemed to be simple, a clear and obvious step in the right direction for a state department with digitalisation projects in every other area of its mandate. We see examples of people who found the online system to be a pleasure in comparison to the previously used methods of applying to extend legal status in the pre-pandemic era. For these people, digitalisation means freedom to escape the tyranny of queuing and its associated dangers. Yet for those who are less digitally proficient, the shift to the online system is a challenge.

The execution of the online system was less than seamless. The switch to the digital mode of permit renewals, and the general lack of information on the technical practicalities, as well as low English language and digital literacy rates of asylum seekers and refugees, have implications for the effectiveness of the system and for the ways in which asylum seekers access rights. Part of this shortcoming lay in the way the state publicised—or rather, did not—the new approach. It was presumed known that there was a specific way to send the relevant information. The template, only received by email after making an extension enquiry, was rigid in its requirements but unclear in instructions. The requirements were not onerous but might be considered to be restrictive for many asylum seekers and refugees who live in precarious situations, often without permanent addresses, with limited access to digital technology and online infrastructures. The system relies upon service users—i.e., asylum seekers and refugees—having a relatively high level of English literacy, and in particular a form of bureaucratic literacy to correctly fill in and provide the requisite information. Whereas previously, service users simply reported to RROs, they are now required to possess the know-how to navigate a nascent, developing system. The system also demands access to technology and digital know-how for permit renewal. Here, the restrictive effects of a digital system (Glouftsios & Scheel, 2021) are related to the fundamental mismatch between the state's assumptions and the realities of asylum seekers' and refugees' capacity to adapt to a digital system that was implemented without an extended roll-out period.

The DHA's shift to the online system is underpinned by assumptions around digital accessibility, know-how, and technical proficiency. Whereas under the previous system, asylum seekers and refugees had to report to RROs frequently for permit renewals, the implementation of a digital system has resulted in distancing asylum seekers and refugees from the DHA geographically, where engagements have transformed into a form of intangible digital limbo involving a digital geography of multiple messages in email chains. The online system's inconsistent responses, and long gaps between sending the request and receiving a response, meant that many asylum seekers sent numerous emails hoping for service, both heightening their anxiety around their legal status and inundating the DHA's servers and staff with email messages. Ironically, the tracing effects of this digital system (Glouftsios & Scheel, 2021) are superficially the reverse—while of course the state tracks applicants through the online system, permit applicants also track the state through its silences. Incorrect template forms, forgotten attachments, emails lost to junk folders, emails not sent because of data shortages, and lack of access to a computer all result in the fortification of a digital border that, while intangible, can prove impenetrable for many.

Moreover, accessing the online system for many service users is extremely difficult, if not impossible, without the assistance of a third party. Migrant agency is seen in their interactions with intermediaries, many of which are staffed by refugees and asylum seekers themselves, who recognise the vital need for inclusion and transparency. That intermediaries could step into the breach has maintained the functionality of the online system. Without them doing this work, there would be no interface between asylum seekers and the state. This has transformed the refugee spaces of everyday life across the city, transfusing community group spaces, homes, cafes, and NGOs with regulatory aspects of the asylum system. Previously sites of social interaction, they now feature aspects of the state's regulatory functions and are spaces where service users seek assistance to renew their documents.

Many of these intermediaries have had to re-imagine and change their everyday work too, changing their setups to assist asylum seekers and refugees with interacting with the state. Civil society organisations build capacity by opening their doors to assist, compiling how-to guides explaining the system in a variety of languages such as Lingala, Somali, and Swahili, and publicising changes to the process. Through NGOs and their outputs, asylum seekers and refugees learn how to create email addresses, scan and attach supporting documents, and engage government bureaucracy to access the state through these limited digital channels. It is worth noting, though, that not every intermediary is trustworthy, and many charge fees for assisting with state services that should otherwise be free. These spaces offer opportunities for solidarity and care, exploitation and neglect. And yet it is here where asylum seekers and refugees can enact their agency and find ways to engage the state beyond the official, highly bounded, system. Without trusted intermediaries, many asylum seekers and refugees would experience even more precarious situations while trying to navigate obtaining documentation.

The effects of the shift to the online system are not limited to the intangible. The online system and its PDF file-issued documentation that confer legal status to individuals (Section 22 visas for asylum seekers, Section 24 visas for recognised refugees) have implications for legibility and security. On the one hand, a digital version sent by email can alleviate some of the issues associated with the previous system's A4 printed permits that were easily damaged, lost, or stolen. On the other hand, the digital versions have fewer identifiable security features and are often not recognised by other government departments or members of the public. The effects of this are decreased access to healthcare, ineligibility to sit for critical exams at schools, and other bureaucratic disjunctures between different sites of the state.

What we show through the examination of this case is the online system as a digital borderscape—a performance around bordering that is both about geopolitical territory, as Godin and Donà (2021) propose, and about who belongs when the state says they can; but in this example, bordering is performed not through state actors but instead through a digital system that, in effect, distances those applying for permit extensions online. There are variegations of permeability of the borderscape here, with possibilities for those with access to technology, with some digital savvy, and some bureaucratic know-how. The borderscape also shifts from being navigated in state spaces (and the spaces around these through queues), to the personal, to the applicant's digital device, to their own email address, entwined with everyday home life. The digital renders borderscapes as something to be navigated in intimate home spaces. And yet in doing this, the digital has a distancing effect, drawing out the time and distance between legal entitlements and their realisation.

8. Conclusion

This article has used the example of the DHA's online system for asylum seeker and refugee permit extension applications to explore the expansion of borderscapes through digital interventions, into a more personal, intimate realm. Here, we have shown how an unremarkable state tool has significant social relevance for the ways in which asylum seekers and refugees can engage the state. Through interviews with people who have used the online system, participant observation at a migrant advocacy organisation, and interviews with key stakeholders working in the field of migration in Cape Town, we have unpacked the experience of changing from in-person engagements to an online system. Through narratives from asylum seekers and refugees, we have examined the materialities produced by the online system. We trace how these both shift and are shifted by intermediaries who step in to facilitate access to the online system, which in turn enables a decision on the applicant's legal status, which is now mediated through an often impermeable digital borderscape. Through this argument, we make the case for an online system that considers the user and where and for what purposes their documentation may be required.

The online system was described by a DHA official as a "hinge" (DHA respondent, 12 September 2024), which denotes how closely intertwined the online system remains with the previous, physical version of the system. We show here how the shift to the digital continues to rely on materialities of the past. This article contributes to expanding academic discourse on the digitalisation of migration governance, drawing especially on calls to examine the digital mundane to show the effects of digital interventions, in this case in relation to migration governance. The digital shift demonstrates the dynamic and fluid nature of the border and how a change in practice can produce significant changes for refugees' livelihoods as well as in the urban fabric, producing digital borderscapes contained on people's phones, in internet cafes, civil society organisations, and in refugees' homes. This example shows quite different versions of the interconnections, traceability, and restrictive effects of digital border management systems to those in other contexts (Glouftsios & Scheel, 2021). The South African example demonstrates how a digital intervention can distance individuals from the state and displace bureaucratic administrative responsibilities onto permit applicants themselves, as well as to third parties. The political effect of this is to distance the state from the limbo experienced by permit applicants, and a mode of differential inclusion where those lacking in English and digital literacy are pushed towards illegality, where more digitally minded refugees are able to navigate the vagaries of the online system. From the perspective of the crisis of the governance of migration, the online system has transformed what was once a physical, highly visible, manifestation of the failure of governance, namely interminable queues and crowds at RROs, into the digital realm where failure and inefficiency of the state are made invisible, and can be shifted to the asylum seekers and refugees attempting to use the system.

Further research is required to better understand the state's rationale and approach to the shift towards digitalisation, particularly a digital tool that is implemented without policy guidance with some urgency during a time of crisis, but is adapted to persist beyond this crisis. In future research, we are interested in tracking and understanding how the online system evolves over time and how communities adapt to it, for better or worse.

Conflict of Interests

During the research period, Corey R. Johnson worked at the Scalabrini Centre of Cape Town on a detention and deportation programme. This was separate from the online system work detailed in this article.

Data Availability

Due to the nature of the research, data sharing is not applicable to this article.

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ARTICLE

The Digitalisation of Dutch Civic Integration: How Digital Technologies Shape Inequality and Bureaucratic Discretion

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Abstract

Migration management is becoming increasingly digitalised, with digital borders producing inequalities by fixing framings that determine who is allowed entry and residence. Civic integration functions as another bordering practice regulating the entry and naturalisation of "migrants." In the Netherlands, the Integration Act 2021 enshrines a partially digitalised civic integration programme, with digital monitoring across government actors, digital language classes and exams, and online communication between "integrators" and "case managers." Nevertheless, how digitalisation shapes the interactions, decisions, and outcomes of civic integration remains unresearched. This qualitative study, based on desk research and in-depth interviews with municipal officers and language teachers, examines the implications of digital technologies in this programme. Our findings reveal a dual impact. For "integrators" with sufficient digital literacy, these technologies offer enhanced language learning and greater self-reliance in a taxing trajectory. However, digital technologies exacerbate existing inequalities and create new forms of digital exclusion for those with limited digital skills, as they impact their performance on their intake test, and therefore their opportunities throughout and after the civic integration trajectory. For street-level bureaucrats, the discretion to potentially mediate these policy effects is not simply curtailed or enabled, but transformed into a "web-level bureaucracy." While digital technologies streamline workflows and quick assessments of a future "integrator," they also impose administrative burdens, introduce bias, and limit bureaucratic discretion. Ultimately, digital civic integration both deepens and narrows existing inequalities and tasks street-level bureaucrats with the responsibility to address pervasive digital divides.

Keywords

civic integration; digitalisation; digital borders; street-level bureaucracy; web-level bureaucracy

1. Introduction

Over the past few decades, migration governance has become increasingly digitalised. In 1990, the Schengen Agreement already provided the basis for large-scale IT systems and information-sharing mechanisms (Brouwer, 2008; Trauttmansdorff, 2017), and by the early 2000s, the European Union had developed surveillance systems such as Eurodac (Broeders, 2007). Scholars have studied this "digital border" by examining how states use databases and algorithms to decide who may enter and stay on their territory (e.g., Achiume, 2021; Brouwer, 2008; Chouliaraki & Georgiou, 2022; Trauttmansdorff, 2017; Zhang & Morris, 2023). During the same period, different European countries started introducing integration requirements for newcomers, with the Netherlands as a forerunner (Joppke, 2017; Kostakopoulou, 2010; Van Oers, 2014). The Dutch civic integration programme encompasses language and civic tuition to "transmit Dutch values" and target newcomers' labour market integration (Entzinger, 2014). The programme is obligatory for people holding a family migrant or an asylum-based residence status, with implications for their residence rights and options for naturalisation. Scholars have therefore increasingly described civic integration as another bordering practice (e.g., Bonjour, 2020; Favell, 2022; Larin, 2020; Onasch, 2020; Schinkel, 2018). Whether viewed as a bordering practice or as a public policy of the welfare state, civic integration also includes digital components.

The Dutch civic integration programme involves digital learning platforms, online communication between municipal officers and integrators, and digital examinations, to name a few. We use the term "integrators" as the literal translation of *inburgeraars* to denote people subjected to the civic integration obligation, and stress that this is merely a bureaucratic label. The use of digital systems by local and central governments to shape and monitor civic integration policy implies that residence rights for newcomers have become hinged on digital skills and access to digital tools. Yet how digitalisation shapes the everyday interactions, decisions, and outcomes of civic integration trajectories has—to our knowledge—not been researched yet. Furthermore, Dutch civic integration is not implemented by a single government institution or actor, but since the coming into force of the new Integration Act 2021, governed across a network of municipal case managers, language schools, central government institutions and organisations. This further complicates how the effects of digitalisation unfold in the Dutch civic integration programme.

To understand how digitalisation affects civic integration, we build on studies from a variety of disciplines and fields, most notably (digital) migration and border studies, public administration scholarship, and civic integration literature, and situate our study at its crossroads. Our focus does not only require attention to scholarship on digital literacy as a threshold for inclusion (e.g., Hansen et al., 2018; Henman, 2022; Nielsen & Hammerslev, 2022) but also warrants attention to the human layers of policy implementation: that of the street-level bureaucrat (e.g., Brodkin, 2012; Lipsky, 2010; Tummers & Bekkers, 2014). Municipal officers and language education providers frequently interact with their clients, and the interaction between street-level discretion and digital infrastructures is key to understanding how digital governance plays out in civic integration. We follow scholars who have adopted Foucault's concept of governmentality to understand the citizen-state interaction within the civic integration arena (e.g., Blankvoort et al., 2023; Löwenheim & Gazit, 2009) and apply the digitalisation lens to understand how this relationship is transformed with digital tools becoming more central in public policy (e.g., Bovens & Zouridis, 2002; Buffat, 2015; Hansen et al., 2018).

In this contribution, we ask what the implications of digital technologies in the Dutch civic integration programme are. Using a qualitative study with municipal officers and language teachers, we (a) map the role of digital technologies in the Dutch civic integration programme, (b) examine the impact of digital technologies on people subjected to a civic integration obligation, and (c) study the implications of digital tools for the discretionary freedom of professionals who are tasked to implement the Dutch Integration Act 2021. In the following, we will present our theoretical framework and our methodological approach, before we move on to our results and a discussion of how digital technologies in Dutch civic integration may mitigate or exacerbate inequalities between "citizen" and "migrant," as well as inequalities among the latter group.

2. Civic Integration as a Digitalised Bordering Practice

2.1. Migration Management & Civic Integration

Scholars have critically approached immigration and integration policies as different manifestations of the same logic: the reaffirmation of national identities (e.g., Darling, 2011; Walters, 2004; Zill et al., 2021). Among others, Schinkel (2018) and Favell (2022) have specifically presented civic integration policy as an extension of immigration policies, as civic integration forms a threshold to full citizenship for those who are allowed residence within nation-states. Several case studies of specific national civic integration programmes have adopted a Foucauldian perspective to argue that civic integration is a one-way process that produces asymmetrical relationships between "immigrants" and the state. For instance, Blankvoort et al. (2023), Hudson et al. (2023), and Löwenheim and Gazit (2009) present civic integration tests as acts that responsibilise the individual integrator, and as technologies of disciplinary power that work to create self-managing citizens. They argue that civic integration functions as a bureaucratic border that newcomers must navigate to access rights, and as such governs who deserves to belong and who does not, along the lines and intersections of race, gender, and class (e.g., Bonjour & Duyvendak, 2018; Hudson et al., 2023; Kirk & Suvarierol, 2014; Kofman, 2023; Kofman et al., 2015; Kostakopoulou, 2010; Larin, 2020; Onasch, 2020). These earlier findings contrast sharply with the official goal of the Integration Act 2021: to offer newcomers a chance to participate in society. Instead, studies of civic integration unveil that people obliged to follow a civic integration trajectory navigate a policy landscape that is producing inequalities between citizens and migrants.

2.2. The Implications of Digitalisation for Migration Management and Public Policy

Needless to say, migration management and public policy are both impacted by digitalisation. ICTs and large-scale digital databases help enact the border through the datafication, categorisation, tracking, and surveillance of people on the move (e.g., Achiume, 2021; Broeders & Dijstelbloem, 2015; Chouliaraki & Georgiou, 2022; McAuliffe, 2021; Trauttmansdorff, 2017). According to McAuliffe (2021), digital borders produce inequalities as their digital nature fixes framings that determine who is allowed entry and residence. An example lies in the use of automated profiling techniques to distinguish "low-risk" from "high-risk" visa applications (McAuliffe, 2021; Rizvi, 2004). Concurrent with the shift from "government" to "governance" in public administration, which takes the multidimensional character of policy systems into account (Hupe & Hill, 2007), digitalisation also impacts the very nature of state governance as ICTs discipline the "implementation of law" (Bovens & Zouridis, 2002) and shape "e-government" (Henman, 2012). Newman

et al. (2022) explain that advanced digital technologies form essential elements in how governments carry out their policies and deliver public services in many countries. Rather than supplementary tools, they are integral to the daily operations of public administration.

The digitalisation of public policy administration produces both positive and negative effects. Digital bureaucratic procedures may benefit users by providing increased convenience and self-service capabilities and allowing access to organisational systems at any time or place. This may enhance information accessibility about entitlements or obligations. From the administrators' perspective, ICTs may streamline their tasks and reduce their workload (Bovens & Zouridis, 2002; Hansen et al., 2018). However, scholars have also argued that the "digital divide" not only reflects but also reinforces existing social inequalities (Scheerder et al., 2017). The divide is commonly described as having three levels: the "first level" concerns unequal access to digital tools; the "second level" involves differences in digital knowledge and skills (Hansen et al., 2018); and the "third level" relates to the unequal outcomes that arise from these disparities. These outcomes are both shaped by and further entrench underlying social factors (Van Deursen & Helsper, 2017; Wei et al., 2011). Research on the first and second levels shows that demographic characteristics such as age, gender, socioeconomic status, ethnicity, and geographic location contribute to differences in digital access and competence (Scheerder et al., 2017). For instance, Hansen et al. (2018) found that being young, male, and Norwegian-born increases the likelihood of ICT use, thereby providing an advantage in interactions with the welfare state. People finding themselves on the disadvantaged side of the divide may instead experience "welfare exits" (Nielsen & Hammerslev, 2022) or "algorithmic disentitlement" (Henman, 2022). Linos et al. (2022), for instance, studied disadvantaged communities' access to free meals through communication technologies and found that technological shifts increase the "administrative burden" for high-need communities due to psychological and technical causes.

2.3. Civic Integration, Digitalisation, and Street-Level Bureaucracy

Digital technologies of bureaucracy also affect civic integration policy. In the Netherlands, integrators are faced with digital language and civic tuition, digital examinations, and virtual contact with their case managers, and their data are stored in client management systems. Following Schou and Pors (2019) and Hansen et al. (2018), digital technologies may further stratify the already uneven terrain of civic integration, which will eventually affect one's residence status or eligibility for citizenship. As civic integration co-determines access to rights and opportunities, it constitutes another bordering practice (e.g., Achiume, 2021; Broeders, 2007; Broeders & Dijstelbloem, 2015; Chouliaraki & Georgiou, 2019, 2022; Henman, 2012, 2022; Larkin, 2013) that is administered with digital technologies.

The "state-citizen interaction" (Bovens & Zouridis, 2002; Hansen et al., 2018; Kvakic & Larsson, 2024; Nielsen & Hammerslev, 2022; Schou & Pors, 2019; Van Toorn et al., 2024) in Dutch civic integration takes place across different levels of government, NGOs, and other organisations. Municipal officers and civic integration teachers together form the street-level bureaucrats (SLBs; Lipsky, 2010) who form the human layer between the central government and the individual integrator. Lipsky's (2010) street-level bureaucracy theory defines SLBs as public service workers who interact directly with citizens and exercise discretion in the execution of public policy. Scholars (e.g., Brodkin, 2012; Hupe & Hill, 2007) have extended this definition to include contracted actors who carry out public work. Both municipal case managers and civic integration teachers interact with their clients on a regular basis, monitor their progress and make decisions

based on the progress made, and report to other actors. "Discretion," "discretionary freedom," and "discretionary power" refer to the ability of SLBs to make choices about how public policy is delivered—i.e., how rules of a policy framework are interpreted, applied, and, if needed, bent to the diverse situations of individual people (e.g., Brodkin, 2012; Tummers & Bekkers, 2014). While a key concern with discretionary power is that it may result in unpredictable and inconsistent administrative decisions, discretion may also help provide appropriate services for the circumstances of the client (Bovens & Zouridis, 2002; Tummers & Bekkers, 2014).

In turn, SLBs' discretion may be impacted by the digitalisation of civic integration. Bovens and Zouridis (2002) argued that digitalisation turns street-level bureaucracies into "screen-level" and "system-level" bureaucracies, in which increased use of ICTs and limited face-to-face interactions lead to less discretionary power and therefore less arbitrariness in the exercise of power. This is called the "curtailment hypothesis." However, the pursuit of this "perfect legality" may spur "digital rigidity," or a blind application of the law that undermines achieving justice in every particular case (Bovens & Zouridis, 2002). The curtailment hypothesis is juxtaposed by the "enabling thesis," which proposes that SLBs can use technologies as resources and still apply their judgment (Buffat, 2015). In their study on Norwegian child welfare services, Kvakic and Larsson (2024) argue that digitalisation invokes "web-level bureaucracy" in which discretion does not disappear, but takes a different form as public service workers are more available to clients, and may use clients' digital footprints to inform their discretionary judgment. At the same time, Kvakic and Larsson argue that the shift to web-level bureaucracy may relocate discretion from frontline staff to IT workers who define underlying algorithms that could create systemic biases.

In sum, civic integration has earlier been conceptualised as a space of power and control, and digital tools shape that power in material and bureaucratic ways. Those dynamics are embodied and negotiated in the everyday practices of the SLBs that implement civic integration policy. In our results section, we will present findings on how digital technologies shape a civic integration trajectory directly and show how SLBs interact with those technologies by resisting, changing, or amplifying their effects.

3. Methodology

We first conducted desk research to map the role of digital technologies in the Integration Act 2021. The documents we analysed concern parliamentary documents that have been published prior to the adoption of the new act, as well as guidelines for case workers produced by Divosa, an organisation tasked with supporting municipalities to take on their new role under the Integration Act 2021.

As we wished to study the real-world implementations and implications of civic integration policy, we have opted for a qualitative study design (Beuving & De Vries, 2015). Our target research population initially included municipal case managers, civic integration language teachers, and integrators. We invited municipal case managers as they hold the most comprehensive overview of the entire civic integration trajectory. Language teachers are the SLBs responsible for the civic integration programme's key activity: language classes. Finally, people with an integration obligation could share key lived experiences of navigating the civic integration programme. We approached our potential interlocutors through snowball sampling, with an email that described the focus of our study and practical information on participation. Eventually, while having held some interviews with integrators, we consciously decided to focus solely on municipal case

managers and language teachers. While the perspectives of integrators themselves are of key value to the topic, we chose to refrain from elaborate fieldwork with this group. Given their still precarious legal status and the currently dominant political hostility against "migrants," this research should be considered "sensitive" (Lee, 1993) and including interlocutors then warrants a particularly careful approach. In addition, people staying in the Netherlands on an asylum-based permit have already been overburdened with similar requests from researchers. These factors led us to shift our focus and eventually underpin this article with twenty-five qualitative interviews with twenty municipal case managers and five language teachers. While these SLBs cannot share lived experiences of the civic integration obligation, they did share valuable information based on their daily interactions with their clients. We therefore believe that this exploratory study still yields valuable insights into how digitalised civic integration policy is implemented on the ground, and which important implications arise for integrators.

Both authors contributed equally to the fieldwork. As researchers working on the Dutch civic integration system, we both occupy positions in the institutional context in which the interlocutors work. As interlocutors were invited through our professional networks, they may have felt a sense of obligation to participate. However, given the absence of significant power imbalances, we believe they were free to decline participation. While we have previously written critically about civic integration, the far larger part of the interlocutors was unfamiliar with our work, and their responses reflected a broad range of perspectives.

We held semi-structured interviews to align our work and to make sure our interviews touched upon all the topics relevant to the study. The semi-structured design left space for other topics to emerge during the conversations (Beuving & De Vries, 2015). With the case managers, we posed questions on the role of digital technologies in the programme's different elements—including the intake, the tuition, the communication between integrators and case managers, and the way civic integration is being monitored. From there, we moved on to their perceptions of integrators' digital skills, and the advantages and pitfalls of digital civic integration for the outcomes of their civic integration trajectories, as well as available support, such as digital skills training. With the language teachers, we zoomed in on their courses' digital elements, their monitoring practices, their intake testing, and their experiences with digital learning modes in the classroom. The interviews lasted between half an hour and two hours, with an average duration of one hour and fifteen minutes. Fifteen out of twenty-five interviews were held via Microsoft Teams and ten took place at an offline location of the interlocutors' preference. While online interview settings do not allow researchers to build much rapport, all interlocutors seemed at ease with the format and open to talking freely and elaborately. All interviews were held in Dutch. We used audio, video, and transcription tools to record the interviews.

We analysed the data with qualitative data analysis software ATLAS.ti and used thematic coding in both a deductive and an inductive way. This allowed us to code according to the interview guide we had prepared and to the topics that emerged during the interviews, and thus to develop themes out of the interlocutors' interpretative stories (see also Braun & Clarke, 2023). In our analysis, we first applied open codes before thematically grouping them into axial codes (Friese, 2019). Both researchers contributed equally to the coding process and collaborated in the Web version of ATLAS.ti by sharing and describing codes. We also held regular meetings to discuss their meanings and ensure intercoder reliability. We paid attention to the relational dynamics of the different interlocutors, as they occasionally worked in the same municipality and shared their perspectives on the collaborations between their language schools and local governments. We therefore refrain from sharing the interlocutors' background characteristics and only use

pseudonyms to accompany their quotes. Given the close connections between these policy officers and considering the current political climate on matters of asylum, we took these precautions to prevent our interlocutors' identification.

4. Results

We will present our results in three sections. The first section is primarily descriptive and provides the inventory of the role of digital technology in civic integration as found through our desk research and as explained by the interlocutors as they reflected on their work processes. The second and third sections are more analytical and highlight the direct (potential) implications of digitalisation for people in civic integration trajectories and the implications for the bureaucratic discretion of civic integration case managers and language teachers. Each section encompasses subsections that present themes directly derived from the data, illustrated with verbatim quotes.

4.1. The Dutch Civic Integration Programme and the Role of Digital Technologies

The current Dutch civic integration programme is enshrined in the Integration Act 2021. This act obliges people with a family migrant or an asylum-based residence status to comply with an integration obligation, which in most cases includes passing an examination within three years of the starting date. During these years, people follow courses to prepare for their examination. The examination generally consists of four Dutch language proficiency tests at the B1-level of the Council of Europe's Common European Framework of Reference for Languages (CEF). It also includes an examination called Knowledge of Dutch Society (KNM) and a final interview for the Module Labour Market Participation (MAP).

4.1.1. Assigning People to One of Three "Civic Integration Routes"

People can fulfil their integration obligation by following one of three "learning routes." All routes aim to achieve the goal of "integration": participation in Dutch society, preferably via paid work (Second Chamber, 2020). The different routes have officially been designed to suit people's different skills, needs, and wishes for their "integration." The routes include (a) the "B1-route," focused on labour market participation and B1 Dutch language proficiency; (b) the *Onderwijsroute* or "education route" with a focus on B1 or B2 Dutch proficiency and continuing education, ranging from vocational training, to higher professional education and university studies; and (c) the Z-route or "self-sufficiency route" for whom the B1-route is considered unsuitable. The Z-route was designed for those who "have had little or no education in their country of origin before coming to the Netherlands, have low learning ability and/or are having great difficulty learning the Dutch language" (Second Chamber, 2020). The Z-route does not require passing an exam, but requires those assigned to it to follow 800 hours of language tuition. Integrators with an asylum status will additionally have to follow 800 "participation" hours. The act offers the possibility to switch between learning routes, as well as to "scale down" the level of language proficiency in the B1-route to A2. Since naturalisation depends on passing a Dutch language exam at level A2, individuals in the Z-route, although required to "integrate," may only be able to acquire Dutch nationality if they are exempted from taking the integration examination. Our interlocutors noted that not everyone placed on this route is informed of this consequence.

Most integrators are in the B1-route (70% of all integrators on 1 June 2025), followed by the Z-route (23%; Second Chamber, 2025). Most participants in the Z-route (almost 90%) hold an asylum-based residence status. Forty-five percent of integrators following the B1-route are "scaled down" to level A2 (Significant, 2025, p. 43). On 1 June 2025, three and a half years after the entry into force of the Integration Act 2021, a total of 111.639 people had been confronted with an integration obligation (Second Chamber, 2025). On that date, 10.710 of these integrators no longer fell under the scope of the Integration Act 2021. Only a third of these former integrators had complied with their integration obligation under the Integration Act 2021. The rest had either received dispensation (41%), had been exempt (2%), or their integration obligation had ended for other reasons, for instance, because their residence permit had been withdrawn (24%; Second Chamber, 2025).

To determine the most suitable route, every integrator is assigned a municipal case manager, who maps the person's educational attainment, work experience, family situation, aspirations, and more, during the "Broad Intake." Central to this intake is the learnability test. This digital test is distributed by the central government agency responsible for administering civic integration at the central level. This agency is called Dienst Uitvoering Onderwijs (DUO). DUO monitors integrators' progress and imposes sanctions if people fail to meet their obligations on time. Our interlocutors explained that DUO presents the learnability test as a neutral tool to assess a person's capability to learn Dutch. The test results are processed by DUO and made available to the case manager through DUO's online portal. In most cases, the route seems to be determined by both the result of the learnability test and the other information gathered during the broad intake. The case manager enters the information gained during the broad intake into a digital dossier and draws a personal integration plan (PIP), including, inter alia, the chosen learning route, and submits it to DUO's portal.

4.1.2. Tuition and Examination

Once the PIP has been determined, the three-year integration period starts. We interviewed people working at two different national language course providers and several local providers. All providers in our sample use classical teaching methods with physical books, as well as online assignments. The course provider or municipality distributes laptops so that students can access their study materials during class and while doing homework. One provider puts more emphasis on digital teaching methods, with a large part of teaching hours spent on digital exercises and independent learning, while the teachers provide on-site individual guidance. Other courses that people must complete in their civic integration trajectory include the KNM examination, the participation declaration trajectory (PVT) to adopt "Dutch values," and the MAP. For the KNM, the course providers adopt a similarly dual analogous/digital learning approach, but the other programmes—not offered by the language course providers—mostly take practical non-digital formats such as workshops and internships. The Dutch language and KNM exams have a digital multiple-choice format and take place at a DUO office location. While the language institution is responsible for providing education, DUO is thus responsible for testing whether the language requirements and the KNM requirements have been met.

4.1.3. Monitoring and Documentation Practices

To monitor integrators' progress throughout their civic integration trajectories, the language teachers track their students' attendance and language attainment through digital logs and send those logs to municipal case managers. These data sharing practices are subjected to the GDPR. For most schools, these logs are

complemented with direct and regular communication about the integrators' progress in class. The case manager and integrator meet several times per year, depending on the case managers' work pressure and the integrators' circumstances. Their communication in between these meetings mostly takes place via WhatsApp. Case managers enter detailed progress updates in their digital client management systems while they submit key points of progress to the DUO portal. These include the passing of the different exams as well as fulfilling the MAP. Integrators can log in to the My Civic Integration area in the DUO portal as well to view their exam results, official letters from DUO, and the start and end dates of their civic integration term. If the integrator fails to attend obligatory meetings with their case manager or fails to attend 80% of their classes fines apply that can be issued at the discretion of the case manager.

4.2. The Potential Implications of Digital Civic Integration for Integrators

Drawing on their overview of the civic integration programme and their experience managing large numbers of client portfolios, the interlocutors offered a solid foundation for identifying potential benefits and challenges of digital civic integration, which we discuss in this section.

4.2.1. Opportunities From Digital Learning

The language teachers explained that, for people with sufficient digital skills, digital technologies could significantly spur their language learning process, as there is "a wealth" of complementary online learning materials and exercises that enable people to learn the language faster. One teacher explained that automated exercises are particularly beneficial for improving pronunciation and listening skills. Some language teachers disclosed that language schools today often lack the human resources to provide separate classes for different (sub)levels among their students. Under these circumstances, studying individually behind a laptop, while still in the classroom, gives students space to keep making progress at their own level. For instance, some people still need to adopt the Latin alphabet. Digital programmes have been designed to help them do so. One teacher mentioned providing a digital literacy module in her mixed-level class. She argued that the module supports both illiterate learners and those literate in a non-Latin alphabet, as it helps them adopt the Latin script through visuals and sounds that reinforce sound-sign connections:

> We have a methodology that is also mostly online. Because then one can independently occupy one part of the lesson, as the teacher does not have time to help everybody at once. (Ingrid, language teacher and coordinator)

These benefits extend beyond the classroom. Some case managers and language teachers disclosed that digital civic integration courses fit the overall level of digitalisation of Dutch bureaucratic systems and reasoned that these courses thus prepare students for navigating those systems independently:

> The Netherlands is all digital, so that is only useful. If you just learn that right now, so to speak. (Ingrid, language teacher and coordinator)

One interlocutor shared that the DUO portal empowers integrators because it allows them to check their own trajectory's progress online, which fosters their self-reliance and personal responsibility for their trajectory:

Ultimately, it is great that people have access to their own integration file. Viewing, being able to apply for exams, so that gives independence and responsibility. (Michelle, case manager)

Another advantage of the use of digital technologies is the easier and more informal communication between the case manager and the integrator. The use of digital communication tools like WhatsApp allows integrators to request information more frequently, and, with the help of Google Translate, in their preferred language. Some mentioned that this leads to both an "enhanced sense of trust in institutions" but also transfers responsibility from the case manager to the integrator, to reach out in case one needs assistance.

4.2.2. Challenges and Constraints

At the same time, the digital aspects of the Dutch civic integration programme ignite some key concerns among the interlocutors. First and foremost, digital skills directly influence people's performance on the learnability test. This digital and visual test asks the integrator to drag and drop pictures with a mouse or a mousepad. Some interlocutors shared how people with no to limited experience with computers struggle to perform in this test, while that does not necessarily mean that these people have no language learning potential. One language teacher, for instance, explained that this test may, at least theoretically, have a great impact on people's future:

The DUO learnability test is digital, and then you filter out the people who are digitally skilled. What municipalities do…when the Z-route comes out of the DUO test, they ask us to take a good look. Because sometimes they are young people, and you really don't want them in the Z-route. Because yes, that's where you actually determine their future, and you really just have to see if they fit into a B1-route with literacy training. That's where the learnability test often produces incorrect diagnoses. (Ingrid, language teacher and coordinator)

Beyond limited options to obtain Dutch citizenship, the Z-route does not offer the same opportunities as the B1-route does in terms of language proficiency, which naturally affects all sorts of opportunities after the civic integration trajectory. More than a direct impact, a lack of digital skills results in (additional) nervousness for this test, which may also negatively affect the outcome:

You can of course just get a lot of stress from that to start with. Yes, then if you are stressed, it can be that just because of that stress you are doing less well. (Michelle, case manager)

Many case managers contextualise the impact of the learnability test by pointing to other factors weighing in on their final decision, and the option to scale up or down if a learning route turns out to be unsuitable after all. We will return to the implications of the learnability test later.

Another concern is that people with limited experience with digital devices also have limited ability to complete their digital homework or engage with online learning environments:

Well, I have two ladies. They can't turn on their own Chrome books. They can't switch from one programme to another, one can still work a little bit with the mouse, but my other student can't even do that. (Lieke, language teacher)

The digital mode of literacy training thus only works if learners are digitally literate. Teachers often mentioned that they spend a lot of time in class teaching digital literacy, which lies beyond their tasks as language teachers. They would prefer that such training happen prior to the civic integration trajectory. These same problems hold for some of the teachers, who also indicate to not fully master the devices they are supposed to operate in class (see also below in Section 4.3.4). Beyond these practical challenges, one interlocutor mentioned that digital language training misses the point:

> You don't learn to apply it in a daily real situation with another person. Language is naturally primarily intended to connect with each other and to have a conversation. (Elsa, language teacher)

Another case manager explained that students seem much less engaged in digital language classes and often skip class as a result, leading to dwindling attendance rates of extremes down to twenty percent. This could, in her eyes, for a large part be explained by the digital nature of the course.

4.2.3. Inequities Among Groups

Our interlocutors noted that certain groups appear disproportionately affected by the digital divide. In their view, older people, those with limited education, individuals who have mainly done physical work, people who are illiterate in their native language, those from rural areas, and women tend to have had less access to digital devices and, consequently, fewer digital skills. In this vein, Lieke, a language teacher, conveyed:

> Particularly women who come from rural areas and have had hardly any schooling. In their home country, they have only carried out household tasks, and their household may also not have had the means to purchase digital equipment. In some countries, digital equipment is also prohibited. In addition, there are also men who, from a young age, did physical work without education or had to enter the army at an early age. These men also often have minimal to no digital skills.

Although some interlocutors reasoned that digitalisation promotes self-reliance and equality through enabling self-study and independent information retrieval from the web or from case managers, others argued that the civic integration policy arena should incorporate digital skills training before the official civic integration term starts. This would help "level the playing field" and give people with varying digital skills more equal opportunities. Although Dutch libraries are mandated to offer digital skills training, language teachers particularly emphasised that these programmes often fail to address the specific digital skills required for civic integration and that libraries are not always logistically accessible. Moreover, these trainings target everybody who would like to work on their digital skills and are given by Dutch-speaking (volunteer) instructors, which may form another threshold for people still learning Dutch. One language school, therefore, developed its own digital skills training, but that particular school does not use a predominantly digital learning programme.

4.3. The Implications of Digital Technologies for the Discretion of SLBs

4.3.1. Ticking Boxes Versus Case Managers' Tailored Support

The results of the learnability test, the start and end date of the civic integration trajectory, and the completion of the different compulsory components—the language and KNM exams, the MAP, and the

PVT—are all boxes the case manager needs to tick in the DUO portal. In the eyes of some interlocutors, this standardised approach imposes a narrow focus on what integration means and reduces case managers' space to adopt a more holistic as well as a more individualised approach that caters to each person's specific and full range of needs for their "integration":

> In our work, integration is very much about "do you meet the integration obligation?"...that is really about a language level, what someone achieves and a number of other obligations that someone completes....I prefer a more integral approach. (Marije, case manager)

In a similar vein, another case manager shared that:

> I would actually like to offer a bit more customisation in some situations. I'm always looking...where is my space to look at what's needed? What works instead of what absolutely has to be done? (Eline, case manager)

However, when one interlocutor tried to apply "what works" and wanted to exempt an integrator from the MAP element, she could mark the MAP as completed without consequences. There was no check-up on this element. For the exams, this would not be possible, as they are administered centrally by DUO itself.

4.3.2. The Learnability Test and Case Manager Judgment

While the learnability test was developed as a standardised tool to assess people's "learnability" objectively, and to subsequently sort people into the different learning routes based on their score, this test does not prevent case managers from making their mark on people's opportunities in the Netherlands. As a matter of fact, none of the interviewed case managers conveyed to follow the test results without weighing in the person's background, which they sketch during the broad intake. Instead, most described the test as a confirmatory factor after they had already assessed the integrator's starting position with questions. Some stressed how they follow their personal judgment:

> I really do have something like a *Fingerspitzengefühl* [loosely translatable as a "finetuned instinct"] that helps me to deviate from the information that does or does not qualify a person for a certain route. (Jeanine, case manager)

Furthermore, the case manager often decides in consultation with the language provider, who uses intake testing to determine the most fitting language level. To mediate the effects of digital skills on the test outcome, one municipality provides training opportunities specifically for the learnability test, and some provide practical assistance during this test. However, these support measures depend on the availability of staff, as well as on the personal considerations of the case manager. One case manager explained that her team needed to hold the learnability test in small groups due to their staff shortage. Some case managers found the test redundant and harmful for people who have failed the test and whose case gives no indication that learning Dutch on more than a basic level is feasible for them. The idea that the test is a redundant element also emerged in the case of integrators who are obviously able to follow the B1-route, such as those who have completed high levels of education. In both cases, people needed to take a test, while the case manager already found the outcome evident before the test was taken. Case managers would like the option to skip over the test, but DUO requires the test to be completed.

While these examples show that case managers still hold discretionary power to choose differently from what the test prescribes, one interlocutor mentioned that some of her colleagues follow legal provisions to the letter, while others give precedence to the law's intended goals. By making this statement, this interlocutor respectively touched upon the difference between "legalism" and "unauthorised discretion" from Kagan's classical typology of rule application (Kagan, 1978). While the case managers' discretion may not necessarily be confined by the learnability test, those SLBs applying a legalistic mode of rule application will follow the test's outcome more closely.

4.3.3. Tracking People Through Client Management Systems

To sketch the background of the integrators with an asylum status prior to their first meeting with them, case managers conveyed to retrieve information from TVS, the client management system operated by Centraal Orgaan Opvang Asielzoekers (COA). COA is the government agency responsible for the reception of people applying for asylum in the Netherlands. While the interlocutors explained that they do not have access to sensitive information used for people's asylum claims, TVS does shed light on the person's life circumstances:

> I check the information in their system. Whether someone has actually been to school, what someone intends to do in the Netherlands, [or whether] the[ir] family reunification [is] going on? But also the current situation. (Daan, case manager)

Though not a direct effect of digital data storage, the easy access of this information shapes a first filter in the decision-making process of the case manager, which may go further than what people themselves would present during their intake conversations.

The sharing of data further along the civic integration process, between colleagues of the same team and between the language school and the municipality, is meant to create a level of inter-colleague transparency for different purposes:

> We have our own system….We have set up all kinds of work processes in it: reporting, decisions, invitations, PIPs, fining processes, the progress of the hours in the Z-route, and a kind of overview list in which we have combined the data from DUO and the data from TVS. So that you can see who has to do civic integration. Who started when, who still has to start, and who is waiting for a house. So that we don't miss anyone. (Mira, case manager)

Data are thus stored by one bureaucrat and shared with another. These record-keeping processes differ per municipality and language school. As for the language schools, the files contain information about civic integration starting dates, the courses and exams taken, presence during class, and expected end dates of civic integration. These files are shared with municipal officers. Information may also be shared via e-mail, for instance, in special circumstances that warrant communication between the language teacher and municipal case manager. Eventually, municipalities mark the different completed parts of civic integration in the DUO portal.

While the administration helps DUO to keep civic integration in check, and may serve the case managers' work processes, client management systems may impose an "administrative burden" that actually reduces the

time the case manager has left for face-to-face support. Though this may largely be an issue of bureaucracy more than solely a digital effect, some interlocutors conveyed how their internal client management system is not "up and running" and is currently causing a duplication of work.

4.3.4. Digital Tools and Teachers' Discretion

Digital technologies also affect the teachers' discretionary power. They may enrich teachers' toolkits to help their students meet the requirements of the Integration Act 2021. However, in some schools, teachers are mandated to provide their lessons on digital devices, while those mandates may not always match their own or their students' digital skills. Issues such as problems with logging in to an online learning environment or issues with the provided hardware often disrupt the classes. Especially for some students in the Z-route, who more often seem to have limited digital literacy and specific learning needs, digital classes present a hurdle. This shows that digital teaching methods do not enable all individuals to "keep making progress" at their individual level. Some teachers stressed the need for a class assistant who has the specific task to troubleshoot practical issues, so that assistance with technology does not detract time from the language tuition itself. To foster more engagement in class, some teachers supplement their mostly digital classes with physical materials, group activities, and outings. This helps their students to learn in a more immersive way:

> Are you familiar with the total physical response [TPR]? This is especially important in the Z-route. The idea with TPR is that you stimulate all the senses, because that is how you remember something best. So I bring things to class, and sometimes I take the students to the supermarket to show things. (Lieke, language teacher)

Both examples show that the teachers demonstrate proactive responses to a more systemic problem, as well as the limits of their options.

Another issue lies in the monitoring of the students' progress. While teachers keep track of student attendance and progress in digital logs, some schools have decided to restrict further communication between the teachers and the municipal case managers. In case of issues with student progress, neither the teacher nor the case manager can discuss the problem with their colleague:

> If I want to make it clear to the municipality that things are not going well, then I can only do that via the project planners. And if I do that, I don't get any feedback. So this could still be improved. (Lieke, language teacher)

Due to the heavy workload of both teachers and these intermediaries, interventions to assist a person are delayed or not happening at all. In that sense, there is a confining effect of the digital nature of current monitoring practices on these SLBs' discretionary freedom.

5. Discussion

In line with Schou and Pors (2019), our interviews suggest that digital components of civic integration may reinforce existing social hierarchies and create new forms of exclusion. Case managers, who supervise the learnability test, indicated that people with limited digital skills may perform poorly on this digital test and

may therefore unjustly be placed in the Z-route. Such misplacement has significant consequences for their ability to obtain full citizenship and for their broader opportunities in Dutch society. Furthermore, language teachers explained that students may struggle with digital formats in their language courses. Those findings illustrate how the "second level" of the digital divide (Hansen et al., 2018) may impede people's civic integration success. As the language teachers reflected on differences between groups of students, their responses hint at deeper inequalities along lines of age, class, gender, and region of origin, because digital literacy seems to be unevenly distributed across demographic groups. This is "the social divide" compounding the digital divide (Hansen et al., 2018) in the Dutch civic integration arena. Nevertheless, we also found that digital teaching methods, easier access to case managers, and digital information retrieval may also support integrators to meet their obligations, provided their digital skills are sufficiently developed (second level) and the necessary devices are available and functional (first level). Our study thus reveals that digital civic integration components affect integration outcomes both negatively and positively, by respectively reinforcing and diminishing social inequalities. The third level of the digital divide is thereby simultaneously deepened and narrowed.

We also aimed to understand how SLBs in civic integration may find their discretionary freedom impacted by digital technologies. We found some evidence for the curtailment hypothesis (see Bovens & Zouridis, 2002), as well as for the enabling thesis (see Buffat, 2015). Yet we mostly found that discretion takes a different shape in the digital age, perhaps best fitting Kvakic and Larsson's (2024) notion of "web-level bureaucracy." As in the study of Kvakic and Larsson, digital technology implies that the discretionary power of the SLBs in civic integration is transformed, in both enabling and curtailing ways. Our study empirically specifies this in different ways:

As for the curtailment thesis, the standardised approach to civic integration, implemented by the central government and monitored by DUO, imposes some limits on case managers' discretion. It does not facilitate thinking beyond DUO's "tick-box monitoring." In other words, it proposes a narrow view of integration and what an individual may need in the process. Several interlocutors expressed a preference for focusing on "what works" over simply complying with "what needs to be done." This emphasis on procedural efficiency was evident in the limited communication between language schools and municipalities, where digital monitoring was considered sufficient by the schools. Such reliance on digital systems restricted more personalised and tailored forms of support. The clearest example of this constraint emerged in discussions about the compulsory learnability test. Some SLBs reported that they would have preferred to skip the test altogether in cases where the outcome of the test and the resulting learning route is already evident to them. However, the test does not eliminate discretion: SLBs can still override its results based on the Broad Intake and the language school's assessment. When possible, case managers may help individuals prepare for the test or guide them through it, if they think this is in line with their own professional role. We view the discretionary power of case managers less in light of the concerns paired with the arbitrary implementation of the law, given the high demands of the Integration Act 2021.

As for the enabling thesis, case managers occasionally use digital technology to their advantage. Client management systems can streamline their workflow, and the constant availability among as well as between SLBs and integrators allows case managers to respond to their clients' individual needs. Moreover, digital information from the TVS system is sometimes leveraged to inform their picture of an integrator. This echoes findings from Kvakic and Larsson (2024), who show how SLBs use their clients' digital footprints to exert discretion. However, the use of digitally shared information, such as that from COA, can be

double-edged. While it may enhance SLBs' discretionary power by enabling early insight into their prospective client, it also risks introducing bias by taking in second-hand information about a person's prior life situation before they meet them. In that sense, digital information may not really enable their discretion, as the individual is no longer perceived independently of their digitally stored profile that was created by another SLB, working in another digital monitoring system.

For language teachers, digital tools can offer a form of enhanced control as they allow them to more flexibly divide their attention between students in the classroom. However, that potential is at times undermined by practical limitations: technical issues and uneven digital literacy among students can slow down students' progress by reducing the quality of the instruction they receive. Moreover, the limited digital skills of some of the SLBs may unintentionally limit the integrators' space for progress when the teaching requirements rely on digital technologies. The findings seem to unveil that both integrators and SLBs are treated as "digital by default" (Schou & Pors, 2019) and may both suffer from an "administrative burden" as they respectively try to comply with or implement civic integration policy. Still, teachers demonstrate proactive responses to these issues and find the power to exert discretion through more immersive language classes by tapping into other, non-digital sources. Integrators will do this too, but our data do not provide the means to delve into this topic.

6. Conclusion

Digital technologies are woven into the entire Dutch civic integration programme, and this both reinforces and diminishes inequalities. Digital technologies offer opportunities for enhanced language learning and greater self-reliance in a taxing trajectory for those with sufficient digital literacy, by providing access to complementary online materials and enabling direct online communication with case managers. Yet digital civic integration impacts newcomers unevenly. Digital technologies tend to exacerbate existing social inequalities and create new forms of digital exclusion, particularly for people with limited digital skills, as they are sorted out by the learnability test and confined on their way to stronger residence and Dutch citizenship. Digital teaching methods may not facilitate the social aspects of practising a language and do not suit everybody's learning style or capabilities, which leads to less engagement in the classroom and eventually less progress in their proficiency. It is therefore crucial that individuals with limited digital skills are given the opportunity at the outset of the civic integration process to develop these competencies in an accessible and supportive manner.

For SLBs, including case managers and language teachers, the shift to a web-level bureaucracy (Kvakic & Larsson, 2024) means their discretionary power is neither strictly curtailed nor simply enabled, but notably transformed. Digital systems have indeed opened new avenues for communication with clients, ways to streamline workflows, possibilities to provide early insights into integrators' backgrounds through shared data, and facilitated data sharing for monitoring practices, all of which do not directly seem to impact the level of discretion. However, they can also impose administrative burdens, introduce bias through pre-existing digital profiles, and restrict the flexibility of the case manager or language teachers, while an individual's situation may warrant a tailored approach from them. Our study thus showed that the "web-level bureaucracy" in which the case managers in our study operate may actually negatively impact their level of discretion more covertly.

Ultimately, as civic integration itself becomes "digital by default," it not only streamlines administrative processes but critically redefines who belongs and on what terms. The digital border that is civic integration tasks the street-level bureaucrat with nuanced policy responses on the ground that actively address these pervasive digital and social divides.

While this study sheds light on digital civic integration, some key questions remain. Future research should, for instance, consider integrators' experiences and examine data-sharing practices between language schools, case managers, and COA to identify privacy risks. We plan to address these gaps in our forthcoming research to provide a more complete understanding of how digitalisation shapes civic integration outcomes.

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ARTICLE

The Halting of Everyday Media Practices in Swedish Detention Centres: A Physical, Social, and Digital Exclusion

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Abstract

In line with previous research, this article starts from the awareness that ubiquity and mobility, central features of migrants' transnational lives, are sustained by everyday digital media practices. It aims to investigate what happens when these media practices can no longer be carried out due to circumstances beyond the individuals. The research context is the Swedish detention system, which in some cases breaks the migration trajectories and forces individuals to wait for an unwanted return. Detention centres are highly mediatized spaces where the rapid digitalization that characterizes societies is forced to slow down to a standstill for migrants. This situation marks the return of old media forms that become new, such as dumb phones and paper letters. The study is based on face-to-face interviews with detained and formerly detained migrants conducted between 2022 and 2024 in Sweden and reported here through the method of ethnographic vignettes. Offline and online practices in detention are explored to understand whether they can still guarantee the social inclusion that digitalization outside had made possible, and that here can be described as a process that follows different speeds and directions depending on the power exercised through it and its aims, leading to a counter movement. I therefore argue that there is a double exclusion, first from the country through the instrument of detention, and thus also expulsion from society understood as sociality, and this through counter-digitalization.

Keywords

detention; digitalization; disconnection; exclusion; migrants

1. Introduction

Migrants are transnational beings who use digital technologies to stay connected to the society they left behind while also participating in their new host society. Media technologies are therefore fundamental to ensuring this movement between the two societies and maintaining migrants' presence in both. The media have always played an important role in migration trajectories. From letters and radio to satellite television and the telephone, new media technologies have brought transnational relationships to an even closer and more intimate level (Madianou & Miller, 2012). Previous studies (Gillespie et al., 2018; Kaufmann, 2018; Twigt, 2018; Udwan et al., 2020; Witteborn, 2018) have demonstrated the importance of media availability, highlighting the significant impact of the Internet and smartphones. Smartphones, especially, these small objects that are easy to carry even along the most treacherous routes, wrapped in plastic bags during sea crossings, have been able to facilitate travel. Migrants have become hybrids, simultaneously absent and present, physical and digital human beings (Alinejad, 2019) in a space that loses its physical connotations to acquire more symbolic and emotional ones, defined precisely as the space of presence (Diminescu, 2008). This is where the concept of the "connected migrant" (Diminescu, 2008) comes from: Migrants are no longer forced to leave their previous lives behind, as they always have at least one digital device that allows them to live different lives, to switch between them while remaining connected to them. Media technologies, therefore, are strongly emphasized for the success of the migratory journey, but also for the process of transnationalization itself, which presupposes not only a return to the country of origin, but also being inside the country and society in which they currently live. Several studies have shown that the role of media technologies in migration is also ambiguous in many respects. For example, information can be unreliable (Wall et al., 2015) and traceability can make everyone recognizable (Chouliaraki & Georgiou, 2022). Despite this awareness, the article recognizes media practices as facilitators in the processes of settlement and inclusion. Today, the level of digitalization achieved requires not only that everything be digitalized, but also that everyone be ready to access and use it. This means that everyone must be digitalized as well. However, this article notes that, while the digitalization process is proceeding in a very specific direction and at an ever-increasing speed, affecting every aspect of daily life, we are seeing a slowdown in this process in some contexts. One of these is detention, which forces people who were previously required to go digital, just to access basic services, to stop doing so. I therefore wonder what effect this forced change has on the lives of these individuals and their inclusion—or exclusion—in society. The question from which this article stems is: What happens when the connected migrant is no longer connected? In Swedish detention centres, media access is limited and different from outside. There are no smartphones here, only dumb phones given to migrants upon their arrival at the centre; however, access to the internet is allowed but only through computers that must be booked in advance, and communications with the Migration Agency take place via paper letters. This in-between situation, where some media are permitted and others prohibited, and where it is neither possible to speak of disconnection nor connection, is explained by two main official reasons. The first is that the Migration Agency wishes to protect the privacy of other detainees, for example, from photos that could be taken with smartphones inside the centres. The second is that, although there are no actual laws at the European level regulating detention, there are directives. One such directive is to guarantee a connection to the outside world via one's own or another telephone (Mentzelopoulou, 2023). Sweden has decided to follow this directive, unlike Denmark, for instance. Therefore, what is emerging is a scenario in which the digitalization process seems to be slowing down, perhaps even reversing course, with the return of old forms of media, such as paper and dumb phones. I find the reappearance of old media forms in certain contexts, such as detention, an interesting phenomenon to analyze. During the fieldwork, I then developed the following research questions: How do media practices take place in a context of limited and controlled media access?

What meaning is associated with the return of old media forms and how are they negotiated within everyday life? What happens to migrants' daily lives and potential inclusion processes if access to digital technologies is no longer guaranteed? The research context of this article is Sweden. Recognizing that the detention context may differ in other countries, this article aims to analyze the Swedish detention system, about which little is still known, and without generalizing about specific cases. However, it seeks to contribute to the debate on the role of digitalization in the inclusion of migrants, which can lead to exclusion. I will proceed with a brief review of the literature on the digitalization of migration and migrants, highlighting the gaps that this article aims to fill. Having reflected on the context and research methods, I will describe online and offline media practices in detention centres through ethnographic vignettes, which will reveal the meanings and effects of this counter-digitalization. I consider what appears to be a return to a lower level of digitalization as a decision with a political purpose. Detention will appear as a space of deprivation affecting individuals on a personal and emotional level, as well as on a material level. Therefore, it is within this space that technologies and the available media forms must be reintegrated, and the functions and meanings associated with them must be reinterpreted. I will argue that migrants suffer not only forced physical and geographical immobility because they are detained, but also digital immobility.

2. Literature Review

2.1. On the Digitalization of Migration

Digital technology is becoming increasingly prevalent in everyday life (Leonardi & Treem, 2020), and the idea that "we live in the media" (Deleuze, 2011) seems more realistic than ever, demonstrating the incredibly invasive nature of digitalization and mediatization in contemporary societies. Following Büchner and colleagues, this article defines digitalization as "the complex and heterogeneous process leading to increased relevance of digital technology and digital data in contemporary society" (Büchner et al., 2022). However, I will argue that it follows different speeds and directions depending on who it is used by and received by. Digitalization is therefore a social and cultural process affecting most of the world at all levels—economic and, above all, social (Parida, 2018, p. 23)—though of course there are major geographical and socio-cultural differences to bear in mind. This also includes the often non-linear relationship between migration and digitalization, which is the focus of this article. Media practices and access to inclusive digitalization are considered necessary conditions for public connection, and thus for an active and informed citizenship (Couldry et al., 2007). In the case of migrants, this also translates into inclusion in society. According to Collin, social and technological integration go hand in hand, stating that "the successful integration of migrants requires that their technological integration is as important as the social, political, and economic integration traditionally reported in scientific literature" (Collin, 2012, p. 66). Furthermore, inclusion is not only a process that concerns migrants, but also the host society, which must change and adapt to welcome them. It is a two-way process of encounter (Alba & Nee, 2003). Settling into a new community requires migrants to adapt to a new culture, customs, social values, and language. As the World Migration Reports of 2020 and 2024 demonstrate, this process is easier in a digitalized society. However, as Bhabha and other colleagues point out, digitalization must always be considered and defined critically, as it is highly context-dependent (Bhabha et al., 2021). The same phenomenon that facilitates inclusion in society and affirms the "connected migrant," for example, has also led to the "datafication of human mobility," making everything about migration measurable. Apps, platforms, and new technologies enable the collection of unprecedented amounts of data, as well as the tracking and monitoring of movements and interests

(Latonero & Kift, 2018; Seuferling & Leurs, 2021). The digitalization of migration governance has led to the datafication and automation of processes, which have become the basis for improving or replacing human decision-making through overlapping developments, including artificial intelligence, machine learning, and predictive analytics (Leurs & Witteborn, 2021, p. 18). In short, the same digitalization that affects migration can promote the inclusion or exclusion of migrants, depending on the logic, purposes, and, above all, the context. While connected migrants can more easily integrate and feel included in society through their media practices, digitalization already helps to recognize desirable migrants and exclude undesirable ones at the borders. As Lévi-Strauss (1966) stated, human beings are classifier animals, and this classificatory logic, which is already in their nature, is now implemented by technologies, AI, platforms, and datafication, which divide and classify in order to exclude. Borders are no longer only geographical (Freedman et al., 2023), but also digital. They are intertwined with policies and technologies and embedded in architectural infrastructures. They are considered an expansive system of practices and digitalized discourses, infrastructures. Therefore, it is important to recognize that there are territorial and symbolic borders, which cannot be completely differentiated because borders are ubiquitous orders of regulation and care or conditional inclusion (Chouliaraki & Georgiou, 2022). The border has become a volume that can expand and contract and change, shaped by philosophical, political, topological, and cultural forces (Gržinić, 2018) and through technologies. Borders can undergo a horizontal expansion depending on agreements between countries, and a vertical one thanks to surveillance and the technology that not only manages it but also creates it. The digitalization of migration has led every stage of migration to become digital (IOM, 2024). Before leaving, migrants inform themselves online (although not exclusively; social contacts are still considered fundamental) by accessing information services for migration. When they arrive in the country, they are confronted with online application processes and use the different digital platforms to stay in touch, make new contacts, look for work, access the health system, improve their language skills and knowledge of the area, manage digital money if they have come for work, and take care of those left behind. Even if they do not stay in the new country, either by choice or by force, the processes of returning and integrating also take place online. Digitalization of migration requires digitalization of migrants.

2.2. On Digital Migrants

As seen in the previous section, migration as a phenomenon and experience is now completely digitalized. According to Leurs (2023, p. 6), "migration does not exist outside technological development, is not developed outside the social-cultural and political domain of migration," which means that migration and technology must be considered ontologically inseparable. McAuliffe (2016) speaks of the "applification" of migration, highlighting how new technologies are applied at various stages of the journey and in the stay in the new country, and how this can empower individuals (Abujarour et al., 2021; Bauloz, 2021). Smartphones, apps, and charging ports and connections are considered as important as food and healthcare (Latonero et al., 2018). The evolution of the media system has brought important repercussions also for the transnational lives of migrants (Licoppe & Smoreda, 2004; Wilding, 2006). Connected migrants (Diminescu, 2008) can maintain relationships from their pre-migration life and continue to participate in both societies, forming digital diasporas (Ponzanesi, 2020; Tsagarousianou, 2020). They are, or should be, physically part of the society in which they live, but, at the same time, continue to be, digitally, part of the society to which they belonged before migrating. In this sense, migrants are transnational, hybrid, digital beings. The revolutionary scope of digitalization is also visible in the personal and private sphere. The advent of email is often identified as a turning point by migration studies (Madianou & Miller, 2012; Wilding, 2006). Although email

communication is more detached, it has enhanced the quantitative aspect of contacts. The smartphone, as previously mentioned, and the possibility of making cheap calls, and using apps such as WhatsApp to send messages or initiate video calls, can be considered an even greater revolution on the emotional side. In this sense, terms and concepts such as "e-family" (Benítez, 2012) have become widespread in the literature to describe this new way of staying in touch and/or "doing family" (Morgan, 1996). Digitalization has also revolutionized the experience of living in the host country, in a process of inclusion that, while not entirely guaranteed by media practices, is at least facilitated by them. Digital technology has become an integral part not only of migrants' transnational lives, but also of the various educational, health, and work systems on which society is based (Adkins & Sandy, 2020; O'Mara et al., 2021), to which migrants need access. Media are also used to learn about the "new" country, its cultures and customs (Kaufmann, 2018), but also on a more geographical level to better orient oneself in space (Kim & Lingel, 2015). They are also often used to learn a new language, through YouTube videos or similar apps, as well as to search for job advertisements or information of a legal nature or concerning the most basic needs, such as healthcare (Gillespie et al., 2018). Alencar (2020) refers to this as the reterritorialization of people (and places), which allows people to regain a sense of continuity that makes it possible to continue one's life even if in a totally different way than before and in different places. This article finds its place in the investigation of those situations in which migrants lose their digital connotation, such as in detention, which has repercussions for the reterritorialization mentioned by Alencar, and for private and non-private transnational relationships.

3. Research Methods and Context

3.1. Research Context

In Sweden, as well as in many other European and western countries, detention is increasingly being used to manage migration. There are currently seven detention centres in Sweden, concentrated in the south of the country where the major cities are located. However, there are plans to increase capacity and distribute centres more evenly across the country. The Migrationsverket, the Swedish Migration Agency, is the authority that runs the detention centres and considers applications from people who want to live in Sweden. In the specific case this article deals with, the Migrationsverket can decide on refugee status, subsidiary protection, and humanitarian protection and rejection. In the latter case, if the person decides not to cooperate with voluntary return, the authority can decide on detention. People can be detained if they are awaiting identification or registration of their asylum application, if they are illegally present in the country, if they are at risk of disappearing, if they have committed a crime or are at risk of committing a crime, or if they have lost their right to remain in the country for any reason, including if they have lost their job (Ankerstedt, 2005). Depending on the reasons, the detention decision may be valid for different periods, but it should not exceed 12 months, as stated by the Court of Justice of the European Union (C-146/14 PPU—Mahdi). Outward movement is forbidden; detainees cannot leave the centres, but they have freedom of movement inside, albeit controlled. As previously described, access to media is limited and controlled. When migrants are taken into custody, their smartphones are confiscated, and they are given a dumb phone, a phone without a camera or internet access, upon arrival at the centre. However, internet access is guaranteed through computers in common rooms, which must be booked in advance. The research context is therefore extremely interesting, as successful digitalization invests in the spaces and processes that precede detention and helps to determine it. However, a counter-digitalization can be observed when it comes to the migrants, which contributes to a movement of exclusion that has already begun outside.

3.2. Research Methods

The data in this article are taken from an ethnographic study (Miranda, 2022) conducted between 2022 and 2024 in Sweden. In May 2022, this research project was approved by the Swedish Ethics Review Authority (Etikprövningsmyndigheten) and I was able to conduct ethnographic interviews (Heyl, 2001; Wetherell, 2003) with migrants currently detained, as well as with former detainees who had been released or repatriated. The Migration Agency granted me permission to interview the detainees, but not to spend time with them in the facilities. This prompted me to conduct in-depth ethnographic interviews, enabling me to conduct research within the centres while remaining outside them, through the stories and descriptions provided by the migrants I interviewed. Participants were recruited spontaneously, according to the well-known snowball effect. After conducting the first interview with a former detainee, he put me in touch with a couple more people: one who had already been repatriated and another who was still detained. In this way, I managed to create my small network of contacts, which was expanding every day after a new interview, and which also helped me from the point of view of building trust (Zapata-Barrero & Yalaz, 2020). During the fieldwork, I met 21 people, many of whom I met more than once, and collected a total of 63 interviews. Inside the centres, the interviews took place in the visiting room and for a maximum of one hour each time. Outside, with no time limit, I let my participants choose the location if they were still in Sweden; otherwise, I conducted the interviews on Zoom. The interviews were not recorded, mainly because I was not allowed to do so inside the centres, and I decided not to record the interviews outside either, so as not to further alter two already different situations. However, I kept an ethnographic diary in which I jotted down words and brief notes during the conversations. As soon as the interview was over, I enriched these notes with all the words participants had said, my impressions, and the silences regarding certain aspects, to obtain a reconstruction of our conversations that was as accurate as possible. I approached my notes following an inductive process typical of the constructivist grounded theory (Charmaz, 2006). This involved following the interviews with data discussion and review sessions, which generated new field research questions, in a cyclic, iterative process. I chose to write using ethnographic vignettes (Bloom-Christen & Grunow, 2022; Demetriou, 2023) that recount real situations but not exactly as they happened, in order to protect the privacy and security of my participants. Although there are no direct quotations or interview excerpts in the text, I believe that the vignettes lend it greater ethnographic weight. For the same reasons of anonymity and protection, the protagonists of the vignettes are also fictitious, constructed as an aggregation of different profiles encountered during the fieldwork. In the following sections, I will use ethnographic vignettes (Vignettes 1–6). These are written in a narrative style and open reflections on research.

4. The Return of *Old* Media Practices

Vignette 1. We were only migrants.

> The kitchen can only be accessed by the staff who take care of everyone's meals. It is not the act of cooking that was missing, but of feeling at home. Also, not being able to move around, watch what you want on television without having to share it with 15 other people, play musical instruments, reading, scrolling through Facebook's home page, watching videos on YouTube, having a curiosity and not being able to prove it on Google. Many of them spoke of feeling distant from people outside the centres, not only from family or friends, but also from those they did not know. Everyone, as if there

was no longer a common, shared experience of reality. "We were migrants, detained migrants, *not people like everyone else.*"

The most frequent finding from the interviews I conducted was a sense of detachment from the rest of society, which was gradually explained as a lack of access to what the rest of society has. There are several media and non-media, online and offline practices that detention makes impossible. For the migrants I interviewed, this deprivation takes on a very specific meaning, as exemplified by the quote in the vignette. It is not just about having one's own smartphone, and internet access, or being able to cook, not even just to spend time that otherwise passes slowly in detention; rather, my participants explained that they were deprived of all those daily practices and gestures that, outside, for the rest of people, are common. The ban on the use of certain media, such as smartphones, as well as time limits imposed on computer use, which are insufficient to meet the needs of everyone in a centre and must be booked in advance, led me to focus on other forms of media returning to detention and the meanings associated with them. Notably, these include dumb phones and paper-based communication, with which many of my interviewees were no longer familiar or had never been familiar. In this sense, I was able to observe not only the meanings and effects of this return, but also the profound process of readjustment to them.

4.1. Return to the Dumb Phone

Vignette 2. The tiny screen.

> Now where do I insert my sim card? In the side there is nothing, ah, maybe in the back, the back cover can be removed and yes there is a space for the sim card, next to the battery. But the phone's slot for the sim card is bigger than the sim itself, the phone came with the adapter. Now I can turn it on, how do I turn it on? A bigger button in the middle, right? Yes, that's it, now it turns on. It takes some time. Finally. Oh, what a tiny screen!

Migrants are given traditional mobile phones once they arrive at the designated detention centre. As these phones are owned by the centres, which means they can only be used within the facility. If migrants are transferred to a different centre, or if they are picked up for deportation, they must hand them back and wait until they arrive at the new centre to receive another one or to get their own smartphone back at the airport. There may also be a delay of a couple of days between the time of the custody and arrival at the centre, during which migrants are isolated because they have already handed over their smartphones and have not yet received their new ones. Once they arrive at the centre and have completed the registration interview, staff give them a short tour of the facility and accompany them to their rooms, where they will receive a plastic bag containing some of their personal belongings and a pillow. It is at this point that they also receive their "new" phone, along with their SIM card and adapter. My participants described switching on this new phone as a special, almost mystical moment. For some of them, it was the first time, so they had to ask someone who already used one or try several times, while others, like the protagonist of this vignette, had to reacquaint themselves with gestures they had forgotten after such a long time. The phone comes with its own charger and a SIM card adapter. In Swedish detention centres, detainees keep their own SIM card, so they keep their phone number and continue to take care of the monthly subscription payment, which they are forced to change. Outside the centres, the general choice is to have unlimited internet by giving up the offers concerning calls and messages. Internet, however, here in detention is useless, because they can only

make calls, send texts, or play Snake. However, communication, especially with those who are far away, takes on a completely different form. Some of the detained migrants I interviewed compared this to how things were at least 15 years ago, when they first left home. Back then, it was not so easy to stay in touch. Often, a day and time would be agreed upon to talk to one's family, who might not have a telephone or an internet connection, meaning they would have to travel to make contact. Today, in detention, the situation is similar, yet the opposite. It is no longer the family left behind who face the greatest difficulties in making contact, but rather the migrants in Sweden. One of my participants always booked the computer for the Tuesday slot from 15 to 16. This was when he could make a video call on Zoom with his brother, who lived in Senegal. A regular phone call using the dumb phone provided by the Migration Agency was too expensive for either him or his brother. Others, however, used dumb phone communication as an emergency channel. However, there are emergencies for which a quick text message is not enough. The day after the tragic earthquake that struck Turkey in February 2023, I had a couple of interviews scheduled at one of the centres I visit most often, just outside Stockholm. On that occasion, the limitations of dumb phones became extremely apparent. There was no internet access to check the situation or read the latest news and updates on what was happening in one's own country or to loved ones. This issue was "resolved" with the help of other detained migrants: in the following days, a computer was made available for checking the news, and a television was tuned to a Turkish news channel. However, communication with those who were there was also difficult, so a more creative solution was found.

Vignette 3. The earthquake.

> I have a friend outside who was detained here with me until a month ago. He is also Turkish. The day of the earthquake, he called me immediately and said he would help me. I still hadn't been able to contact my family; they weren't answering. I gave him my brother's number, he contacted him on WhatsApp, and shortly afterwards he joined my family's WhatsApp group. For the next three days, I sent him text messages, which he copied and pasted into my family's chat. Then, whenever a reply came, he forwarded it to me. I was in the WhatsApp chat without having access to WhatsApp.

Migrants placed in detention lose their hybrid status of being digitally connected and transnational. However, as in the case just described, they try to find alternative ways to continue being so. Detained migrants may have access to the internet via computers in common rooms to be shared with others, but the number of computers in a detention centre varies according to its size and the number of people accommodated. In general, there are never enough to cover the demand and, for this reason, those who want to use the computers must reserve a time slot in advance.

Vignette 4. Surveilled routine.

> Finally, my computer hour. I sit down, turn it on, immediately open the internet. I have so many things to do. Today I have a video call on Zoom with my sister in 18 minutes. I start checking everything, as always. I type into Google the two pages I usually read to inform myself, then I also open Twitter and start checking. I jump from one tweet to another, I type in Google, I go back to Twitter, I open Facebook too. So many things have happened since the other day! I have to do something; the situation is really falling apart. I start to write a tweet too, but I stop immediately, and I close everything. There are too many surveillance cameras in the room, I do not want them [the people from the Migration Agency] to see what I write or think. Ok, now I will call my sister, she will be ready.

While the computer itself cannot be considered an old technology, it becomes one when it is the only means of accessing the internet. It is used to stay connected to the outside world and communicate, as people did before smartphones became widely available. In many cases, therefore, the hour of internet access is also the only time one has access to information, the only time one can find out what is happening and participate more actively. Furthermore, the vignette also illustrates another aspect that I refer to as a self-censorship practice. In detention, the level of privacy when using a computer or accessing the internet is almost zero. Media practices are shared, observed, heard, recorded: Detainees fear that these online activities may be used against them. Consequently, they decide to self-censor, breaking those relationships with their country and their participation in the public scene. This results in a sense of detachment and exclusion from the outside world, and from what was previously their own space and society.

4.2. Return to the Paper

Sweden is recognized as a leader in digital innovation and a high-tech country when it comes to bureaucracy. Everything can be accessed with a quick and easy click, making everything fast as long as you possess a personnummer (the Swedish personal identity number) and a Bank ID (the electronic identification system). To obtain a personnummer and BankID, you must have the right to reside in the country and open a bank account. Migrants, especially those in detention, obviously do not fall into this category. For those without a personnummer or BankID, the way the country functions is completely different, and they are automatically cut off from certain mechanisms of society. For this reason, migrants in facilities, for example, have contact with the bureaucracy through paper letters. The return to paper in the centres is explained as indispensable, as it is the only way to maintain official communication. Although the Swedish Migration Agency has decided to print its documents on both sides of a sheet of paper—a sign of awareness of the difficulty of obtaining paper and of the associated costs—as well as being a more environmentally friendly choice, paper continues to be used as a bureaucratic tool in the context of detention. Official letters informing detained migrants of decisions taken regarding their applications and other communications from the Migration Agency, for example, relating to travel or arranging appointments and interviews with staff, are addressed to individuals in detention centres and delivered in physical paper format (see Vignette 5).

Vignette 5. Receiving a letter.

> I had been waiting for this letter for at least two weeks. It arrived, I opened it, it was in Swedish. I know Swedish, but this was a different kind of Swedish. I didn't know what some of the words meant, and even after translating it on the internet, when I finally got the computer, I still didn't understand. I had to wait until I had a meeting with my solicitor, who explained it better to me. I could have asked the staff in the centre, but I don't trust them.

As the vignette shows, official communications are often written in Swedish and sometimes use terms that make them difficult to be understood, even if one knows the language. This issue can be more easily resolved outside the centres, where migrants have access to various aids, including technological ones, and several translators. However, inside the centres, migrants have to wait not only for the letter to arrive, but also to understand its meaning. This is the main issue associated with paper-based bureaucracy: not only waiting but also exacerbating an already complicated situation. During the research, however, I observed that the return to paper can be experienced in different ways and take on different meanings (see Vignette 6).

Vignette 6. Writing a letter.

> Aram is in his room, lying in bed with a piece of paper and a pen; he is trying to write to his partner. He can't even remember how to write letters anymore, but he starts anyway, telling him what he did today, and yesterday, after their weekly video call. Then he crumples up the paper and takes another one from the bedside table. He doesn't have much to tell, he hasn't done much, why write a letter telling nothing? But at the same time, he really wants to write him, a video call is not enough. He begins to remember when they met, got married, all that was before the detention, and then all that would be after, outside again, no reference to what he is today, now, in that centre.

The letter can become another means of communication, differentiating the technologies used for communicating with whom and for what purpose. Of course, there is an added wait for that letter as well, but it is a kind of waiting that brings happiness and helps to maintain the romanticism that that situation hindered and that returning to paper and waiting for those words could bring back. It is therefore very interesting to note that there is also a dual role attributed to paper. In this case, paper restores the intimacy denied by detention, proving that it is not the media itself that needs to be considered, but rather the role, the context, and by whom it is used.

5. Counter Digitalization and Exclusion

Mimi Sheller, talking about the different functions of the smartphone for migrants, states: "From banal everyday object, iPhones and Samsungs emerge suggestively as lifeline, ticket, identification, meeting point, fetish object, gift exchange" (Sheller, 2016, p. 7). As already discussed in the previous section, it is difficult for a dumb phone to replace a smartphone, and it is almost impossible for it to fulfil all the roles it was intended for. The same applies to paper, which cannot match the speed and efficiency of email, but can create scenarios for a different kind of communication, slower but also more intimate. What this research has highlighted, among other things, is that the return of old media practices requires individuals to also make an emotional effort to adopt and adapt to them. In both cases, it is a matter of re-familiarization. Not knowing how to use an old model of phone or how to start writing a letter are perfect examples of this and that of a movement of digitalization that goes in the opposite direction to the one outside, presenting itself as a counter-digitalization that immediately takes the form of exclusion. In a fully digitalized society, for example, having to wait for a letter to arrive and be delivered, and then wait again for someone to explain what it says or what it means, also means being excluded from the normal functioning of the rest of the country. The case of the earthquake in Turkey is an example of what has just been said. Although it can be interpreted as an expression of the agency of detained migrants who manage to find alternative solutions to the limitations imposed by detention, it is not a form of communication that can be considered characteristic of a highly digitalized system, such as the one in which migrants find themselves. The vignettes presented in the previous section show an almost constant feeling of exclusion from the outside world, a distance that is not only from one's family and loved ones, nor only from one's country of origin, but a wider and deeper distance from other people, from external reality, and from society. This feeling is amplified by the constant sense of delay experienced by migrants in detention (Jacobsen et al., 2021). The result is a kind of temporal split between what is the real time *outside* and what is the time *inside*. The lack of connection with outside reality means that events outside the centres arrive late to those inside, as discussed above regarding the earthquake in Turkey. This naturally prevents participation in such events. In this sense, I argue that detained

migrants are the opposite of the digital migrants, who manage to demonstrate their presence even when they are not physically present. In detention, what is lacking is the "coincidence in time and proximity in space" (Lawrence, 1981, as cited in Huang, 2012, p. 592) that cannot even be digitally. Events inside and outside do not happen simultaneously. The disjunction between time outside and time inside, the recognition of two presents, the different speeds, the difficulty in participating in both, even if one wants to, speaks of a simultaneity that detention, as space and system, interrupts. Anderson recognizes simultaneity as that homogeneity and temporal coincidence, and the necessary condition that helps to imagine a community (Anderson, 1991, p. 26). In this imagination of community through simultaneity, media are those tools that make you feel part of something. Consequently, if this simultaneity is broken, the detained migrant is excluded from the imagined community, from society. I argue that detention results in the exclusion of individuals on several fronts. First, and perhaps most explicitly, there is an exclusion from the country: Migrants, also due to fully digitalized borders, are registered, controlled, and classified. If considered undesirable, they are excluded from the reception system and detained for repatriation. The other is the exclusion from digitalization, which takes place in detention centres. The same digitalization process that has completely invested the management of migration and detention, as well as the infrastructures that precede it, at the same time denies migrants access to it. In this sense, this article shows the need to critically discuss the movement of counter-digitalization. Exclusion from digitalization also leads to exclusion from society. Detained migrants are not even equipped with the means and tools needed today to actively participate in public discourse in both the host and the home country. This critical situation of limited internet access and, therefore, limited participation also affects those whom Migrationsverket has opted to repatriate. In some cases, these are people who no longer have ties to the country they left and to which they will have to return. This means that some kind of preparation is also necessary before forced return, for example, looking for job offers or accommodation. Just as digital assistance is fundamental to settling in a new country, so too is it fundamental to what we might call resettlement. However, these practices cannot be implemented, or are extremely limited, to computer-booking slots. In this sense, there is a double exclusion once again: not only from the host society that is sending them away, but also from the society to which they will be sent back. Not having access to digitalization gives people the feeling of exclusion. Tazzioli refers to this as "digital expulsions" when she discusses the digitalization of the asylum system and media technologies that have the role of intermediary between asylum seekers and institutions, are instead used to hinder participation and access to financial and humanitarian support (Tazzioli, 2023, p. 1302). The same situation arises in both societies. Detention delays information about what is happening outside, and about decisions affecting their lives. This uncertainty increases a sense of confusion and vulnerability. Therefore, while we are witnessing a rapid and widespread digitalization of spaces, we can also observe a kind of counter-digitalization among the individuals inhabiting those same spaces. In this sense, I would argue that digitalization follows different speeds and directions, depending on the power exercised through it and its purposes. Detained migrants go back to being un-digital, to playing Snake, to call, but only those who can afford it, as the only way to communicate, to access the internet through computers in a determinate set of time. In contrast, the system that manages and controls them is composed of highly sophisticated technologies capable of collecting biometric data to be shared with infrastructures outside these spaces and cross-referencing them through algorithms to create certain profiles. This is a counter-digitalization within a very highly digitalized system, where the presence and absence of technology take on meanings and roles that I referred to as political in the introduction. Heidegger believed that technology is a way of relating to reality and thus plays a fundamental role in how individuals view the world (Heidegger, 2008, p. 311). Is this the key to understanding the role of technologies in detention and counter-digitalization? Technology is often

emphasized as a way of relating to reality, which is peculiar to migrants who use it. However, what emerges from the discussion is that the same can be recognized even within the detention system, and in this sense, it is a "technologically framed venture" (Backman, 2024, p. 18). I argue that it is a system that works precisely because of the way it employs its own technologies or makes only some of them available. This creates a precise vision of reality, which is the one in which detained migrants live, and which is characterized by waiting, deportability, and a time lag that doubles time by actively interrupting simultaneity, resulting in exclusion. This new restricted, limited, and controlled landscape is the result of a conscious choice by the authorities and excludes individuals from the digitalization that has affected all other spheres of society.

6. Conclusion

Migration, as also emerges from the literature review, has become one of the symbols of digitalization, in terms of both the experience of the individuals and how different countries, authorities, or even humanitarian organizations manage it. There has been a total digitalization of the infrastructures that revolve around migration and reception: Asylum applications, rather than access to economic support or services such as healthcare, are now entirely digital, requiring migrants to become mediatized and digital individuals. Migration management depends on different technologies, such as surveillance technologies and biometric recognition systems, that identify individuals by cross-referencing their biological and behavioural characteristics with data acquired through databases and algorithms (Chouliaraki & Georgiou, 2020; Madianou, 2019). Detention management is among them. The choice of detention, for example, is also made through the surveillance and tracking of individuals and the cross-referencing of data from different parts of Europe (Walters, 2002). This establishes risk profiles to determine whether a migrant can be accepted. However, in this highly digitalized and technological landscape, it is possible to note some contradictions in terms of digitalization and inclusion, which this article aims to highlight. Fieldwork and the vignettes revealed that while migration management can rely on technological assistance, the same cannot be said for migrants themselves. The media technologies intended for use by migrants are, in fact, limited and controlled. This creates a less intimate and spontaneous way of connecting with the outside world, resulting in a feeling of vulnerability and exclusion from society. In this sense, the high-tech digitalization comes to a halt when migrants themselves use and access it, rather than institutions. Yet, there is a return to old forms of media and old ways of connecting with reality and maintaining relationships, which characterizes the everyday life of the centres, due to the delayed arrival of information about what is happening outside. Even letters arrive late and are already outdated by the time they arrive. Therefore, I have argued that it is difficult to participate in and feel included in societies and relationships in this kind of media environment, and so detained migrants feel excluded from everything they were part of before their detention. This is a theme that has already been addressed in other studies and emerges explicitly in detention. According to Helsper (2021), the lack of access is the most basic form of digital disconnection, and according to Byrne (2005), inequalities in digitalization shape the normative evaluation of civic engagement. This means that people who lack the necessary resources, or who have them taken away, as in the case of my interviewees, tend not to have the opportunity to participate actively in a community. Following Bossert and other colleagues, I state that social exclusion is also manifested by an individual's relative and persistent lack of access, resulting in a state of deprivation over time (Bossert et al., 2007). If digitalization does not guarantee inclusion, but merely facilitates it, asking migrants to no longer be digital beings becomes synonymous with exclusion. The earthquake case makes it quite clear: While families were isolated because everything around them was falling apart, detained migrants were isolated simply because they were detained.

Conflict of Interests

The author declares no conflict of interests.

Data Availability

Due to the nature of the research, data sharing is not applicable to this article.

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About the Author

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GeoMatch/MisMatch: A Critical Investigation of a Refugee Resettlement and Labour Market Integration Algorithm in the Netherlands

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Abstract

This article critically investigates the unintended and perverse effects of digital public technologies on refugees' fundamental rights and socio-economic inclusion. As a case study, we examine the GeoMatch algorithm, a recommender system implemented by the Dutch government to automate employment search and matching processes for refugees across its 35 labour market regions. As data and methods, we used close reading techniques to analyse a set of disclosed documents obtained through Freedom of Information (FOI) requests, drawing on the practices of investigative journalism. Contrary to official claims of effectiveness, economic impact, and objectivity, our findings suggest that GeoMatch's algorithmic system prioritises aggregate optimisation over individual opportunities, with a disproportionate risk of discrimination on the basis of ethnicity, gender, or marital status. The findings further indicate a diminished capacity for both refugees and reception officers to contest automated decisions, threatening refugees' human dignity and self-determination. We therefore argue that the deployment of GeoMatch should be reconsidered until these ethical concerns are adequately addressed. The article provides an empirical case supporting concerns raised in the literature on the role of algorithmic systems in social and economic stratification. Methodologically, our contribution endorses the emerging approach of combining FOI and close reading to study opaque technological systems and automated policy domains.

Keywords

AI; Big Data; digital migration governance; freedom of information; FOI requests; GeoMatch algorithm; refugee reception; refugee resettlement

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1. Introduction

Digital technologies have significantly transformed the governance of migration and arrival infrastructures for asylum seekers. These innovations include the use of Big Data and AI to automate the identification and registration of newly arrived migrants, risk assessment, resettlement, housing allocation, welfare distribution, and improvements in labour markets and civic integration. Recently, recommender system algorithms have emerged in refugee reception to offer a data-driven approach to placement. Their goal is to match individual characteristics of refugees with local integration opportunities to improve outcomes such as employment and, consequently, reduce welfare expenditure. Yet their effectiveness in finding the most suitable living place for persons depends, for instance, on data quality, ethical design, and the inclusion of human judgment—what some call the "human-in-command"—to address complex and context-specific needs. These concerns raise urgent questions about the role of digital technologies in shaping socio-economic inclusion and exclusion for migrants.

Our case study examines the GeoMatch algorithm, a recommender system that has been implemented by the Central Agency for the Reception of Asylum Seekers (COA; Centraal Orgaan opvang Asielzoekers), the Dutch central government agency responsible for the reception, accommodation, and guidance of asylum seekers in the Netherlands. The GeoMatch algorithm was created by the Immigration Policy Lab (IPL, based at Stanford University and ETH Zurich) to predict employment outcomes for visa applicants in Canada (Ferwerda et al., 2020). There, the algorithm functioned as a nudging tool to overcome new migrants' biased preferences in favour of well-known locations such as big cities (Ferwerda et al., 2020). Under the auditing of the consultancy firm Deloitte, the Dutch pilot project of GeoMatch was initiated in 2021 (and since 2025 has been in its "trial phase") to support COA's decision-making regarding the placement of newly arrived refugees in one of the 35 Dutch labour market regions (LMRs). Amid increasing political pressures on COA in particular and the whole asylum system in general, the deployment of the algorithm coincides with the 2024 Dispersal Act (*Spreidingswet*), which aims to ensure more balanced placement of asylum seekers across municipalities, as well as the Civic Integration Act (*Wet Inburgering*), which seeks to ensure that newcomers can learn Dutch more quickly and gain work experience at the same time. According to COA, the GeoMatch algorithm is expected to help allocate over 35,000 refugees annually (Hotard et al., 2025).

Beyond the technical limitations, questions of power and agency emerge. Existing literature distinguishes between bottom-up uses of technology by migrants and top-down deployments by states (Alencar, 2024). Bottom-up use of technologies serves newly arrived migrants in functions such as navigation, job information, and guidance, while top-down use of technologies serves state functions such as surveillance and border control, service delivery, and welfare distribution. The latter systems are increasingly developed through public–private partnerships with uneven accountability. While advocates stress their potential for efficiency and transparency, critical scholars have underscored their risks, particularly regarding privacy and human rights for subjects who might be in vulnerable and/or dependent situations due to their hierarchical positioning vis-à-vis the state (Madianou, 2024; Molnar, 2024).

Our interest in this algorithm lies in its unusual positioning: unlike many top-down deployed digital tools in asylum governance, it is not intended to police but claims to generate meaningful profiles aimed at promoting socio-economic inclusion. Therefore, the research adopts a socio-technical paradigm drawing on research in economics, migration infrastructure, and Big Data and AI studies to bridge between the analysis

of the algorithm's technical claims and underlying assumptions, on the one hand, and a critical perspective on its social and ethical implications regarding fundamental human rights. This article asks: To what extent does automating refugee resettlement and labour market integration through algorithms, such as GeoMatch, mitigate or reproduce pre-existing socio-economic inequalities and affect refugees' opportunities for agency and dignity? And if concerns about perverse effects arise, what are their possible sources, and how might practitioners anticipate and prevent them in future digital innovation processes?

Besides the Netherlands, the GeoMatch algorithm has been introduced in refugee governance in several countries, including the US, Canada, Switzerland, Mexico, and Sweden. We have been able to document its development and use in the Netherlands. In this process, we collaborated with the investigative journalism collective Follow the Money (FTM) to submit Freedom of Information (FOI) requests. As an underused method for accessing documents held by public institutions, FOI can be repurposed to investigate opaque and black-boxed processes in algorithmic governance (Stavinoha, 2024). The process yielded 35 documents, including technical documentation, project initiation papers, audits, and data privacy assessments. Triangulating these sources, we mapped the institutional actors involved and analysed how they were framed through close reading (Ellermann, 2024). Focusing more on its technical documentation and application procedures, we then studied how the GeoMatch algorithm works, "reading along" (Stoler, 2009) the dominant arguments and frames and "against the grain" to uncover those that remained unstated, within the scope of our research question.

Our contribution is structured as follows: First, we review scholarship on digital innovation rationalities in the public sector, algorithmic labour-market matching, and the principle of human dignity in legal assessments of AI. Second, we outline our methodological contribution using FOI requests and close reading, proposing the concept of FOI-request literacies. Finally, we present our empirical findings and examine the implications of profiling algorithms like GeoMatch for refugee inclusion and automated public decision-making more broadly.

2. Theoretical Framework

2.1. Digital Transformation: Rationalities and Power Dynamics

Digital transformation refers to the integration of digital technologies into the daily functioning of (public) institutions. Over the past two decades, governments have replaced paper-based procedures and physical counters with digital portals, databases, and algorithmic systems. These changes are rarely contained within the state machinery. They are co-produced with private actors—consultancies, technology firms, and international agencies—embedding commercial and technological agendas within public administration (Eubanks, 2018). In migration governance, such collaborations have meant that asylum seekers and migrants are increasingly managed as data points within predictive and automated systems, but at high costs for the agency of both subjects and bureaucrats (Dekker et al., 2025).

The rationalities underpinning this transformation are multiple. Beyond the dominant rationality of "algorithmic reason," which treats data as neutral and objective (Aradau & Blanke, 2022), "e-government" is often invoked to frame automation as a tool for faster, cheaper, and more consistent services (Meijer, 2015). Madianou (2024) expands this picture, identifying accountability, auditing, capitalism, technological solutionism, securitisation, and resistance as central logics in the deployment of digital systems. These logics

have both promise and risks. Auditing and accountability can easily shift into surveillance. Capitalist logics privilege profit and extractivism over a fair optimisation of public value. Techno-solutionism narrows political questions into technical fixes, while securitisation frames migrants primarily as risks to be managed. And resistance, while visible, often struggles against entrenched infrastructures (Madianou, 2024).

Crucially, critical race and feminist scholars remind us that digital systems do not emerge from neutral environments but reproduce intersectional biases, where discriminatory outcomes are obscured under the guise of neutrality (Chun, 2021; Noble, 2018). A stark example is the Dutch Childcare Benefits Scandal (2005–2019), where over 43,000 parents, many with a migration background, were wrongly accused of fraud due to flawed and racist risk models, leading to their financial ruin and, in some cases, separation from their children, eventually prompting the government's resignation (Leurs & Candidatu, in press).

Digital innovation often thrives in contexts of weak public oversight. State organisations adopt innovation for internal optimisation or legitimacy, even without proven public benefit (Jansen, 2024). In migration governance, low levels of public control mean that asylum seekers frequently serve as "testing grounds" for biometric and algorithmic systems, often without safeguards or consent (Molnar, 2024). In such cases, the evaluation of responsible innovation is not only about whether digital technologies deliver efficiency, among other positively framed logics, but also who designs and regulates them, and whose rights and interests are marginalised in the process. Critically considering the implications of digital disruptions in migration governance calls for a data justice perspective, which we will employ in Section 2.3.

2.2. Automating Search and Matching in Labour Markets

Economic models of search and matching have long shaped understandings of how labour markets function. Rooted in the human capital theory that suggests that skills, education, and experience determine differences in earnings (Becker, 1964; Mincer, 1958), search-and-matching models explain the success of job matching between job seekers and employers in human capital terms (Burnazoglu, 2020, 2021; Cahuc et al., 2008). In this view, labour market matching is a technical practice in which exchanges between job seekers and employers can be optimised by aligning the supply and demand of measurable worker attributes.

Automation extends this logic by offering to improve efficiency and objectivity in the matching process. Automated decision-making (ADM) systems, such as CV-screening algorithms, are promoted as less prone to personal bias (Woods et al., 2020) and are often perceived by workers themselves as fairer evaluators than human recruiters (Fumagalli et al., 2022). They are also credited with practical benefits: processing information quickly, reducing costs, and widening access to public services. Within this framing, ADMs function as neutral tools that transform information about skills into job matches, promising productivity gains for both employers and job seekers (Burnazoglu, 2023a).

However, an increasing amount of research shows that ADMs are not neutral in practice and that these systems can reproduce and intensify structural inequalities (Lambrecht & Tucker, 2019; Obermeyer et al., 2019). The basis for job matching is assumed to be skills, but algorithms often rely on proxies for skills, such as personal characteristics in terms of race and gender. These proxies can result in discriminatory outcomes, disadvantaging certain groups in recruitment. The opacity of ADM systems compounds the problem, as applicants are rarely informed how their data are processed or how decisions are reached.

Burnazoglu (2023b) argues that such patterns of exclusion are not accidental but reflect systemic features of stratified labour markets. Societies organise and rank people in a hierarchical way, not only according to their individual characteristics but also membership in social groups and categories. She conceptualises stratification as social-identity-based institutional structures that channel people towards different outcomes with sharply different sets of opportunities. For migrants in particular, this stratification can act like a trap, reinforcing exclusion through self-perpetuating dynamics. From this perspective, ADM systems do not simply inherit bias but can actively embed and intensify stratification by re-inscribing existing social hierarchies into digital infrastructures.

For this reason, evaluating ADM systems requires moving beyond technical performance metrics. Scholars such as Bembeneck et al. (2021) emphasise the importance of interrogating "label choice bias," asking what algorithms are intended to do, what they actually do, and whether discrepancies between the two vary across social groups. Burnazoglu (2023a) argues that when algorithms are biased such that the bias penalises certain groups, "algorithmic mediation" turns into what she calls "algorithmic stratification." Such frameworks are essential for assessing whether ADM systems contribute to equity or serve to reproduce exclusionary practices.

2.3. Human Dignity as a Counter-Framework to Automation

The rationalities of digital transformation (Section 2.1) and labour market stratification (Section 2.2) frame matching in terms of efficiency, optimisation, and employability. A human dignity perspective provides a critical counterweight, emphasising autonomy, recognition, and the prohibition against treating persons as mere objects of technical procedures in ways that undermine their equal moral worth (Orwat, 2024). Similarly, data justice in migration governance refers to the fair and ethical collection, use, and governance of migrant data to ensure the protection of their rights, agency, and equitable treatment in decision-making (Josipovic, 2023).

Dignity and justice may be threatened by the creation of profiles, proxies, or data-doubles. Algorithms reduce people to employability scores or relocation categories, as in systems like the GeoMatch algorithm, where migrants are matched to municipalities based on predicted labour-market outcomes. Even if empirically "accurate," such externally imposed profiles curtail self-representation and autonomy. Dignity and justice require control and meaningful consent, yet asylum seekers often encounter data extraction in a condition of dependency. Alajak et al. (2024) document how Dutch authorities search refugees' smartphones during asylum procedures without transparent justification, exemplifying how formal consent is meaningless when alternatives are absent. The "human in the loop" approach only safeguards dignity if there is real discretion. Eubanks (2018) shows how welfare caseworkers defer to automated risk scores under time pressure and institutional constraints. Eubanks demonstrates that while caseworkers may be present, automation bias is entrenched when they lack real decision-making authority over the systems' outputs. Finally, refugee camps often serve as low-rights zones where public–private consortia test new technologies with minimal oversight (Molnar, 2024). Such asymmetries illustrate how innovation can proceed at the expense of those least able to resist.

Anchoring analysis of algorithmic systems in dignity and data justice, therefore, complements critiques of rationalisation and stratification. It reframes matching not as a technical optimisation problem but as a

political question of recognising agency, control, and autonomy—an orientation that grounds our analysis of the GeoMatch algorithm and allows us to focus on socio-economic exclusionary dynamics from the perspective of the refugee subject.

3. Data and Method

Our objective was to investigate the development, justification, and framing of the GeoMatch algorithm in Dutch refugee resettlement and labour-market integration policy. To achieve this objective, this study employed a qualitative, document-based methodology combining two interrelated approaches: FOI data collection and critical close reading.

Data collection was conducted via FOI requests submitted to Dutch government institutions, especially COA, between 2023 and 2025. This was done in collaboration with investigative journalists from FTM. First, FTM reached out to us with a request for a formal analysis of the first-round evidential documents they had gathered through an independent FOI request. Upon completing our initial analysis and realising the gaps that existed in the curated evidence, we extended this collaboration with FTM in order to co-develop strategies for filing further requests. The resulting 35 documents span from technical documentation to project plans, audit reports, data privacy assessments, email communications, and formal agreements.

In return for the direction we offered to advance this collaborative investigation, the partnership with FTM gave us insights into the procedural and rhetorical literacies required for FOI-based research: how to phrase requests, where to submit them, and how to monitor compliance with statutory deadlines. Despite its promise, FOI is not a panacea. Gathering the necessary documents entailed repeated requests, long waiting periods, and navigating institutional selectivity. In the first submission round for this manuscript, we were still awaiting responses to follow-up requests. For transparency and replicability, we include the full FOI filing letters as well as their respective official decisions in the supplementary material.

While FOI requests are gaining traction in critical migration studies, they remain under-theorised methodologically. Schmidt (2024, p. 503) notes that they have "received comparably little methodological scrutiny." We aim to address this gap by arguing that engaging with FOI requires developing what we term "FOI literacies": a reflexive awareness of the political and procedural structuring of public disclosure mechanisms. FOI archives are not neutral; they are curated, strategic, and shaped by institutional rationalities (Stavinoha, 2024). As Schmidt (2024) observes, FOI disclosures create "live archives," revealing certain truths while obscuring others.

To operationalise FOI literacies, researchers must adopt methods attentive not only to the content of disclosures but also to their conditions of possibility. The task is not simply to extract information from released documents, but to interrogate how disclosure itself is structured by bureaucratic logics, redaction practices, and the selective visibility and invisibility of certain actors' activities in state archives. For this reason, we turn to interpretive approaches such as close reading, which allow us to hold together what is present and absent, what is rendered legible, and what remains obscured.

Close reading originated in literary studies and is increasingly used in governance research (Bonjour & de Hart, 2013), enabling researchers to unpack how institutional documents normalise, legitimise, and conceal

particular policy logics. As Ellermann (2024, p. 340) puts it, "interpretive reading requires us to grapple with a speaker's choice of frame…as well as with what remains unsaid." Drawing on Stoler (2009), we both read "along" and "against the archival grain," paying attention to how internal bureaucratic logics embed power relations, while also unsettling the intended narratives of the state. Schäfer (2024) confirms the value of close reading of algorithmic systems to reveal the hidden labour, failures, and adaptive practices within data processes.

To this end, our analysis of the FOI corpus employed a close reading approach attentive to the context and positionality of document authors, their dominant arguments and framings, as well as to alternative frames that were less explicitly articulated but discernible from the background noise. Our thematic coding followed an iterative, inductive approach whereby codes were developed directly from the public documents and refined by frames proposed in the literature (Madianou, 2024). This inductive approach led us to focus on three key documents: COA's project initiative document (24 pages), IPL's technical documentation of the GeoMatch algorithm (104 pages), and Deloitte's final auditing report (49 pages). Together, these documents exemplify distinct institutional logics: bureaucratic, technical, and managerial. In addition, we adopted an iterative interpretive approach, informed by participant observation at a public conference in May 2025 featuring COA and IPL (see Hotard et al., 2025), and by triangulation with media reports and parliamentary debates.

4. Analysis

In this section, we report on the findings of our analysis. First, we begin with an overview establishing the project's frames, context, and the positionality of its actors, which foregrounds our close reading of the GeoMatch algorithmic system. Next, we conduct a detailed technical analysis of the system, focusing on its logic of inquiry, input data, machine-learning technique, and output. Finally, we examine how the algorithmic system is integrated in the broader administrative procedures of COA.

4.1. Situating the GeoMatch Algorithm: Context, Positionality, and Frames

The GeoMatch algorithm project in the Netherlands was initiated in 2021 through a collaboration between COA and IPL entitled *Kansrijke Koppeling met behulp van AI* (in Dutch: "Promising connection with the help of AI"). Several COA sources mention that the project unfolded following a 2018 study by the Netherlands Bureau for Economic Policy Analysis, which had concluded that Big Data techniques seemed promising for improving regional matching and enhancing refugees' employment outcomes (Gerritsen et al., 2018). Building on that study, COA initiated internal research into whether algorithms could strengthen refugees' labour-market participation, the Centraal Bureau voor de Statistiek (CBS) reviewed their proposal, and ultimately IPL was contracted to build the tool.

The *Project Initiation Document* by COA (n.d.-a) presents the GeoMatch algorithm through several interrelated frames as follows. The frames of effectiveness, economic impact, and social cohesion position the algorithm as a mechanism to improve refugees' integration, participation, and independence, which simultaneously contribute to the position of refugees within Dutch society. The additional emphasis on more objective decision-making further reinforces the earlier frame by suggesting that data-driven allocation will lead to more informed and reliable decisions for refugees, as opposed to relying on the subjective assessment and intuition of COA employees. The organizational intelligence frame emphasises internal

transformation: the development of a culture of continuous learning, data-driven reflection, and predictive capacity to improve COA's professional competence. The transparency frame focuses on external legitimacy, presenting data as a tool to increase trust and credibility in relations with municipalities through measurable and explainable decision-making processes. The frame of sustainable integration extends the welfare orientation into the long-term, promising individualised and adaptive support that aligns placement with refugees' skills, needs, and aspirations. Finally, the innovation and growth frame situates the algorithm within a broader narrative of digital transformation, where technological adoption signals progress, adaptability, and future-readiness.

These frames not only define COA's responsibility to refugees but also are strategic to other regulatory bodies. While in the project initiation document, the economic impact frame promotes better employment and increased independence for refugees, on COA's website and public algorithm register (COA, 2024; Het Algoritmeregister, 2024) it is reframed as a fiscal benefit for municipalities and government departments, with higher labour participation among status holders presented as a means to reduce welfare expenditure and increase tax revenues. Similarly, transparency is not represented in terms of accountability towards refugees but of its benefits to COA, in that "it offers clear and measurable indicators in the matching of status holders to municipalities, which strengthens the trust and credibility of the COA" (COA, n.d.-a, p. 6). The *Project Initiation Document* specifies a measurable goal of a four percentage-point rise in employment within the first year, amounting to a relative improvement of one-third compared to the baseline (COA, n.d.-a). Thus, the GeoMatch algorithm is framed as a predictive tool capable of processing larger volumes of data and identifying patterns that are "impossible for humans to find," while also respecting institutional constraints such as municipal quotas (COA, n.d.-b). The language of optimisation, efficiency, and innovation thus allows COA to position itself as a modern, evolving organisation that uses technical means to legitimately respond to political demands.

These institutional frames cannot be understood apart from the wider structural context and political pressures shaping Dutch asylum policy. Historically, permit-holders were allocated under the Housing Act purely according to municipal population size, without regard to labour-market opportunities. However, the Netherlands has been facing a structural housing shortage for a long time. As a result, municipalities varied in their willingness and capacity to host newcomers, with local political opposition, financial constraints, and resource scarcity fuelling uneven provision of services. This prompted the 2024 Dispersal Act (*Spreidingswet*), which obliges municipalities to provide accommodation. Importantly, the law is framed not as a temporary crisis measure but as a permanent restructuring of asylum reception.

Second, political discourse increasingly stresses rapid labour-market integration. Under the 2021 Civic Integration Act, newcomers are expected to enter work, paid or unpaid, within three years, a responsibility again devolved to municipalities. And while COA is not the implementing authority for the Civic Integration Act, it is structurally implicated because it shapes the placement and information flows that municipalities use when delivering on their mandated integration responsibilities. In short, COA is involved in supporting these transitions and "pre-integration" tasks because it controls who goes where, when, and with what data (Raad van State, 2023). Its placement decisions effectively set the starting conditions that allow municipalities to meet their integration duties.

Beyond the legislative frameworks of the Dispersal Act and the Civic Integration Act, COA has faced increasing political pressure under the recent Dutch government. This includes budget cuts, the transfer of

financial responsibilities for asylum reception from the central government to COA and local partners, and public rhetoric framing COA's work as misaligned with national asylum priorities (European Council of Refugees and Exiles, 2025; Government of the Netherlands, 2025). Symbolic gestures, such as the minister's refusal to approve royal honours for COA volunteers (Daams, 2025), further underscore a broader political distancing from the asylum-reception system. With conditions at reception centres increasingly falling below EU standards (Rechtbank Den Haag, 2022), the GeoMatch project emerges not simply as a technical innovation, but as part of a broader effort to reconcile shortages and political scepticism with a push for data-driven "solutions."

The network of actors defined in COA's project initiation document (COA, n.d.-b) consists of three partners: IPL, which carries out the design, testing, and implementation of the *Kansrijke Koppeling* solution; CBS, which assesses AI-related risks in refugee placement and provides complementary data and trend information to improve COA's dataset; and Deloitte, which was contracted to audit the technical and ethical elements of the algorithm. The actual network extends beyond this limited set of actors. For instance, our FOI material reveals that the consultancy firm Berenschot conducted a data protection impact assessment and an artificial intelligence impact assessment, which are mandatory under European and Dutch law. More importantly, other actors directly impacted by the project—including refugees, organisations that represent refugees such as the Dutch Refugee Council, and any receiving municipalities—are also not explicitly mentioned.

Our analysis of external sources shows some critical conflicts between the positionality set out in COA's documents and the reality. First, the non-inclusion of refugees is concerning because they are fully dependent on COA and the municipalities for housing allocations. Following this thread, the absence of clear representation from the municipalities could have a significant impact on the project's effectiveness. The Dispersal Act reduces COA's dependency on the municipalities by making the latter's participation legally mandatory, although COA must still rely on them to deliver the requisite housing and integration services.

Second, COA describes IPL as a "partner," but IPL presents COA more as a source of funding. In its own media communications, IPL promotes GeoMatch as a tool being piloted internationally—with pilot programs in Canada as well as the Netherlands—"with the support of two funders," one of which is COA (IPL, 2021). This gap between COA's sense of ownership and IPL's global ambitions raises questions about who really controls the project. IPL also claims the authority to judge whether the algorithm is fair, despite not being democratically accountable.

Based on our examination of the legal and academic arguments as well as other documentation provided (COA & IPL, 2024a, 2024b, 2024c, 2024d), we can describe the positionality within this social network as follows: COA is the data controller/owner with statutory power, IPL is the processor with high technical influence but contractually subordinated, CBS is a neutral data authority, the municipalities and ministries are informed recipients, and refugees are subjects without agency.

4.2. GeoMatch Technical Model: Input, Function, and Output

In this section, we examine the technical aspects of the GeoMatch algorithm. In particular, we examine the algorithm's logic of inquiry, input data and variables, the machine learning technique used to find relationships in the data, and the output in terms of the recommended region for each case.

4.2.1. The Policy Problem and GeoMatch's Logic of Inquiry

COA's project initiation document states that the algorithm is designed to match refugees' skills, qualifications, and preferences with regional labour market needs in order to support their integration into Dutch society (COA, n.d.-a). This matching is subject to policy constraints, including a consideration of proportionality to account for the receiving capacity of each market region, the "municipal quotas," as well as what we shall term the "smoothing constraint," which ensures a balanced allocation across the municipalities over time (as per IPL's technical documentation).

To solve this policy problem, one might expect the algorithm's logic of inquiry to estimate a newcomer's prospects in each of the 35 LMRs in the Netherlands and suggest a region where the individual would have the highest likelihood of employment, subject to the prescribed constraints above. However, the GeoMatch algorithm follows a different logic. While it estimates the prospects of a newcomer in each LMR, it also simulates future arrivals and compares the first estimate with the prospects, in each particular placement, of hypothetical individuals based on their predicted skill profiles.

The GeoMatch research team makes a distinction between "online and offline problems." The offline problem assumes all refugee cases are known in advance and can be assigned optimally at once, while the online problem reflects the real-world setting where refugees must be assigned immediately as they arrive, without knowledge of future arrivals, creating a trade-off between optimising for current and future employment outcomes. As offline problems presume complete knowledge of all cases, they require the creation of hypothetical refugee profiles (simulated from historical data) to approximate a full set of cases before the real information is available. As the GeoMatch research team explains:

> The dynamic aspect of this problem introduces a key trade-off between immediate and future rewards: assigning a current case to a location results in an immediate reward (namely, the employment score of the current case at that location), but also uses up a slot at that location for the unknown arrival. (IPL, 2024, p. 14)

The "offline problem" is solved by defining and quantifying each case's employment impact score (EIS), which reflects how good a match a refugee family is with a location. It combines three factors: their chance of finding a job there, how the placement affects future refugees' opportunities, and whether the location is already too full or too empty (see Bansak et al., 2018a, 2018b). If refugees with similar backgrounds have done well in a certain location, EIS will predict the chances of employment for new arrivals with the same profile to be higher there. As a result, that location builds a favourable score in the system, and future refugees with similar profiles are more likely to be matched with that location.

Taken as a whole, the resulting algorithm is fundamentally different from the policy problem it sought to address. The adoption of the "offline problem" logic of inquiry and its associated EIS could be partly explained by the smoothing constraint dominating the design choice. However, instead of adopting the logic of matching people to regions, GeoMatch does the reverse—matching LMR to refugees. This inversion of the matching process may appear to promote fairness by equalising results, but in practice it risks creating institutionalised disparities. In emphasising outcomes over opportunities, the system may unintentionally reproduce or magnify existing forms of stratification.

4.2.2. Input: Databases and Variables

The GeoMatch algorithm is trained, implemented, and tested using two key data sources: COA's IBIS database (named after software provider IBIS), which provide comprehensive administrative information on all status holders since 2014 and serves as the basis for generating recommendations; and CBS's Asielcohort microdata, which merge various administrative databases to track post-arrival outcomes such as economic and educational integration (IPL, 2024). It is worth noting that the Deloitte (2024) audit report highlights that key safeguards were excluded from review, leaving uncertainty about full GDPR compliance and potential personal data leaks outside the EU.

The IBIS and CBS databases support the algorithm in predicting matches between people and locations based on refugees' background characteristics. Van Grinsven, the project leader at COA, has explained that the GeoMatch algorithm is designed to estimate regional job prospects by looking at how permit holders with similar profiles have fared historically (IPL, 2021). Crucially, however, these databases do not contain information on the specific needs and opportunities in the 35 Dutch LMRs. This means that, contrary to COA's claims (COA, n.d.-a, p. 1), the algorithm can only draw on refugees' historical outcomes rather than ongoing regional labour demand.

Moreover, several cases were excluded from this data, including those where permit-holders moved to a second or third region. The justification for this exclusion is technical; IPL argues that it becomes unclear whether later outcomes should be attributed to the first or subsequent region, and multiple relocations complicate the data structure (IPL, 2024, pp. 24–25). This is concerning given that about 20% of refugees in the Netherlands relocate, regardless of income (Gerritsen et al., 2018). As such, the downside of this exclusion is that it removes evidence of poor matches, meaning the model is biased toward "successful stayers" and blind to the real frequency of relocation. In effect, the algorithm learns to match refugees to LMRs where they are more likely to remain, rather than where they might actually succeed.

In terms of selection of predictors, the GeoMatch research team's rationale is to include "as many predictors that have a plausible link to the target outcome as possible" (IPL, 2024, p. 25). The final list of variables included in the model remains unknown, despite our several requests. However, by triangulating the sources, we were able to compile a comprehensive list of these variables. In brief, these can be divided into three categories: variables that are potentially meaningful (such as previous work experience); protected demographic variables (age, nationality, language); and procedural variables (time of arrival, date of decision).

Regarding the selection of indicators, Deloitte's (2024) audits throughout GeoMatch's development suggest that the model is "fed more than it needs," raising serious concerns about the robustness, impartiality, and reproducibility of its predictions. Thus, scientific standards, which require clear justification and transparency in the selection of variables, seem largely absent.

4.2.3. Technique

The GeoMatch algorithm uses the gradient boosting machine (GBM) estimation technique, an ensemble method that combines many weak models into a stronger one. As GeoMatch's research team argues, GBMs are valued for "their robustness to irrelevant predictors, automatic variable selection, and ability to discover

complex interactions without requiring researcher specification" (IPL, 2024, p. 10). This is achieved by building a sequence of decision trees, each of which corrects the errors of the previous one; at each step, the algorithm selects only the features that reduce prediction errors, leaving unused those that do not contribute. In practice, this implies that the model itself determines which variables matter for the prediction, potentially excluding others that may hold social or contextual significance. This makes it crucial to scrutinise which predictors the model deems relevant.

To examine the relationship between the inputs and the algorithm predictions, we looked at the variable importance plots generated from the GeoMatch backtest predictions. These plots were presented in a 35-page appendix in the algorithm's technical documentation (IPL, 2024). On each page, a plot corresponding to an LMR is printed, ranking the predictors (for example, age, education level, country of origin, or work experience) by how strongly they influenced the model's predictions in that region based on historical data.

We compiled the 35 variable importance plots in Figure 1 to reveal which factors the algorithm found most significant when making predictions for that LMR. Inspecting this figure visually, we see that across regions, procedural variables (e.g., age_at_assign, assign_month, and assign_year) consistently dominate predications. Similarly, demographic variables (e.g., country_origin, language, male, and marital_status) also rank highly. By contrast, human capital variables—such as previous work experience in health, transport, automation and IT, trade, logistics, and hospitality—show low significance.
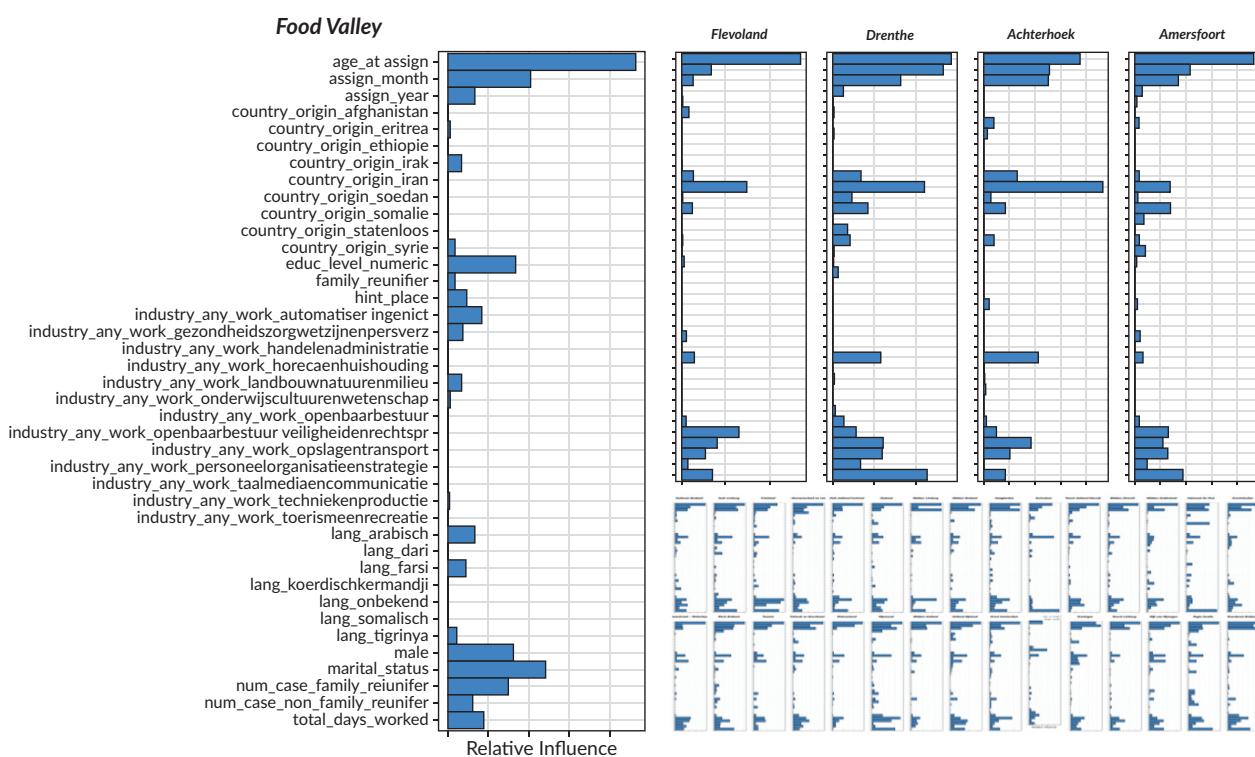

Figure 1. GeoMatch variable importance plots. Notes: The y-axis lists the predictor variables used in the GBM model; the x-axis shows their relative influence (variable importance), expressed as a percentage of the total influence across all predictors; longer bars indicate which variables the GBM relied on most heavily when making predictions. Source: Adapted from the 35 individual plots presented in Appendix 3 of the IPL's technical documentation (2024, pp. 66–101).

These variable importance patterns are unexpected. For example, in Twente, the home of a technical research university, or the Eindhoven and Veldhoven region (Zuidoost-Brabant), which is a tech and design hub, one might expect experience in automation and IT to be significant. However, in both LMRs, these variables contribute less than 20% of the impact of factors like age or marital status. Likewise, in the Food Valley LMR, which is known for agriculture and food science, work experience in agriculture contributes minimally. These patterns suggest that the GeoMatch algorithm is not performing skills-based matching in any meaningful way.

This is troubling for several reasons. First, it undermines the stated rationale of automated job-matching, which is supposed to be centred on relevant skills and work experience. Second, it suggests that protected demographic variables contribute more to predictions than human capital indicators, leading to a risk of discriminatory outcomes, as decisions may be driven by factors such as age and gender, which are explicitly protected under Article 21 of the Charter of Fundamental Rights of the European Union. Moreover, the combined use of demographic and procedural variables is particularly problematic because, as a 2024 DAIA/AIIA report by Berenschot (2024) critically notes: while GeoMatch does not directly include variables such as race, ethnicity, or religion, it relies on proxies such as country of birth or language, which can operate as indirect indicators of ethnic origin or religion.

4.2.4. Output

The GeoMatch algorithm's output variable is defined as the "medium-term outcome of employment attainment within a full year after moving into housing in the municipality" (IPL, 2024, p. 24). Technically, this outcome is operationalised as a binary variable which indicates "whether a status holder has found any employment in any of the 12 months within their first year after moving into housing in the municipality." One of the main justifications behind the choice of this outcome is to help refugees achieve "long-term and lasting success" (p. 24).

In examining this choice of outcome variable, we note several issues. First, the measured employment is largely limited to short-term employment, regardless of its duration. This means that a refugee who holds a job for just one day within the first 12 months after their relocation would be counted as a success. In contrast, the Dutch CBS's Monitor of Wellbeing (CBS, 2025), for example, defines employment as working at least 12 hours per week for six months. Furthermore, the binary variable not only ignores the duration of employment but also its quality. OECD frameworks define job quality as a multi-dimensional consideration that factors in earnings, job security, and work environment (Cazes et al., 2015). GeoMatch's definition of outcome meets none of these standards. If the choice of outcome is indeed meant to achieve long-term success, such a measurement would fall short since it accounts for neither job quality nor security.

Finally, it is important to note that the desired outcome is operationalised for each case at the level of the family, as opposed to the individual. That is, as per the IPL's technical documentation: "the predicted probability that at least one refugee in the case would find employment at the location in question" (IPL, 2024, p. 11). This is done by starting with individual predictions, whereby the model first estimates the employment prospects of each member of the family. To move from the individual to the family, different aggregation methods exist to combine these probabilities, such as taking the average, the maximum, or the methods applied in the GeoMatch algorithm, which combine all family members' probabilities to estimate the chance that someone (anyone) in the family will secure a job.

The implications of adopting this aggregation method for a family-level outcome might be severe given the risks of gender-based biases in the algorithm. On the one hand, the "at least one" method gives a bit more weight to families where multiple members have some chance of employment. On the other hand, this level of aggregation can reproduce or mask gender disparities. Figure 1 shows that the "male" variable strongly influences the model prediction, while "female" does not appear at all. This indicates that the model has learned a strong positive association between being male and employment outcomes, likely reflecting underlying gender disparities in the training data. When mapped to family-level decisions, this in turn embeds gender-based discrimination into family-level placement decisions, regardless of women's positions within a household.

4.3. GeoMatch Administrative Process: User Journey, Control, and Consent

After our technical examination of the GeoMatch algorithm, in this section we finally turn to an examination of the administrative process, which is equally important in shaping outcomes.

As noted in Section 4.1, before 2016 and under the Dutch Housing Act, the relocation policy typically assigned refugees to municipalities according to population size, without regard to labour-market opportunities (Gerritsen et al., 2018). With the introduction of the "promising coupling" policy in 2016, COA sought to improve integration outcomes by placing refugees in regions where they had better employment and education prospects. Accordingly, the matching process began with a profile assessment carried out in an intake interview. Employees recorded both "hard criteria" (such as employment opportunities, presence of first-degree family members, and medical advice) and "soft criteria" (such as extended family ties or regional connections). Based on this, the staff drafted a regional recommendation, generally aligned with the intake interview. This process gave employees significant influence over placement outcomes.

With the introduction of GeoMatch, the administrative process has been restructured, as shown in Figure 2. Now, the algorithmic recommendations are integrated into the workflow as follows. After the interview, but before drafting their own regional recommendation, employees receive three suggestions from GeoMatch. They may add up to three of their own, resulting in between three and six options. A separate decision-maker then selects the final region from this combined list.

This administrative shift has major implications for transparency, consent, and control. First, employees' roles are diminished. Although they continue to conduct interviews, they cannot access the algorithm's decision criteria. As discussed in Section 4.2.3, the GeoMatch algorithm uses decision-tree models that determine by themselves which variables are "relevant" and which are not, with the latter effectively excluded from the ADM process. For example, employment history may be discounted if deemed statistically irrelevant. Yet COA has agreed with IPL, the developer, not to disclose this information to employees, explaining that "although these plots are included in the technical appendix, they will not be provided to users, as focusing too much on individual predictions would present an incomplete picture of what COA is trying to achieve with GeoMatch" (IPL, 2024, p. 21). This explanation would fit with what we observed in Section 4.2.1. However, as a result, employees cannot see how particular factors are excluded from the automated decision results, nor can they challenge the algorithm's reasoning or explain it to refugees.

GeoMatch User Journey

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
During his screening and matching interview, **Ahmed tells Peter about his background,** connections, and goals.	**Peter recommends up to three regions** based on his conversation with Ahmed.	**GeoMatch provides advice for three regions** based on its predictive models. Peter chooses the regions to recommend to Claire.	**Claire uses the recommendations** to choose the municipality where Ahmed will be placed.	**Nathalie welcomes Ahmed at his new location.** It's a strong fit because it was chosen using Ahmed's input and data-driven insights.

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Figure 2. GeoMatch user journey. Source: Hotard et al. (2025).

Second, informed consent is weakly addressed. Current work instructions offer no clear guidance on how to explain automation to refugees. Apart from a short statement on the COA website, there is no structured protocol (cf. COA, 2024). The website notes:

> To see whether you can find work in a region, we combine your data with national data from Statistics Netherlands [CBS]....Based on this, our computer system [GeoMatch] estimates how likely it is that you will find work in different regions. (COA, n.d.-c)

This statement acknowledges ADM, but provides little detail on data use, decision logic, or the right to opt out. Refugees, therefore, cannot give meaningful consent, since they are neither fully informed nor able to contest the process.

Finally, the decision-making structure leaves little room for either employees or refugees to exert control. The final choice between human and algorithmic recommendations rests with a third-party decision-maker, with no direct input from the refugee. Even when employees or refugees advocate for a placement based on family or community ties, these views can be overridden.

5. Discussion and Conclusion

This study set out to critically analyse the GeoMatch algorithm, a recommender system piloted by the Dutch national reception agency, COA. We investigated its impact on refugees' fundamental rights and socio-economic inclusion, as well as possible sources of risk. Through close reading, we examined materials obtained through FOI requests, including the algorithm's technical documentation, project initiation

documents, and audit reports. By analysing government framing and assessing the algorithm's workings against these frames, we evaluated whether the system delivered on its stated goals.

Our analysis suggests that the GeoMatch algorithm reproduces, rather than mitigates, socio-economic inequalities. Framed as a means to achieve effectiveness, economic impact, sustainable integration, and social cohesion, the algorithm's operational logic prioritises aggregate economic gain over individual welfare. It matches refugees to locations where similar profiles have historically fared best, rather than evaluating which region offers the best opportunities for each refugee. This creates a "rich-get-richer" dynamic, reflecting a utilitarian form of optimisation that prioritises efficiency and aggregate benefit over individual welfare or equity (Bembeneck et al., 2021).

Reliance on historical data also undermines the algorithm's own utilitarian rationale. Without input regarding actual labour-market demand in different regions, the algorithm systematically underestimates the potential of previously disadvantaged individuals. This logic reifies stratified labour markets, systematically sorting disadvantaged groups into locations with lower economic prospects and reinforcing pre-existing inequalities. Consequently, total welfare is reduced rather than maximised. Such a process, which Burnazoglu (2023a) terms "algorithm stratification," can occur due to several reasons, such as reliance on historical data, and is amplified by probable miscommunications between policymakers and the algorithm's developers.

In the long run, such stratification threatens the algorithm's goals of sustainable integration and social cohesion. Because the GeoMatch algorithm matches places to people rather than people to places and draws solely on previous outcomes, refugees with weaker employment prospects are likely to be directed to municipalities where previous cohorts have also struggled, often due to discrimination. This risks fuelling the socio-economic exclusion of refugees and, by extension, social tensions.

The analysis also shows that the GeoMatch algorithm risks violating fundamental rights. Although COA frames the algorithm as an objective, data-driven tool that reduces the role of subjective assessments and intuition, data itself is never neutral and carries its own discriminatory values based on pre-existing inequalities. ADM systems do not simply fail to correct for structural inequality but may actually embed it in automated governance. In the case of the GeoMatch algorithm, the emphasis on aggregate stratified outcomes, coupled with the inclusion of protected demographic categories and automated exclusion of actual human capital variables, systematically produces disproportionate discriminatory outcomes on the basis of ethnicity, gender, age, and marital status. When algorithms rely on demographic proxies for employability in the context of labour markets, they risk institutionalising social stratification in seemingly technical processes (Burnazoglu, 2023a). These findings also resonate with broader studies on algorithmic discrimination showing how ADM systems reproduce social biases under the guise of neutrality (Lambrecht & Tucker, 2019; Obermeyer et al., 2019).

While these risks might be inevitable in all automation, a promise of transparency can mitigate such discriminatory decision-making. This is particularly important, not just because of the risks of discrimination on the basis of protected social groups, but also when refugees are subjected to decisions based on non-meaningful profiles through the inclusion of administrative factors. However, we see that, by design, neither refugees nor employees have control over the ADM process since outcomes at the individual level are not what COA is trying to achieve; meanwhile, considerable autonomy is given to the machine-learning

algorithm to decide which variables are relevant, without any possibility of intervention from "humans in the loop." As the variables' relative significance is not explained and Geomatch placement recommendation occurs after the interview, refugees are not provided with any justification for how the decisions are made and employees are unable to acquire meaningful consent regarding the automated process.

Given the risks of perverse effects, we asked what the possible sources of these risks might be and how they can be anticipated.

Transparency is, in fact, a dominant frame used by COA to justify the algorithm, but regarding municipalities rather than refugees. COA claims that by offering clear and measurable indicators, it strengthens its trust and credibility with local governments (COA, n.d.-a). Reading against the grain and following the "logics" of accountability and audit (Madianou, 2024), transparency becomes a frame that serves COA's broader institutional mission. That mission is not primarily to foster a positive economic impact, social cohesion, or sustainable integration, but the effective distribution of refugees across the Dutch municipalities. As such, one might say that the algorithm's purpose is revealed not in COA's explicit claims regarding the socio-economic inclusion of refugees, but by what remains unsaid in the structures created by the Dispersal Act.

Still, this does not fully explain why COA would implement an unreliable and potentially discriminatory system. "Optimisation logic"—described by Jansen (2024) as the drive to innovate for its own sake—offers only a partial explanation. In this sense, despite the top-down rationale mobilised by COA directors of keeping up in the AI race (Internationaal Kennisplatform COA, 2025), it is unlikely that COA's bureaucrats would deliberately deploy discriminatory algorithms merely to signal technological progress and appear modern. A more plausible explanation lies in institutional pressure. Facing mounting political pressures and acute housing shortages (a key theme in the 2025 national election campaigns), COA sought a quick technical solution that appeared legitimate and efficient. In this context, the partnership with IPL may have seemed pragmatic under the assumption that private partners possess greater agility and capacity for innovation than public institutions, due to the latter's bureaucracy (Madianou, 2024); GeoMatch was thus a ready-made innovation from a private actor promising data-driven efficiency at a time when COA's own institutional capacity and credibility were under strain.

Yet this pragmatic choice for solutionism also exposed COA to the commercial logic of its partners. IPL promised COA efficiency, projecting EUR 5.3 million in annual savings from reduced social assistance and increased tax revenue. Crucially, reading against the grain, we see a footnote in IPL's technical report which reveals that these gains drop to EUR 4.5 million if sensitive predictors such as religion and ethnicity are excluded (as per the IPL's technical documentation). Even without the further drops in the projections if other demographic variables are excluded, this nearly EUR 1 million difference shows that monetised ethnic profiling is not incidental but central to the GeoMatch algorithm's business strategy. These details, hidden in plain sight, whether in footnotes or plots in appendices, support our hypothesis that COA may have become complicit in ethnic profiling—not through malice, but through haste and misplaced trust in private expertise. While this hypothesis would explain how the situation arose, it does not justify the lack of due diligence and accountability from public agencies, given the large volume of research findings, from Molnar (2024) as well as others, warning how such partnerships expose groups in vulnerable situations to the non-ethical market-oriented priorities of private actors for whom technological experimentation overrides social responsibility.

In conclusion, the automation of refugee resettlement and labour-market integration policies through recommender systems, such as the GeoMatch algorithm, can reproduce pre-existing socio-economic inequalities and negatively affect refugees' fundamental rights in terms of freedom from discrimination, self-determination, and the preservation of human dignity. Among the possible sources are solutionism logic and the dominant influence of private parties over both refugees and public institutions. Accordingly, we recommend that COA's implementation of the GeoMatch algorithm should be seriously reconsidered until these critical concerns are addressed. Recommender systems could potentially be a valuable tool to empower refugees with information and agency over their lives. However, their current deployment is characterised by unreliable data and premature institutional integration, rendering them socially harmful. Until their implementation is proven to be inclusive and aligned with fundamental rights, these tools must, at most, be considered—as they were initially designed—as nudging tools used for voluntary guidance with a full explanation of their logic, rationale, and outcomes.

Beyond the empirical findings, our case study also contributes methodologically by demonstrating the value of FOI requests combined with critical close reading as a structured approach for studying opaque governmental systems. By integrating FOI-based data collection, we propose a methodological template for investigating black-boxed algorithmic systems in migration governance. We show how FOI materials can function as live archives—if approached with interpretive tools that reveal how state logics and exclusions are embedded within them. Our approach underscores the power of combining journalistic and academic research practices to navigate institutional opacity, while highlighting the importance of reflexivity, triangulation, and positionality in reading what such archives expose and conceal.

Finally, this study is not without limitations. While researchers need not provide empirical justification for caution—that responsibility lies with the state—future work could explore the algorithm's quantitative outputs after removing demographic and procedural variables. Qualitatively, future research should engage with refugee communities regarding their perspectives and experiences with relocation policies; their voices are absent in this study, which relied solely on official documents. Speaking with case workers could also provide valuable insight while reducing the burden on refugees, as staff accumulate knowledge from many cases over time.

Conflict of Interests

The authors declare no conflict of interests.

Data Availability

The data, consisting of 35 documents, is available upon request.

LLMs Disclosure

The authors used the LLM ChatGPT 4.1 and 5.0 for grammar and style improvement of previous versions of the article, while the authors verified the quality of the edits. Prior to submission, the final version of the article was fully copy-edited by a professional human proofreader.

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Digital Technologies and Refugees' Social Inclusion: The Use of ICTs by NGOs

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Abstract

Numerous studies highlight the direct impact of digital technologies on migrants, shaping their decisions to migrate, their migration trajectories, and their experiences in their destination countries. This article contributes to this emerging literature by exploring the influence of digital technologies on the inclusion of migrants, specifically by examining how non-governmental organizations (NGOs) use information and communication technologies (ICTs) to support refugees—an area that has received limited attention in the existing literature. In particular, the article focuses on NGOs in Türkiye and the Netherlands. We conducted interviews with representatives of 23 NGOs across the two countries to understand how and why they use digital technologies. The findings show that NGOs in both countries use ICTs extensively for (direct and indirect) communication, advocacy, and service provision, with clear benefits but also challenges. ICTs enhance visibility and reach, support multilingual and remote service delivery, and help NGOs raise funds and build an institutional identity. Challenges include unequal access to digital tools and insufficient digital literacy by both NGO staff and their clients, lower engagement in online formats, and the risk of losing personal connection due to standardized digital processes.

1. Introduction

Contemporary societies are becoming increasingly digitalized, with the use of digital technologies spreading across all sectors (European Commission, 2022). This shift influences various aspects of social life. Numerous

studies highlight the direct impact of digital technologies on migrants, shaping their decisions to migrate, their migration trajectories, and their experiences in their destination countries (Alencar, 2020; Dekker & Engbersen, 2014; Komito, 2011). Digitalization is therefore implicated in migrants' overall social inclusion, defined as "the process of improving the terms on which individuals and groups take part in society—improving the ability, opportunity, and dignity of those disadvantaged on the basis of their identity" (World Bank, n.d.).

This article contributes to this emerging literature by exploring the influence of digital technologies on the social inclusion of migrants, specifically examining how non-governmental organizations (NGOs) use information and communication technologies (ICTs) to support refugees—a particularly vulnerable population in terms of social inclusion, due to increased digitalization in society (Alencar, 2020).

In 2023, the number of internationally displaced persons reached a record high of over 36 million, including more than 8 million asylum seekers (UNHCR, 2023). The number of refugees under UNHCR's mandate more than doubled between 2013 and 2020. This increase is linked to long-standing conflict dynamics in certain countries (e.g., Afghanistan, Congo, Myanmar, Syria, and Sudan) and the refugee-protection crises in Europe (2014–2015) and other regions (e.g., the Venezuelan crisis in South America).

Research has highlighted the crucial role of ICTs in facilitating migration and reshaping social inclusion (Alencar, 2020; Dekker & Engbersen, 2014; Godin et al., 2025; Komito, 2011). First, ICTs enable migrants to stay connected with family and friends in their country of origin, while fostering new social connections globally. Second, they play a key role in the migration and settlement process by providing access to valuable information that might otherwise be difficult to obtain.

In addition, the process of social inclusion involves adapting to a new society and its increasing levels of digitalization. In Europe and beyond, ICTs have become powerful tools for managing bureaucratic work and everyday life needs (European Commission, 2022). Governments and NGOs can capitalize on ICTs to enhance the delivery of services and support to migrant populations, but they may also entail significant challenges. For instance, increasingly complicated digital bureaucracies, especially if paired with limited digital skills, may hinder migrants' access to essential online services related to their settlement. Indeed, they increasingly undergo ICT-mediated interactions in accessing information and services from national and local governments. A lack of familiarity with the digital environment might therefore create an additional layer of exclusion (Martin-Shields et al., 2022).

NGOs act as a bridge between refugees and increasingly digitalized state systems (Diaz Andrade & Doolin, 2019; Schreieck et al., 2017), helping individuals navigate both online services and broader inclusion processes. Despite the increase in ICT use for refugee support and its potential challenges, there is a notable gap in the literature. While many studies explore the use of ICTs by refugees (and migrants in general), the use of ICTs by support providers, especially NGOs, is largely disregarded (Ślęzak-Belowska et al., 2026).

To provide new insights on the topic and contribute to filling this gap in the research, we focus on how NGOs use ICTs to support refugees. This article shifts the analytical lens from migrants' own use of ICTs—an area that has already received substantial scholarly attention—to the practices of NGOs as key intermediaries in the inclusion process. We are particularly interested in how and why they use digital technologies, as well as the associated benefits and challenges. In particular, we propose the following main research question: What are the reasons for and implications of NGOs' use of ICTs in the support they provide to refugees?

To answer this research question, we conducted interviews with representatives from 23 NGOs across the Netherlands and Türkiye. We selected these two countries because they both encounter challenges in managing the inclusion of migrants, though they differ in scale: As Türkiye hosts a larger refugee population, government agencies and NGOs face significant pressure, potentially affecting the quality and availability of services that foster inclusion. Moreover, the Netherlands benefits from a well-developed digital infrastructure, whereas Türkiye experiences disparities in digital accessibility (e.g., regional disparities in internet access and the limited adoption of digital systems). These differences may impact how support is delivered, including the extent to which digital tools are utilized to provide assistance.

In what follows, we first present the background to the research, focusing on ICTs and the role of ICTs for refugees' inclusion (Section 2). We then present the methodology (Section 3) and the main results of our comparative research on the purpose of ICT use, its benefits, and challenges (Section 4). We conclude by reflecting on the broader implications of these findings and discuss the study's limitations, which may pave the way for future research (Section 5).

2. Background

2.1. ICTs for Refugee Inclusion

The concept of "information and communication technologies" (ICTs) encompasses all technical tools and systems designed to manage information and facilitate communication. This includes both hardware—such as computers and networking devices—and software applications that enable data processing and connectivity (Eurostat, n.d.). Digital communication technologies can be categorized into asynchronous and synchronous forms (Cormode & Krishnamurthy, 2008; Walther et al., 2011). Asynchronous communication does not require users to be online simultaneously and includes tools such as forums, newsletters, and emails. In other words, they enable interaction without requiring real-time engagement. These tools are particularly useful for refugees who live in remote locations or have inconsistent internet access. Synchronous communication, on the other hand, allows for real-time discussions and information exchange, allowing for immediate communication and support. Examples of synchronous communication tools include social media platforms (e.g., Facebook, Twitter, Instagram) and messaging applications (e.g., WhatsApp and Telegram). Understanding these distinctions is essential for evaluating how different forms of communication serve the purpose of support providers (e.g., NGOs) and the needs of specific groups (e.g., refugees).

As digital transformation progresses, we see a growing digitalization of public services and citizen–state interaction, particularly in relation to accessing support and essential services. The evolution of ICTs has therefore profoundly impacted how refugees communicate, access support services, and develop their lives in their new societies (Alencar, 2020; Leurs & Smets, 2018).

Leveraging these technologies effectively will be crucial for ensuring that refugees receive the help they need, regardless of their location. Digital platforms can provide refugees with better access to fundamental services such as healthcare, education, and job opportunities. Electronic government (e-government) services can simplify administrative procedures such as visa processing, work permit applications, and registration for social services, ensuring that migrants can more easily access essential resources (Diaz

Andrade & Doolin, 2019; Martin-Shields et al., 2022). All together, these create a (digital) arrival infrastructure shaping the experiences and thus the lives of migrants (Leurs, 2019).

A growing body of research examines the connection between migration and ICTs (Alencar, 2020; Dekker & Engbersen, 2014; Godin et al., 2025; Komito, 2011; Leurs & Smets, 2018; Masiero & von Deden, 2022). Scholars in this field have analysed how digital tools influence both migration governance and the daily lives of migrants. When it comes to the role of ICTs in fostering social inclusion, existing studies focus on migrants' perspectives and explore how they use ICTs (such as social media) to communicate and access information (Alencar, 2020; Latonero & Kift, 2018). Most of the existing literature points to the fact that ICTs play a crucial role in sustaining social relationships, enabling migrants to maintain ties with friends and family in their countries of origin while also forming new connections with locals, fellow migrants, and support organizations (Alencar, 2018; Gillespie et al., 2018; Komito, 2011; Kutscher & Kreß, 2018). Many migrants engage in online communities and discussion forums where they exchange experiences and practical advice, creating a collective knowledge-sharing space (Alencar, 2018). For example, online resources help migrants secure housing, connect with assistance networks, and take part in local cultural and community events.

Nonetheless, research also highlights notable challenges. A key concern is the "digital divide," which reflects inequalities in access to the internet and digital tools. Barriers such as financial constraints, language difficulties, and limited digital skills can prevent migrants from fully utilizing these resources (Alam & Imran, 2015). In their work, Lintner and Zadra (2025) identified three main challenges for asylum seekers: access to digital infrastructure (i.e., the material and digital instruments); lack of digital literacy (i.e., the skills needed to navigate digital environments); and a lack of digital capital (i.e., the ability to convert digital engagement into other forms of capital and tangible life improvements).

Migrants' (including refugees') use of ICTs has been extensively analysed, but there is almost no literature on how support organizations use digital platforms or services, with three notable exceptions (Ślęzak-Belowska et al., 2026). First, Schreieck et al. (2017) conducted an action research study, within the context of a non-profit initiative, to assess the application of governance mechanisms informed by existing research on platform and community governance. Second, Turkay and Turkay (2019) conducted interviews with representatives from eight Turkish NGOs to investigate the use of ICTs in providing support to Syrian refugees. They found that these organizations utilize digital tools in three key ways: for operational purposes (e.g., keeping track of the refugees and storing private and sensitive information); mediation between local and refugee communities (e.g., using social media to spread positive messages, images, and videos regarding refugees to amplify their voices); and to disseminate information (e.g., inform refugees about services). Third, Martin-Shields et al. (2022) investigated the use of e-government services among Venezuelan migrants in Colombia, comparing their access and usage patterns with those of short- and long-term Bogotá residents. This study found that, despite having internet access, migrants were significantly less likely to use e-government services than locals, leading the authors to conclude that access to ICTs alone is insufficient and that other barriers might play a crucial role. Overall, however, there is a paucity of literature on the types of ICTs used, and their advantages and challenges (Ślęzak-Belowska et al., 2026). In addition, only Turkay and Turkay (2019) have taken the perspective of service providers that, we argue, is essential for understanding how ICTs are used for service provision.

In sum, ICTs hold significant potential to support migrant and refugee inclusion by facilitating communication, access to services, and community engagement. While digital services have the potential to

enhance migrants' access to information and support, and to reduce instances of discrimination or inappropriate treatment—as may occur in interactions with human officers—digitalization may also reinforce structural exclusion by presuming familiarity with, and access to, ICTs. Such challenges have not been fully explored. A deeper understanding of how governmental and non-governmental service providers utilize these technologies, and the barriers migrants face in accessing them, is essential for designing inclusive digital strategies. To contribute to closing this gap, this article shifts the analytical focus from individual migrants' use of ICTs to the practices of service providers.

2.2. Comparing the Netherlands and Türkiye: Migration and Digitalization

Migration has been a defining issue in both the Netherlands and Türkiye, as both countries host a sizeable number of refugees, but there are significant differences between the two countries.

First, according to UNHCR (2023), the total number of asylum seekers in the Netherlands was around 44,000, with approximately 230,000 refugees under the UNHCR mandate (approximately 1.3% of the entire Dutch population). Türkiye, on the other hand, hosts one of the largest refugee populations in the world. As of 2023, Türkiye was home to approximately 3.2 million registered refugees (approximately 4% of the population) and 222,000 asylum seekers. Given its geographic location, Türkiye has been a primary destination for those fleeing war and economic hardship in Middle Eastern countries. Managing such a large influx of refugees has placed immense pressure on Türkiye's infrastructure, economy, and social services (Benner et al., 2015).

Second, Türkiye and the Netherlands have different levels of digitalization. In Europe, the use of digital tools is spreading across all sectors, with the Netherlands at the forefront of the digitalization of the economy (European Commission, 2022). With widespread internet access, a high degree of automation, and a well-integrated e-government system, Dutch society leverages digital tools for various services, including immigration management and the social inclusion of refugees (European Commission, 2022). Online portals, services, and digital identity verification systems have been incorporated into asylum application processes, social service access, and civic integration programmes. Türkiye has made significant progress in digitalization over the past decade, but its digital infrastructure and integration of digital tools into public services remain uneven. According to several international reports (ITU, 2023; OECD, 2023), Türkiye has broadened internet access and increased the availability of e-government services, particularly through platforms such as e-Devlet (the national e-government portal), through which citizens and residents, including refugees with legal status, access a variety of administrative services. However, challenges persist in terms of user friendliness, digital literacy, regional disparities in internet provision, and the limited adaptation of digital systems to refugees' needs.

3. Methodology

For the present research, we conducted qualitative interviews with NGO representatives from the Netherlands (10 interviewees) and Türkiye (13 interviewees). To identify potential interviewees, the research team compiled a list of NGOs using a combination of online sources, such as published reports, organizational websites, and the field researchers' existing professional knowledge and networks. Representatives were contacted by email and/or telephone, with approximately 40% agreeing to an

interview. Acceptance or rejection of our interview request was not associated with any specific type of NGO.

Face-to-face interviews were conducted, focusing on refugee support in each country. The NGOs we interviewed focus on different aspects of refugee support, such as humanitarian relief, social inclusion, housing and accommodation, language support, legal assistance, advocacy, and education and training. Table 1 provides more details of the representatives and their respective NGOs.

The interviews were conducted in 2023 and 2024, with each lasting approximately 30 minutes on average. They were conducted in English in the Netherlands and in Turkish in Türkiye (and subsequently translated into English by the interviewer). During the interview, the following main topics were addressed: the activities of the NGO; the role of the interviewee within the organization; and their use of digital technologies to support refugees. Respondents were asked to reflect on the importance of ICTs in their operations, which specific tools or platforms they use (e.g., WhatsApp, Google Translate, client management systems), and how these technologies facilitate communication and service delivery. Further questions explored the benefits of digital solutions—such as speed, efficiency, and accessibility—and the barriers

Table 1. Overview of the interviewed NGOs.

	NGO activities	Country
1	Housing, accommodation, and other administrative support	NL
2	Organize temporary housing	NL
3	Build refugees' social network through Dutch language learning	NL
4	Social inclusion	NL
5	Legal assistance to undocumented refugees	NL
6	Support for LGBT+ refugees	NL
7	Social inclusion	NL
8	Education	NL
9	Social inclusion	NL
10	Advocacy	NL
11	Advocacy	TR
12	Communication and legal support	TR
13	Communication and legal support	TR
14	Provision of educational and psychosocial support	TR
15	Provision of material support	TR
16	Provision of material support	TR
17	Humanitarian relief	TR
18	Humanitarian relief	TR
19	Psychological support	TR
20	Legal support	TR
21	Provision of material support	TR
22	Provision of material support	TR
23	Psychological and mental health support	TR

encountered—including language difficulties, limited digital literacy among refugees, and infrastructural constraints such as poor internet connectivity. Respondents were then asked to provide concrete examples of both successful and problematic experiences of digital tools in their work with refugees. This open-ended, semi-structured approach enabled the research team to gain detailed insights into the operational realities, challenges, and opportunities surrounding the digital support of refugees across different organizational contexts.

The interviews were then transcribed by the interviewers and analysed using coding in ATLAS.ti. This allowed us to systematically identify recurring themes and insights.

To protect the anonymity of our respondents and their organizations, we will not include any identifying details about the NGOs or their representatives in the presentation of the findings (Section 4). This is particularly necessary in light of the increasingly hostile socio-political climate and broader global discourse around migrants and NGOs. Quotes will be attributed only in general terms (e.g., "a Turkish NGO" or "a Dutch NGO"), without linking them to specific individuals or respondent numbers. This approach is essential to ensure the safety and confidentiality of those involved.

4. Findings

In this section, we present the findings of our research. We first address the purpose of ICT use by NGOs, before moving to the associated benefits and challenges.

4.1. Type of Use and Kind of ICTs

When it comes to the ICT use, three main purposes emerged from our interviews: (indirect and direct) communication; advocacy; and support provision. In general, NGO representatives we spoke with underscored the critical importance of digital technology to facilitate or enhance their NGOs' communication, support provision, and advocacy activities. The specific digital tools NGOs employ mostly depend on the purpose of their use.

4.1.1. Communication

ICTs play a pivotal role in enabling NGOs to maintain both direct and indirect communication with beneficiaries and other stakeholders, including partner organizations, donors, and the general public. Our interviews highlighted three key types of communication.

First, NGOs have to reach out to (potential) beneficiaries to promote their services and events. A Dutch NGO representative states that "ICTs bridge the gap between people who otherwise would have never met in real life, now we have a way of meeting them...without actually having to be face to face." Many NGOs use both synchronous and asynchronous ICTs, mostly in an asynchronous way (i.e., their website and social media channels) to inform their potential beneficiaries about their services and events. For example, one Turkish NGO actively employs Facebook, Instagram, and WhatsApp to disseminate information:

Social media is a very important tool for us to meet with beneficiaries. We organize educational programs, workshops. So we definitely announce them with posters on social media...we announce them in WhatsApp groups, and...in Facebook groups where Syrians are highly present.

Similarly, a Dutch NGO maintains both a dedicated website and a Telegram channel to reach out to potential beneficiaries. Beyond one-way dissemination, ICTs can also facilitate more interactive forms of engagement. A notable case is a nationwide Dutch NGO that organizes Zoom sessions with supported refugees, enabling remote participation in workshops, Q&A sessions, and community-building activities.

Second, ICTs are used for direct communication between beneficiaries and NGOs. This runs through a variety of more direct channels, often allowing for both synchronous (e.g., WhatsApp and Telegram) and asynchronous (e.g., email) communications. Channels are chosen to cater to the specific needs of the target group. For example, a representative from a Dutch NGO told us:

We use WhatsApp a lot because when we use it, refugees that don't understand English or the Dutch language can easily use the translator app to translate messages sent to them from the WhatsApp app and understand better compared to when you talk to them.

Another Dutch NGO uses Telegram when assisting Ukrainians, as the app has particularly strong uptake among this community. In another example, an NGO in the Netherlands supporting refugees from the LGBT+ community commented:

I use Instagram rather than Facebook, because Instagram is a safe place for members of the LGBT community, and you can meet real people there, compared to Facebook, where there are many fake people. When we have events, I won't post [about] it on Facebook because of the safety of refugees in my community.

In addition, these channels can be tailored to specific services. For instance, WhatsApp is used to communicate between clients and legal advisors, as underlined by this Dutch NGO:

So, normally, if you only do it by phone, then you must keep remembering it, the message you gave, and if we can write it down, they don't have to remember, they can just read. So, it can be quite important for them to read what exactly, because it's sometimes from a legal point of view, it's sometimes very important to have the right message.

Third, NGOs use their websites to showcase their work, attract donations, and build their institutional identity. It is important for NGOs to publish articles, reports, and press releases on their websites, and then increase their exposure by linking to them through social media platforms. The importance of a website is explicitly underscored by the representative of a Turkish NGO:

Posts can disappear on social media...but the website is not like that....Now, if you share a press release with the link and images of our website, people will also be able to access our website and see what you have done before, who you are and your corporate movie....They will see your corporate identity, they will see your depth.

4.1.2. Advocacy Activities

ICTs are also central to NGOs' advocacy activities, enabling them to influence public discourse, challenge misinformation, and mobilize support for migrants' rights. While both synchronous and asynchronous ICTs are employed for such purposes, asynchronous communication remains the predominant mode. The most intuitive and widespread application of ICTs in advocacy is the strategic use of social media. Platforms such as Instagram, Twitter/X, Facebook, YouTube, and TikTok are leveraged to directly address prevailing misconceptions about migration by disseminating counter-narratives and sharing factual information. For example, one Turkish NGO produces and distributes press releases, videos, and other multimedia content across multiple platforms with the explicit aim of combating disinformation and hate speech. As one representative explained:

> Social media is generally one of our main areas of focus. This is because misinformation, racism, and increasing hate speech were particularly influential in our starting point....We produce content that addresses disinformation, generates more confirmed information, and counteracts hate speech.

Similarly, several Dutch and Turkish NGOs emphasized that Instagram functions as a powerful advocacy platform for reaching and engaging global audiences and for increasing organizational visibility. These organizations noted that sustained activity on Instagram allows them to gain followers, enhance recognition, and attract potential partners or donors.

However, the advocacy potential of ICTs extends far beyond traditional social media posting. For instance, a Turkish NGO representative noted that other pro-migrant advocacy organizations use digital petition tools, such as Google Forms or Microsoft Forms, to conduct e-signature campaigns in support of specific policy changes or community initiatives. Such tools allow NGOs to mobilize supporters quickly and efficiently, enabling direct civic participation even from geographically dispersed populations. Synchronous ICT applications also play a role in advocacy, particularly when NGOs seek to create interactive, dialogical spaces for public engagement. Several interviewees described using live webinars to advocate for their objectives and interact with their audience in real time. For example, a Turkish NGO has a "programme called the Migration Path; 20 minutes each [episode], [with] people interested in migration, experts, or migrants. We invite them, we talk on YouTube." As the NGO representative explained, these sessions aim to humanize migration debates, foster informed discussion, and connect diverse audiences with credible voices on the subject.

4.1.3. Support Provision

NGOs also employ ICTs to provide tangible and non-tangible support, beyond mere communication. The specific digital tools depend on the nature of the services provided, and whether a service requires real-time or delayed interaction, or a mix of both.

NGOs that provide practical aid use digital technologies to manage their aid distribution and to reach their beneficiaries. For instance, one Dutch NGO that provides housing with host families uses a database created with Google Forms filled out by both host families and guests, and a client management system with "matching software" to connect guests to suitable families. A Turkish NGO that provides financial aid shared:

"In 2019…we distributed something called 'cash cards.' Managing contact with six thousand people individually would have taken a tremendous amount of time." However, with "a small programmatic equation and a simple schedule," the organization refilled the accounts monthly and sent programmed messages to the financial aid recipients. Finally, a small Dutch NGO set up a Facebook "helpdesk" to run a bike collection project, and used a WhatsApp group to share pictures of items—such as beds or cooking equipment—available for people living in a Dutch camp.

NGOs also rely on ICTs to provide non-tangible support (e.g., education, health and psychosocial support, or legal services). One NGO developed its own app that functions as a centralized information source for people living without documents in the Netherlands. The app was created to help people find the information they need in their location, and holds a database of organizations and community places, organized by category, such as (night) shelters and safe spaces. Similarly, a representative of a Turkish NGO explained that they developed a "platform that includes materials about mental health. You can start by taking a mental health test through the platform. You can also receive textual or face-to-face consultations."

Other organizations provide online consultations (e.g., through platforms such as Free Convenes and Zoom). Organizations that offer legal aid use online applications and websites to provide basic guidance and information on rights and procedures. For example, one Dutch NGO's website lists legal information and uses WhatsApp for direct contact with people in an asylum facility, in addition to email for legal aid questions. This allows for quick, written communication with refugees, regardless of their location.

Finally, NGOs involved in education and training programmes strongly rely on ICTs. One organization, for instance, provides online education programmes for Syrian children in Turkish primary schools through Zoom. Another organization offers traineeships through online platforms to strengthen the career prospects of newcomers in the Netherlands. Another Dutch NGO uses Slack as its main communication channel, where participants, trainers, and mentors can all communicate and collaborate on their training programme.

4.2. Benefits and Challenges

Having examined the primary ways in which ICTs are used, let us now turn to the key benefits and challenges they present.

4.2.1. Benefits

The use of ICTs undoubtedly comes with benefits, evident in the previous section. This section illustrates these benefits in more detail.

First, digital technologies help to increase NGOs' reach, allowing them (and the information and content they produce) to become more visible to potential beneficiaries. Enhanced information access also benefits beneficiaries, as they can independently access vital information about rights and services. The representative of the Dutch NGO that developed its own multilingual app to support people living without documents in the Netherlands explained that the app made "people…more independent in finding the information they need."

Second, ICTs also increase the reach of services and support provision. Through remote services, digital technologies facilitate the maximization of NGOs' support, allowing people to take part in NGO programmes regardless of their location or personal schedule:

> Refugees are literally everywhere in the Netherlands, in places which don't even have a train station or a bus stop, and the only way those people can be reached is through digital means. I can give an example, a place like Luttelgeest in Flevoland, it's a village. There's no bus, there's no train station. So, one person found me on Instagram, and then he referred three more people, and so now I've reached out to four people without even lifting a finger.

This increased reach is also linked to the fact that online services allow for multilingual communication, making it easier to overcome language barriers. One interviewee explained that service providers and beneficiaries may easily use translator apps for their digital communication, and that digital applications allow both audio and written communication, which is an advantage as compared to paper correspondence:

> I think [digital tools] are perfect because you can speak and write with them. Some people can't write but they speak perfect. So, I think also it's the best.

Third, ICTs may help accelerate NGOs' work and make them more efficient. ICTs help NGOs respond quickly when the demand for a service suddenly increases, as digital tools streamline and accelerate the assessment and administration of recipients' needs and personal data. For instance, when thousands of Ukrainians arrived in the Netherlands in early 2022, a Dutch NGO that connects host families with newcomers transitioned from physical paperwork to digital administration processes. As a Turkish NGO noted:

> I believe it is almost impossible to work without using these technologies....We have a huge amount of data related to families,...and processing this data through technology accelerates the assessment process and facilitates timely access to people's needs.

Lastly, NGOs themselves benefit from the enhanced visibility, especially in terms of fundraising. Digital technologies promote NGOs online and thus help raise awareness and attract donors and volunteers from all over the world. A representative of a Turkish NGO explained:

> The more visible content we produced on social media, the more our general donations increased....They didn't know us before. So, it really made a nice difference for us. Our donations kept increasing....Our general volunteer applications also increased a lot.

4.2.2. Challenges

Despite its benefits, the use of ICTs is not without challenges. NGO representatives identified three main types.

First, people with limited access to the internet or digital tools, and those with limited digital skills, may be hampered by the digitalization of NGO (and governmental) services. This applies to both beneficiaries and staff. Some NGOs mentioned that unstable internet access makes their work impossible at times:

When the system is not working, when we have no Wi-Fi here, it's terrible as nobody can work. In a digital world [like] today, if there is a network failure, you cannot do anything. Clients must wait or come back another day resulting in delays in getting work done.

This also applies to clients' internet access:

They only have free Wi-Fi in the asylum center where they live. They don't have free internet on their phone. When they are out of the center, they have to subscribe to a personal internet plan and most of the refugees are unable to do this due to financial constraints or some other reason best known to them. Some of them see it as an additional expense. This made it difficult for us to communicate with refugees when there is a matter of urgency, when we need urgent information from them, there may be a delay in response as they might be outside the asylum center.

Where digital literacy is concerned, staff members may also struggle to adapt to their NGOs' digital operations. One NGO representative shared that "teaching someone who is not familiar with digital tools can be difficult," and another stressed that the "main obstacle is technological illiteracy among volunteers." In particular, the operation of complex software and rapid digital developments may give staff a sense of "falling behind." This may create a need for more specialized staff, such as social media experts or promotional content creators with specific expertise in Adobe Photoshop, for example. NGOs with client management systems need to operate them "consistently and accurately" to ensure streamlined collaborations among colleagues.

This also applies to NGOs' clientele. Some beneficiaries may struggle with the specific digital infrastructure in their new institutional and bureaucratic context, or they may have limited experience with operating (particular kinds of) digital devices. One representative of a Dutch NGO gave their view on the matter:

A lot of refugees don't have a computer in the country where they come from, and they cannot operate digital tools. This can be frustrating for the refugees and frustrating for us too and becomes time-consuming.

Limited familiarity with digital tools, for instance due to age or limited exposure, is a complicating factor for both NGO employees and their beneficiaries, especially when paired with a digitally demanding bureaucratic system, as exists in the Netherlands.

Second, sustaining online engagement remains a significant challenge for NGOs working with refugees. While digital tools offer flexibility and broad accessibility, they often fall short of fostering active participation, collaboration, and a sense of connection among participants. A Dutch NGO emphasized that certain training projects are intentionally conducted in person, as face-to-face interaction leads to greater involvement and more meaningful group dynamics. As one representative explained:

We have a few project groups, so they are. It means that they are building a project together in a group of four people. When we do this in person…we get a lot of positive [things out of it], much [more] positive feedback than doing it online, because then you sit around with your, with your, with your mates and with the mentors and they have this, you know this big board and they draw the tasks on the board, they do the planning for the project. And this was more effective than doing it online. I wouldn't say that [it was] a barrier [doing] it online, but it is more effective [doing it in person].

A Turkish NGO shared a similar experience:

> Especially after the Covid-19 period, we conducted some of our training programmes online for both refugees and Turkish citizens. Unfortunately, it seems that this digital media does not provide the same interaction as face-to-face interaction. Attendance can be a problem, as people don't want to participate by looking at a phone screen. They may not regularly attend classes and could be absent. Even if they attend, they may not get much out of the lesson.

This underlines how online settings can be challenging for the quality of interaction and the overall learning experience, especially in activities that rely on collaboration, hands-on guidance, and peer-to-peer engagement. Naturally, such engagement may further be thwarted when digital literacy is lower.

Third, the use of digital technology may lead to rather standardized practices, putting complex cases beyond their scope. They also fail in situations where the "human touch" is critical. A representative from a Turkish NGO states that assessing a person's needs after a disaster using a tablet "turns the person in front of me into a robot. This leads to the loss of the gentle human feeling that I understand what you are going through." A lack of in-person contact prevents a holistic view of the NGO's clients, as stressed by this representative of a Dutch NGO:

> You cannot consider the whole person whom you're facing. When you see a person in real life, then you can see, of course, if the person has, for example, psychological problems, or is maybe somebody who does not understand English that well, or has not had lots of education....If you're answering an email or WhatsApp...you don't know if they understand it and if you have helped them in the right way.

5. Conclusion

This article has examined how NGOs in the Netherlands and Türkiye use ICTs to support refugee populations. By focusing on NGOs rather than refugees themselves, this study addresses an important gap in the literature, which has predominantly centered on migrants' own use of digital tools (Alencar, 2020; Dekker & Engbersen, 2014; Komito, 2011), while largely overlooking how ICTs are operationalized by support providers (Ślęzak-Belowska et al., 2026). This article shifts the analytical focus away from migrants' individual use of ICTs, an area extensively studied, and instead examines how NGOs themselves use digital tools to support inclusion efforts. We conducted interviews with representatives of 23 NGOs across the two countries to understand how and why they use digital technologies, as well as their associated benefits and challenges.

Our findings highlight that, despite differing levels of digitalization, NGOs in both countries make extensive use of ICTs. In fact, we observed no substantial differences in the ICTs they can or cannot use; any cross-country differences were more related to infrastructure (e.g., lack of a stable internet connection). Choices about how (and how much) technology is used appear to be influenced more by the NGO's area of work or specific objectives than by national context.

NGOs' ICT use spans three main domains: (direct and indirect) communication; advocacy; and service provision (both tangible and non-tangible support). These categories align with and expand on the typology

identified by Turkay and Turkay (2019), who found that ICTs are used for operational purposes, disseminating crucial information about services, and mediating relationships between local and refugee communities (e.g., through positive storytelling on social media). We confirmed these purposes, underlining the importance of ICTs in communicating with refugees to promote or provide services, as well as raising an NGO's institutional presence. Table 2 presents a synthesis of our findings, organized around the three key domains identified.

Table 2. Usage, advantages, and challenges (by domain).

Domain	ICTs used	Benefits	Challenges
Communication (direct and indirect, institutional presence)	WhatsApp, social media (e.g., Facebook, Instagram), email, video calls	Fast, real-time contact; wide reach; accessible communication with refugees across locations	Limited digital literacy; unstable internet access; refugees lacking devices
Advocacy	Social media platforms, websites, digital campaigns	Raising awareness; mobilizing support; low-cost outreach	No particular challenges
Support/service provision (tangible and non-tangible support)	Online platforms; WhatsApp, apps	Efficient service delivery; centralized data; scalable outreach; flexible access to services	Lower engagement of beneficiaries; Standardization of support/relationship

As this table shows, our research reveals the fragmented and sometimes ad-hoc ways in which NGOs engage with digital tools. In addition, the benefits and challenges associated with ICT use often overlap and cross the boundaries between communication, advocacy, and support.

A key insight from this study is the critical distinction between synchronous and asynchronous ICTs (Cormode & Krishnamurthy, 2008; Walther et al., 2011) in shaping NGOs' digital practices. Synchronous tools (e.g., WhatsApp, Zoom, or live chats) are indispensable for real-time interactions, enabling NGOs to provide immediate support through psychological consultations, legal advice, or live educational sessions. In contrast, asynchronous tools, including websites, online forms, and social media posts, allow NGOs to establish a continuous institutional presence, disseminate information broadly, and facilitate service access at the refugees' own pace. This dual approach reflects a strategic balance: NGOs tailor their digital engagement to the demands of each service, ensuring immediacy where necessary, while maximizing accessibility for refugees who may face irregular connectivity or limited availability. By leveraging synchronous ICTs for direct, real-time support and asynchronous channels for needs assessments, service coordination, and information sharing, NGOs optimize both responsiveness and reach.

The study also revealed various benefits and challenges associated with the use of ICTs. In doing so, the study highlights a paradox: While ICTs hold considerable potential for improving service delivery and communication, their efficacy is constrained by structural barriers such as digital literacy gaps and uneven access to technology. On the one hand, ICTs offer significant benefits for NGOs, including greater visibility, broader outreach, and more efficient service delivery. Digital tools not only enable beneficiaries to access vital information independently and across language barriers, but also allow NGOs to scale up their support, respond quickly to emerging needs, and attract donors and volunteers more effectively. On the other hand, ICTs present several challenges for NGOs. In their study, Lintner and Zadra (2025) identified limited access

to digital infrastructure, low levels of digital literacy, and a lack of digital capital as the three key challenges faced by asylum seekers in the digital realm. Our research confirms that limited digital access and skills among both beneficiaries and staff can hinder participation and reduce the effectiveness of online services. In addition, it expands Lintner and Zadra's (2025) analysis by showing that engagement in digital activities is often weaker compared to in-person formats, particularly for collaborative or hands-on learning. Moreover, the use of standardized digital procedures can reduce flexibility and empathy in service delivery, making it harder to respond to complex individual needs and maintain a human connection. Overall, despite their advantages, digital tools risk perpetuating structural exclusion by assuming that all migrants can be reached in this way. These challenges are consistent with broader concerns in the literature about the digital divide and the risk of exclusion from increasingly digitalized societies more generally (Lythreatis et al., 2022).

The study also has its limitations, however. The sample is limited to 23 NGO representatives, and while it includes a diverse range of organizational types and missions, it does not capture the full spectrum of civil society actors operating in either country. This is also why we refrained from making strong comparative statements about the two countries. Additionally, the fast-changing nature of digital technologies and migration dynamics means that findings may quickly become outdated. Longitudinal or follow-up research would be valuable in tracking how NGOs' digital strategies evolve in response to shifting technological, social, and political landscapes. Despite these limitations, this research contributes to the growing literature on ICTs and migration (Alencar, 2020; Godin et al., 2025; Leurs & Smets, 2018; Masiero & von Deden, 2022), offering empirical insights and conceptual distinctions—such as synchronous versus asynchronous ICT use—that can inform both academic debates and practical interventions. It highlights the importance of equipping NGOs and refugees alike with the skills, tools, and infrastructure required to ensure that digitalization contributes meaningfully to social inclusion rather than deepening marginalization.

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Conflict of Interests

The authors declare no conflict of interests.

Data Availability

Due to the nature of the research, data sharing is not applicable to this article.

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ARTICLE

Navigating Integration in The Netherlands: Syrian Refugees, Digital Practices, and Inclusive Communication

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Abstract

This study explores how digital communication technologies and informal actors facilitate and shape the communication and network development that support Syrian refugees in navigating integration in the Netherlands. It examines how digitalization introduces both opportunities and challenges in addressing language barriers, cultural differences, and bureaucratic procedures. Drawing on semi-structured interviews with 14 Syrian refugees and six Arabic-speaking mentors on whom they relied for support, the study demonstrates the significance of digital technologies and social networks in helping refugees navigate the increasingly digitalized Dutch welfare state and foster new social connections. The findings highlight the potential of platforms such as WhatsApp, Facebook groups, and other online communities as dynamic tools for facilitating access to institutional information and for establishing both online and offline social networks. These networks are essential for building trust, which in turn supports the provision of translations, information verification, and navigation of digitalized procedures. In addition, the results show that offline interactions with mentors and intermediaries offer translated content and culturally contextualized guidance that further enhances integration. Overall, the study conceptualizes integration as a relational process shaped by the interplay between online and offline interactions.

Keywords

digital tools; digitalization; media literacy; mentors/intermediaries; misinformation and migration; social media; social networks; socio-economic inclusion; Syrian refugees

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1. Introduction

Digital communication technologies are essential for societal integration. They foster daily opportunities for inclusion, engagement, and belonging in increasingly varied and digital environments. Understanding integration processes through inclusive communication and digital engagement highlights the relational and co-constructed nature of inclusion, where both technological frameworks and human interactions determine access to participation.

In recent decades, global displacement caused by armed conflict, civil turmoil, and human rights abuses has reached unprecedented levels. The Syrian conflict is among the most enduring catastrophes, displacing millions from their homes. A considerable number of Syrians have sought asylum in Europe, with the Netherlands becoming an important destination. Between 2014 and 2024, the Dutch government granted residence permits to 157,000 Syrian nationals (Centraal Bureau voor de Statistiek, 2025), positioning Syrians as one of the most prominent refugee demographics in the country.

Syrian refugees can suffer significantly beyond the simple loss of their homes and possessions. The traditional customs, dialects, and community networks that traditionally shaped their identity and cultivated a sense of belonging are now inaccessible to them. Upon their arrival in the Netherlands, Syrian refugees must navigate unfamiliar systems and services while facing considerable institutional and societal expectations to integrate swiftly and effectively. Although many demonstrate a willingness to participate in their new community, their efforts are often hindered by various obstacles, such as psychological stress, social isolation, language barriers, and inadequate familiarity with increasingly digitalized bureaucratic processes (Dagevos et al., 2018). These challenges collectively increase the difficulties of adaptation and integration.

Accessibility, cultural awareness, and encouraging the involvement of people from different backgrounds are all parts of inclusive communication. Research indicates that numerous organizations in the Netherlands persist in utilizing standardized outreach strategies that inadequately cater to the diverse needs of specific groups, such as refugees, and do not address structural disadvantages. A growing body of research has examined the rise of informal support systems, including digital communication platforms (Alencar, 2018; Alencar et al., 2018; Udwan et al., 2020) and the participation of mentors or intermediaries (Valero-Garcés, 2008).

Digital channels have become important places for many refugees to find information that is trusted and easy to locate, especially when official sources of communication are unclear or do not respond. Posts and comments that are frequently disseminated by fellow refugees or community members, composed in their native languages, and adapted to the local context (Udwan et al., 2020) offer accessible experiential knowledge.

Mentors and intermediaries, especially those who share cultural or linguistic backgrounds with newcomers, serve as vital mediators; they aid refugees in maneuvering through formal institutions and social norms while offering translated resources and culturally relevant guidance. Jaschke et al. (2022) highlight that such mentors offer individualized assistance grounded in trust, which enables refugees to navigate complex institutional settings more effectively and strengthens their integration into the host society. In doing so, they also contribute to fostering a broader sense of stability and social cohesion within the receiving community.

Throughout various stages of resettlement, refugees increasingly rely on digital communication methods to acquire experiential knowledge shared by peers inside their communities. Communications in the form of posts and messages are often shared by fellow refugees or community members, articulated in native languages, and tailored to local contexts. Mentors and intermediaries, especially those with cultural or linguistic connections to immigrants, serve as crucial mediators; they aid refugees in navigating social conventions and interactions with official institutions, while offering translated resources and culturally pertinent support. In doing so, they foster a sense of security and belonging within the host community.

Refugees frequently rely on digital platforms as reliable spaces for the rapid and informal exchange of crucial information in familiar languages. Fellow refugees or community members often circulate such content, adapting their messages to the current local circumstances (Udwan et al., 2020). At the same time, mentors and intermediaries—particularly those who share cultural or linguistic ties with newcomers—function as essential brokers. They help refugees interpret institutional procedures and social expectations by offering translated materials and culturally situated explanations. According to Jaschke et al. (2022), mentors play a key role by offering individualized, trust-based guidance that enables refugees to navigate complex institutional settings and fosters their integration into society. These interpersonal and culturally attuned mediation techniques foster sentiments of safety, confidence, and belonging within the host society.

However, the growing reliance on digital instruments also creates new forms of marginalization. Although the Netherlands has an advanced digital infrastructure, the ability to effectively use online services is not evenly spread among the population. Refugees may be deficient in the requisite equipment, skills, or expertise to navigate these platforms effectively (Georgiou et al., 2024; Potocky, 2021). This study seeks to examine the degree to which Syrian refugees can leverage diverse digital platforms. The aim is to examine how informal support systems, such as digital communication technologies and mentors, use inclusive communication strategies to mitigate these inequities.

This study views integration as a societal necessity and an opportunity for mutual improvement. It is regarded as an interactive, ongoing process shaped by daily interactions and reciprocal exchange (Klarenbeek, 2021). When provided with adequate assistance, refugees can offer economic, social, and cultural contributions to the host community. Without such support, there is a risk of worsening inequities and endangering long-term prosperity and social cohesiveness. This study examines these processes by concentrating on personal narratives.

This study consists of 20 semi-structured interviews with 14 Syrian refugees and six Arabic-speaking mentors or mediators. The aim is to investigate the central research question: How can digital communication tools and mentors/intermediaries promote inclusive communication and aid in the integration of Syrian refugees in the Netherlands? The analysis is guided by the following sub-questions: How do Syrian refugees in the Netherlands employ digital communication technology to enhance inclusive communication and integration? What roles do mentors and cultural intermediaries play in advancing inclusive communication and aiding the integration of Syrian refugees in the Netherlands?

This research examines the influence of digital communication tools and mentors in aiding the integration of Syrian refugees, who have been arriving and acclimating in the Netherlands for over five years. It emphasizes that integration is not solely a top-down communication process but also a horizontal, community-driven

ecosystem. These informal networks function as essential intermediaries between the former community in Syria and the new society in the Netherlands, with inclusive communication at their core.

This essay aims to enhance academic understanding of and policy strategies for refugee integration in the Netherlands. It enriches extensive discussions regarding intercultural communication, refugee integration, and digital inclusion. The study advances scholarship in communication studies, migration and integration studies, and digital media research by synthesizing existing literature with novel qualitative data. Recent studies have emphasized the increasing influence of digitalization and algorithmic systems on refugees' daily contacts with public institutions and support networks (Dekker & Engbersen, 2014; Latonero & Kift, 2018). In the Dutch context, these improvements are evident in the proliferation of digital government platforms and automated decision-making, which influence how immigrants access services and information. Recent research on the expansion of digital platforms and datafication (Leurs, 2023) underscores the importance of viewing digital inclusion not merely as access to technology, but as a relational and ethical process embedded within socio-technical infrastructures.

2. Theoretical Framework

In heterogeneous societies such as the Netherlands, inclusive communication goes beyond the simple, literal translation of institutional messages; it requires a critical structural awareness of the linguistic, cultural, and digital disparities that affect individuals' access to information, services, and opportunities. This corresponds with Van Deursen and Van Dijk's (2019) concept of "digital divides," which emphasizes disparities in access, literacy, and engagement that affect migrants' interactions with technology. Refugees, particularly newly arrived Syrians, sometimes face complex bureaucratic procedures, language barriers, and unfamiliar governmental systems. In this context, digital technologies and informal contributors, such as mentors and peer networks, are essential in mitigating the limitations of formal, hierarchical communication channels.

This study emphasizes that refugee integration goes beyond policy goals and institutional criteria, encompassing a dynamic process of addressing daily challenges, often in increasingly digitized environments. The Netherlands increasingly delivers public services through online platforms, requiring residents to use tools such as DigiD to access healthcare, housing, education, and employment services. Boekhorst (2003) notes that information literacy is unevenly distributed, with the result that many newcomers lack the necessary digital competencies to engage effectively with these systems. Digitalization offers opportunities but also risks exacerbating exclusion when institutional communication is inaccessible or lacks credibility.

This study builds on contemporary literature on digital migration and refugee media practices (Alencar, 2018; Leurs & Smets, 2018) to comprehend the digital dimension of refugee integration. Leurs (2023) and Alencar (2018; see also Alencar & Tsagkroni, 2019) assert that digital technologies serve as both symbolic and material lifelines, assisting refugees in maintaining transnational connections, acquiring vital information, and navigating issues of identification and belonging in unfamiliar socio-cultural contexts. Digital communication platforms function as experiential infrastructures for integration, enabling real-time information exchange, often in familiar languages and cultural frameworks (Gillespie et al., 2018). This is especially evident in diasporic Facebook or WhatsApp groups, where newly arrived refugees can collectively obtain information about housing, legal rights, education, and employment opportunities (Mena Montes & Boland, 2025).

Nevertheless, digital tools serve purposes that extend beyond their basic functionality. They have highlighted the role of emotions and relationships, demonstrating how they engage in "digital resilience scaffolding" by leveraging social networks to foster trust, alleviate uncertainty, and provide mutual support. This is achieved through the sharing of knowledge and experiences. These efforts highlight the horizontal and peer-oriented nature of refugee information-sharing, which either supplements or replaces formal government programs (Udwan et al., 2020).

The notion of digital migration infrastructures is crucial for understanding the integration of digital behaviors with tangible support systems. Leurs (2023) asserts that these infrastructures encompass not only devices and platforms, but also the actors and institutions that influence digital engagement, including NGOs, cultural intermediaries, mentors, and policy frameworks. This theoretical paradigm allows the understanding of inclusion as a relational and co-constructed phenomenon that comprises both human interaction and technological mediation. From this perspective, integration is not provided by the state to passive recipients; rather, it occurs in everyday contexts—both online and offline, formal and informal.

Mentors and intermediaries fulfill an essential role. Their work aligns with the theory of intercultural mediation (Gibb & Good, 2014; Valero-Garcés & Martin, 2008), which emphasizes the facilitation of understanding between culturally varied groups. In the refugee context, mentors act as cultural mediators, helping newcomers to navigate language, implicit social norms, institutional expectations, and digital bureaucracy. This case study demonstrates that mentorship is not a static role; instead, it involves a dynamic shift from receiving support to offering it, highlighting the progressive nature of integration.

Mentorship among migrants often arises organically from shared experiences rather than from formal appointments. This relational, grassroots dynamic echoes Klarenbeek's (2021) definition of integration as a reciprocal, localized, and engaged process, wherein both host communities and newcomers negotiate meanings, obligations, and practices. This corresponds with (Modood, 2021) distinction between multiculturalism, which focuses on cohabitation, and interculturalism, which promotes participation. Intercultural communication, especially when facilitated by trusted people, helps newcomers understand the "whats," "hows," and "whys" of local culture.

This framework is underpinned by conviviality theory (Gilroy, 2004) and Pozzo and Ghorashi's (2021) notion of contextual diversity, both of which contest assimilationist perspectives on integration. Recent studies have built on these notions by linking conviviality to media use (Duru & Trenz, 2017; Georgiou, 2017), highlighting how everyday communication practices in digital contexts affect perceptions of diversity and intercultural exchanges. In superdiverse societies, such digital interactions foster an "everyday cosmopolitanism," allowing individuals to navigate differences through mediated exchanges and shared digital infrastructures. These behaviors illustrate that conviviality is not simply a societal ideal but a dynamic process expressed through online interaction, narrative exchange, and mutual visibility across linguistic and cultural boundaries. Rather than insisting on conformity to established norms, integration is viewed as a mutual, dialogical process of learning, negotiation, and adaptation. Mentors and digital peers aid refugees in adapting to Dutch society while collaboratively creating inclusive spaces that promote knowledge sharing, affirm their sense of belonging, and cultivate community.

This concept views integration as a relational and co-constructed process that incorporates principles of inclusive communication, digital involvement, and conviviality. Human actors and digital infrastructures continuously affect one another, creating both new opportunities and barriers to participation. The idea highlights how individuals exercise communicative agency by actively seeking out information, resources, and social networks in order to participate and build a sense of belonging. This focus on the relational dynamics between human agents and digital environments shifts attention away from research centered solely on technology adoption to that which demonstrates how inclusion develops dynamically in both online and offline situations.

3. Methodology

This study employed a qualitative research methodology to investigate the integration experiences of Syrian refugees with Arabic-speaking mentors and intermediaries in the Netherlands. The study specifically analyzed the influence of digital communication technologies, such as WhatsApp and Facebook groups, together with mentorship, on access to institutional information, public services, and a sense of community. The study recognized that integration is not a homogeneous process, but rather, it is shaped by intersecting factors such as age, gender, education, employment history, and duration of residence. The study aimed to clarify the complex relationships between individual and structural attributes and the digital and social resources that either promote or hinder integration.

3.1. Participants

The research included 20 subjects: fourteen Syrian refugees possessing residency permits and six Arabic-speaking mentors or facilitators. Participants were recruited through a combination of convenience and snowball sampling techniques. We established initial contacts using personal networks and digital communication platforms, particularly WhatsApp. We primarily reached out to refugee participants via direct messaging, often employing referrals from other participants. The snowball method successfully engaged individuals who might have been otherwise unreachable due to language barriers or minimal institutional involvement.

We collaborated with mentors and intermediaries with Kémi Ra, a community-focused NGO in Apeldoorn committed to the integration of migrants and refugees. The creator of the NGO served as a gatekeeper, facilitating introductions to volunteers who met the study's criteria. All six mentors had previously interacted with Kémi Ra through volunteer endeavors, intervention initiatives, or informal community involvement.

We deliberately chose individuals to ensure diversity in age, gender, education, migratory background, and length of residence in the Netherlands. This variety enabled the study to investigate how varied personal backgrounds affect digital access, communication practices, and navigation in integrated systems.

The Syrian refugees in our sample demonstrated a diverse range of digital literacy, proficiency in Dutch, and autonomy in acquiring information and services. The majority had limited formal education, with five participants having completed only elementary or secondary schooling. Four individuals possessed vocational qualifications in practical or technical fields (e.g., mechanics, construction, office administration), whereas three held academic degrees. This educational distribution enabled us to gather perspectives often

marginalized in digital integration research, particularly from individuals encountering structural obstacles and constrained formal schooling possibilities. Their narratives offer crucial insights into the many strategies migrants employ to utilize digital technology and manage trust in online information, particularly on official channels.

The mentors and intermediaries, ages 30 to 61, all had refugee backgrounds and originated from Syria, Iraq, Lebanon, or Palestine. Their shared language and cultural ties with the Syrian populace enhanced their credibility and effectiveness as intermediaries. They had all achieved functional or fluent proficiency in the Dutch language. Their experiences in navigating Dutch institutions informed their mentoring roles, allowing them to aid others in understanding cultural norms and bureaucratic processes.

3.2. Data Collection and Analysis

Data was collected through semi-structured interviews, employing two tailored interview guides: one for Syrian refugees and another for Arabic-speaking mentors or intermediaries. Each guide delineated the specific tasks of participants while incorporating overarching topics such as migration history, access to governmental information, use of digital communication platforms, informal networks, and integration experiences. The guidelines were developed in accordance with recent literature on refugee integration and digital inclusion (Alencar, 2020; Leurs, 2023).

The interview methodology was crafted to be linguistically and culturally suitable. Participants could choose to do the interview in either Dutch or Arabic. Although all participants were Arabic-speaking, most preferred interviewing in Dutch, since it allowed them to express themselves in the language they usually use when engaging with institutional entities in the Netherlands. In four interviews, a qualified interpreter facilitated communication by translating questions from Dutch to Arabic and rendering the participants' comments back into Dutch. The translation prioritized clarity and participant comfort.

This flexible linguistic approach fostered trust and clear communication, enabling participants to articulate their experiences in the language in which they were most adept. It also enhanced the complexity and contextual relevance of the narratives, particularly when discussing complex or sensitive issues such as forced displacement, digital exclusion, and bureaucratic interactions.

We performed a thematic content analysis of the interview data, utilizing both deductive and inductive methodologies. We systematically arranged responses in an Excel matrix, facilitating comprehensive within-case analysis and comparative cross-case evaluation. We developed an initial codebook based on theoretical ideas relevant to the study, such as digital resilience, inclusive communication, and informal mentorship, and subsequently refined it iteratively as new themes and patterns emerged during the analysis.

The analysis revealed distinct patterns between the refugee and mentor groups. Mentors typically demonstrated heightened computer literacy and greater faith in Dutch institutions, while refugees, particularly those with lower educational attainment or weak Dutch language skills, relied more on informal support networks, social media, and translation tools. These findings highlight the varied aspects of digital inclusion and point to the importance of culturally grounded mentorship in providing access to key tools and information.

3.3. Ethical Considerations

The investigation was conducted in accordance with the ethical standards of Radboud University. All participants were informed of the study's purpose, their right to withdraw at any time, and the measures established to protect their privacy. Identifiable data was anonymized during transcription, and all materials were securely stored in password-protected files.

In light of the potential sensitivity of migrant tales, we created a respectful and culturally sensitive research environment. Participants were allowed to choose a comfortable setting for their interviews, and we approached all topics with flexibility and empathy. The involvement of a linguistically and culturally proficient interpreter enabled rapport building.

In addition to protecting participants, we ensured reciprocity and ethical engagement. By focusing on the perspectives and experiences of those involved, we sought to provide insights that could guide the development of more inclusive policies and communication strategies, especially for individuals whose limited education or digital access often results in their underrepresentation in academic and policy discussions.

4. Results

The 14 narrative interviews with Syrian refugees, along with six interviews with mentors and intermediaries, revealed several key themes. In relation to digital communication technologies, three main themes emerged: access to information, soft integration and cultural learning, and distrust. Regarding mentorship, four themes were identified: mentors as system translators, intercultural mediation, the limits of mentorship, and the reciprocity of mentorship. The sections that follow go beyond each of these themes to illuminate the complex dynamics that shape the integration experiences of Syrian refugees in the Netherlands.

4.1. The Role of Digital Communication Technologies in Inclusive Communication and Integration

4.1.1. Access to Information: "There's Always Someone Online Who Can Answer Questions Faster Than the Municipality"

The first theme focuses on how digital communication platforms support Syrian refugees in the Netherlands in accessing practical and institutional knowledge for their asylum applications and during the integration process. Participants consistently reported using WhatsApp, Facebook, YouTube, and, increasingly, Instagram and TikTok to navigate complex systems related to housing, healthcare, education, and employment. These platforms serve not only as informal repositories of practical advice but also as digital entry points into Dutch bureaucratic systems. Peer-shared experiences and testimonials, circulated within diasporic networks, enable refugees to learn. This peer-driven model of information exchange illustrates a form of digital conviviality (Gilroy, 2004), where everyday encounters across linguistic and cultural differences are negotiated and sustained through shared digital practices.

The perceived usability and informality of digital communication platforms, particularly social media, contrast sharply with the inaccessibility of official governmental websites, which participants describe as

linguistically complex and overly formal. Several participants emphasized that content shared on informal digital platforms influenced their migration decisions even prior to arrival. As one participant explained: "I chose the Netherlands because I saw Syrians posting about family reunification [on my social media]. It looked possible there!"

A key finding drawn from the data is that refugee-led Facebook groups function as dynamic, real-time information hubs. These spaces allow users to crowdsource bureaucratic advice, clarify institutional procedures, and stay informed about policy changes. Such online communities collectively build experiential infrastructures for integration (Gillespie et al., 2018). Participants describe these groups as offering practical information in a detailed and relatable manner, while also providing emotional support, facilitating connections with others in similar circumstances, and fostering a sense of mental connection and belonging through online interaction. In this way, these peer-led information infrastructures act as decentralized alternatives to state-led orientation programs. As one participant noted: "There's always someone online who can answer my questions faster than the municipality."

In addition, formal requirements are frequently reformulated into practical, step-by-step instructions through information shared among peers, illustrating how community-driven communication contributes to processes of digital resilience (Lee & Hancock, 2023). Participants reported joining niche digital communities, particularly in WhatsApp and Facebook groups—designed for Syrian and Arabic-speaking populations in the Netherlands. WhatsApp, in particular, was described as an indispensable tool due to its affordability and flexibility for both voice and video communication.

In sum, these peer-driven digital communities allow refugees to bridge information gaps, both large and small, in a timely manner and in a familiar language. Moreover, they overcome the geographic constraints of face-to-face networking by expanding opportunities for connection. Our findings illustrate how refugee information-sharing practices can serve as both complements to and, at times, substitutes for formal state initiatives (Udwan et al., 2020).

4.1.2. Informal Integration and Cultural Learning: "I Learned More From YouTube and Talking With My Girlfriend Than From the Class"

In addition to the functional role, digital communication technologies also served as tools for soft integration and cultural learning. While formal Dutch-language classes were widely available, participants frequently emphasized the value of informal learning pathways. These pathways enable learners to apply their Dutch-language skills in practical contexts rather than limiting their knowledge to textbooks. Such activities included watching YouTube videos, listening to music, and engaging in everyday conversations with Dutch-speaking partners or friends. As one participant remarked: "I learned more [Dutch] from YouTube and speaking with my girlfriend than from the class."

Some participants reported following Dutch influencers on TikTok and Instagram to become familiar with Dutch customs, linguistic nuances, fashion trends, and even Dutch humor. These elements are often absent from official integration courses. When discussing how digital communication platforms influenced their cultural adaptation, one participant remarked: "In Syria, you just show up. In the Netherlands, you need an appointment for everything—including visiting a friend!" This example illustrates how social media

facilitates informal cultural learning, thereby complementing and, in some cases, substituting for formal integration programs.

Cultural adaptation was described as a gradual process. Participants often encountered cultural differences through real-life experiences, then interpreted and confirmed them through indirect, peer-shared explanations online, or vice versa. This dual exposure, through both personal encounters and digital reflections, appeared to reinforce an awareness of cultural expectations, especially among those aiming for integration.

4.1.3. Distrust: "Google Translate and ChatGPT Often Lacked Contextual Nuance and Could Lead to Misinterpretation"

Digital communication platforms have become an increasingly important source of both formal and informal information for Syrian refugees, but some participants also voiced worries about the spread of false information. Although these platforms enabled rapid access to advice, many participants reported a degree of skepticism toward unverified content. These concerns led them to adopt strategies such as cross-checking and triangulation. As one participant noted: "I always double-check what I read online. Sometimes people spread things that aren't true."

Another participant pointed out the limitations of automated translation tools such as Google Translate and ChatGPT, noting that they often lack contextual nuance and can lead to misunderstandings. As one participant shared: "I didn't trust the translation, so I sent it to a friend who knows both languages. That was faster and more reliable." While translation tools can support engagement with Dutch-language content, they are unable to convey the underlying cultural assumptions or contextualize the lived experiences of Syrian refugees. In some cases, they may introduce additional misinterpretations.

A trade-off between efficiency and authenticity is consistently evident. Official sources of information often appear less accessible, whereas digital communication platforms, despite being more approachable, lack authoritative credibility. Consequently, digital engagement alone cannot fully encapsulate the refugees' integration journey, even though it plays a visible role in facilitating navigation through this process. The integration journey is thus co-constructed through the interplay of technological mediation and human interaction.

4.2. The Role of Mentors and Intermediaries in Inclusive Communication

4.2.1. Mentors as System Translators: "Even as He Understood the Rules, Declaring Taxes Himself Felt Overwhelming Without Support"

Mentors, often Arabic-speaking refugees who had resided in the Netherlands for a longer period, play a critical role in facilitating refugees' access to bureaucratic systems and social services. Many of these mentors became involved through personal connections with the NGO Kémi Ra, having encountered its founder at local events, language classes, or municipal programs. The support offered by mentors ranges from linguistic translation and digital literacy training to cultural mediation and practical assistance. Mentors reported sharing specific information on topics such as housing, school enrollment, healthcare access, the functioning of municipal systems, and the correction of common misconceptions.

At the material level, interviews revealed that all participants owned smartphones, though access to additional devices such as tablets or laptops was limited. While smartphones enabled them to use digital communication platforms to obtain information related to social services and integration, most participants struggled to navigate the Dutch bureaucratic system using only their phones. Limited digital literacy, in particular among older refugees or those with little prior education, combined with exclusive reliance on mobile phones, raised significant barriers to accessing and interacting with complex digital systems. For instance, four out of six mentors highlighted the difficulties refugees faced in applying for and using DigiD, a mandatory tool in the Netherlands for securely accessing various government and public services, including tax authorities, residence permit applications, and health insurance portals: "I helped a woman use DigiD. She didn't know it was needed to do almost everything here."

Mentors identified several key barriers that refugees face when attempting to access official information. One of the most significant challenges was the formal and complex language commonly used in official communications, which posed a particular obstacle for newcomers. As one mentor explained:

> When they are new, the language is difficult, making it hard to understand. After living here for more than three years, they can search on their own. Initially, he couldn't find anything himself if he wanted to make an appointment with the government or municipality.

This highlights the linguistic and bureaucratic hurdles refugees must overcome in the early stages of their resettlement and underscores the need for tailored support during this critical period.

In addition to language barriers, many refugees, particularly newcomers, exhibited a lack of confidence in navigating life independently in the host country. They often expressed a fear of making mistakes, especially when dealing with official procedures, and preferred to seek reassurance from individuals with more experience living in the Netherlands. Several mentors observed a general lack of proactive behavior among newly arrived refugees, noting that many felt overwhelmed and disoriented in the early stages of resettlement. As a result, newcomers often adopted a passive approach, waiting for assistance rather than actively seeking out information or resources.

Refugees often require a "guide" to help them become familiar with Dutch systems. Even those who are able to search for information online and use tools like Google Translate often struggle to fully comprehend the structure and functioning of these systems. Despite having access to translated content, many refugees remain uncertain about their understanding within the new context and feel anxious about taking action without confirmation or guidance from someone more experienced:

> I can explain the laws and rules to refugees, but that doesn't mean they can manage everything on their own. In practice, things become more complicated, for example, when financial issues are involved. I once helped a man understand the tax system. He grasped it, but he was not confident enough to file his taxes himself because it felt like such a tremendous responsibility. He preferred to have someone else do it on his behalf.

Therefore, interaction with a mentor goes beyond mere language translation because accessibility does not equate to comprehensibility. Mentors also serve as system translators, providing the scaffolding necessary to build refugees' self-confidence and autonomy in navigating life in the Netherlands.

Further, the integration process involves more than language learning and completing official documentation. While online translation tools such as Google Translate can help address language barriers when accessing information, they are often insufficient for tasks that require effective information output, whether oral or written. Refugees frequently face situations that demand active communication, such as speaking with teachers, attending school meetings, opening bank accounts, or navigating unfamiliar locations—these are often accomplished with the support of mentors. Mentors emphasized the significance of ongoing in-person guidance, especially to offer immediate support and aim for individuals with low confidence or limited digital skills.

4.2.2. Mentors as Intercultural Mediators: "I Translated and Narrated in Arabic to Ensure People Truly Understood It"

Beyond one-on-one, in-person explanation and accompaniment, mentors also play a key role in contextualizing Dutch bureaucratic and social norms, often by adapting official materials to make them more culturally relevant and accessible. For example, mentors offer immediate support and aim to foster long-term independence by guiding refugees in managing their financial situations. One mentor described providing Arabic narration for a municipality-produced financial literacy video to ensure better understanding and engagement:

> I collected information through Kémi Ra and sometimes directly from the municipality. For example, the municipality produced a video on how to manage money, which I translated and narrated in Arabic to ensure people truly understood it.

Mentors viewed themselves as information curators rather than mere conveyors during the process of translating language and systems, and they occasionally reinterpreted procedures. They cross-verified content from multiple sources, including municipal websites, NGOs, their experiences, and social media, before sharing it with refugees.

This illustrates a gatekeeping function, whereby mentors actively filter and validate content to ensure its accuracy and cultural relevance. Their mediation allows information to be better tailored to Syrian refugees by connecting it to their previous experiences and highlighting key differences in the host country. Such labor is often overlooked in policy discussions, yet it is foundational in reducing misinformation and fostering trust. This work aligns with the theory of intercultural mediation (e.g., Valero-Garcés & Martin, 2010), which extends beyond simple information-sharing to include culturally sensitive adaptation of narratives and focus specifically tailored to the needs of the target group, in this case, Syrian refugees. As noted in the methodology, participants were purposively selected for diversity in education, gender, and migration history, which contextualizes variations attributed here to social class.

Mentors emphasized that they did not share information indiscriminately; rather, they triangulated multiple sources before dissemination to ensure both accuracy and contextual relevance. This practice underscores their role as trusted intercultural mediators operating at the intersection between refugees and institutional systems.

4.2.3. Limits of Mentorship: "It's Based on an Individual's Personal Experiences, and They Shared It as Absolute Truth Sometimes"

However, the mentor support system is not without its limitations. One interviewee deliberately avoided seeking assistance from Arabic-speaking intermediaries due to prior experiences with misinformation received from a mentor: "I used to obtain wrong advice, so now I rely on official websites and Dutch people I trust." He distinguished between two approaches to finding out how to apply for documents or subsidies:

> To begin with, newcomers often rely on information shared by other Syrians, but this advice is not always accurate. Because it is usually drawn from personal experiences, people may present it as absolute truth, which can confuse newcomers and lead to misunderstandings and mistakes. I am against only building our own people within a new country instead of integrating. This can be very confusing for newcomers, causing mistakes and misunderstandings. It's based on individuals' personal experiences, and they shared it as absolute truth sometimes. However, for a more reliable approach, you need to research the official rules yourself. I try to do this in English, even if my English is poor. I put significant effort into searching online or contacting customer service. Official Facebook pages of the government or municipal bodies are trusted sources. Dutch people, especially those who are highly educated, are more reliable sources of information than those with less education.

This response stands out from other interviews, suggesting that it requires a more individualized approach to support. Differences within the refugee group may stem from varying educational backgrounds and levels of digital literacy. In addition, social class could influence integration experiences beyond shared nationality and legal status. We should not overlook some refugees' desire to maintain autonomy in navigating the integration process.

4.2.4. The Reciprocity of Mentorship: "At First I Asked Others for Help; Now I Give Tips"

One of the important findings is that mentorship was described as a reciprocal process. Many mentors experienced a transition from receiving support to providing it to others: "At first, I asked others for help; now I provide tips. I tell people what works and what to avoid." On one hand, the mentor role serves as a crucial bridge between Dutch bureaucratic systems and newly arrived refugees. On the other hand, some mentors viewed their role as an opportunity to deepen their integration by gaining a greater understanding of, for example, the Dutch education system, language, and cultural norms: "It is beneficial for me to improve my Dutch and gain more knowledge of the Dutch education system. I wanted to acquire additional information and compare education systems."

This dual orientation, serving others while simultaneously improving oneself, highlights the reciprocal nature of mentorship. When mentors support others, they share knowledge and strengthen their own sense of belonging in Dutch society. Many mentors perceive themselves as still undergoing the process of integration and position themselves not only as guides but also as peers within the refugee-inclusion ecosystem. In this light, social integration occurs not only through top-down systems but is also cultivated horizontally through community relationships.

In sum, digitally literate peers and mentors serve as essential curators within this ecosystem. They share information and contextualize bureaucratic knowledge. Through their support, integration is understood not as a linear trajectory but as a relational, dynamic, and participatory process embedded within networks of mutual learning and shared experience.

5. Discussion, Limitations, and Future Research

5.1. Discussion

This study investigates how Syrian refugees in the Netherlands navigate integration through the interaction of digital communication technologies and interpersonal mentorship. The findings indicate that digital technologies function not as independent support systems, but as mediating infrastructures that enhance communication, foster trust, and provide access to information among the diverse individuals and institutions engaged in the welfare process. In this scenario, integration emerges as a relational and co-constructed process, influenced by the interplay between technological affordances and human mediation.

The findings advance the notion of digital migration infrastructures (Leurs, 2023) by elucidating the co-production of understanding and trust through iterative human–digital interactions. Refugees' capacity to make use of information does not depend solely on connectivity or access but also on the interpretative efforts of mentors and peers who authenticate, translate, and contextualize bureaucratic knowledge. These constitute a significant "missing middle" in integration infrastructures between information access and its operationalization, as informal and community actors convert raw data into usable knowledge.

The study simultaneously exposes the limitations of digital dependence. Participants revealed skepticism towards automatic translation technologies, apprehension regarding disinformation, and dissatisfaction with the limitations of mobile-only platforms when undertaking administrative and instructional tasks. These problems help to refine current perceptions of digital inclusion (Van Deursen & Van Dijk, 2019) by demonstrating that exclusion endures even in technologically advanced cultures when institutional communication is linguistically, culturally, or emotionally inaccessible. Thus, digital proficiency should be understood as a relational interaction between system accessibility, user competence, and societal trust.

The results further contribute to discussions on conviviality (Gilroy, 2004) and intercultural mediation (Gibb & Good, 2014; Valero-Garcés, 2007) by clarifying the role of mentors as system translators who bridge linguistic, cultural, and institutional gaps. By employing methods such as articulating procedures in Arabic, verifying information, and modeling bureaucratic interactions, mentors equip refugees to anticipate local norms and expectations. Significantly, mentorship was perceived as reciprocal: many participants described a transition from dependency to direction, exemplifying the participative aspect of integration highlighted by Klarenbeek (2021). This horizontal and community-oriented inclusion aligns with Modood's (2021) interculturalist perspective, which emphasizes conversation and reciprocal adaptation rather than assimilation.

These findings also correspond with Duru and Trenz's (2017) concept of conviviality as the practical, daily negotiation of differences, which in this context is manifested through digital peer networks and mentor–refugee interactions that promote cooperative coexistence despite institutional obstacles. Shared WhatsApp communications, peer-led information groups, and reciprocal knowledge exchange between

refugees and mentors demonstrate conviviality both locally and online. These digital and interpersonal contexts can be seen as "convivial spaces" where differences are pragmatically managed and which facilitate cooperation, problem-solving, and mutual help despite linguistic, cultural, or institutional barriers. Conviviality provides a valuable framework for analyzing the relational and procedural aspects of integration identified in this study: Instead of a straight trajectory toward adaptation, integration arises from the everyday actions of negotiating meaning, sharing experiences, and collaboratively overcoming problems within hybrid human-digital infrastructures.

Social media and messaging services, notably WhatsApp, Facebook, YouTube, and TikTok, have developed as decentralized frameworks for the circulation of information and emotional connection. These digital platforms enable migrants to navigate bureaucratic processes while simultaneously cultivating emotional resilience and a sense of community. Peer-to-peer communication and horizontal networks encourage the gradual cultivation of independence even as individuals remain connected to supportive communities. The study effectively connects the digital and interpersonal realms, demonstrating that technical mediation and human mentorship collectively support both practical and emotional integration.

Integration outcomes materialize when technical platforms, communicative practices, and human mediators are in alignment. This relational paradigm expands current methodologies for digital inclusion by redirecting focus from mere technological access to communicative relationality—the ability of human and digital infrastructures to jointly provide the conditions needed for meaningful participation and a sense of belonging.

5.2. Constraints and Prospective Investigations

This qualitative study, based on semi-structured interviews, offers compelling insights into the lives of Syrian refugees and Arabic-speaking mentors in the Netherlands, although it also suffers from several methodological and contextual constraints. The limited, non-random sample emphasizes interpretive depth rather than statistical generalizability, indicating that the results cannot be extrapolated to represent all refugee experiences. Despite the implementation of methodological safeguards, including reflexivity, triangulation, linguistic accommodation, social desirability bias, and transprecautions, these limitations may have affected participants' responses.

Furthermore, the mentor sample, which predominantly consisted of Arabic-speaking individuals with refugee backgrounds, omits the viewpoints of host-society mentors or institutional representatives. Future studies could adopt a multi-actor approach that incorporates politicians, caseworkers, and Dutch-born mentors, enabling a more comprehensive understanding of intercultural mediation within digitalized integration frameworks.

The study is situated within the highly digitalized Dutch welfare state, characterized by modern digital infrastructure and civic integration activities. This specificity limits the applicability of findings to other national contexts with distinct digital governance frameworks, welfare models, or migration policies. Nevertheless, this limitation highlights the Netherlands as a key case study for comprehending the worldwide shift towards digital governance and its implications for integration.

Future research could expand upon these discoveries in various avenues. Comparative studies across European and non-European contexts could explore how different digital migration infrastructures (Leurs, 2023) influence refugees' trust, agency, and engagement. Longitudinal designs would be particularly valuable for examining how mentorship progresses from dependency to reciprocity and how former beneficiaries transform into agents of inclusion over time, thus reinforcing Klarenbeek's (2021) participatory perspective on integration. Moreover, participatory and co-creative research methodologies could investigate refugee-led initiatives and digital innovations, including peer-verified video tutorials or multilingual AI chatbots, as emerging infrastructures for inclusive communication.

Finally, in light of the increasing impact of artificial intelligence on translation and bureaucratic communication, future research should critically investigate the ethical, epistemological, and cultural impact of algorithmic instruments on refugee integration. Such an investigation could link to critical digital literacy frameworks (Couldry & Mejias, 2019) and conviviality theory (Gilroy, 2004), examining how AI-mediated communication affects trust, power, and belonging in superdiverse societies.

6. Conclusion

This study demonstrates that integration in a digitalized welfare context is fundamentally relational and communicative. Syrian refugees and mentors collaboratively construct integration through digital and interpersonal mediums. Our view of integration as a communication ecology in which tools, institutions, and human interactions intersect emphasizes the pivotal roles of mentors, NGOs, and peer networks. Hybrid human–digital strategies that are culturally grounded, relational, and trust-centered can promote integration systems that are technologically efficient and socially equitable.

Conflict of Interests
The authors declare no conflict of interest.

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ARTICLE

Navigating Precarity Between Law and Profit: Migrant Riders in Italy, Poland, and Spain

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Abstract

This article examines how platform-mediated food delivery work shapes the socio-economic inclusion and exclusion of migrants in Italy, Poland, and Spain. Drawing on 60 in-depth interviews with migrant riders in Turin, Warsaw, and Barcelona, the study adopts a comparative ethnographic approach to examine how distinct regulatory models—Italy's "dual-track," Poland's "contractual bricolage," and Spain's "regulated exclusion"—shape migrant inclusion in platform labour markets. Despite these differences, the findings reveal a striking convergence: migrant riders across all three contexts face legal ambiguity, economic insecurity, and algorithmic control, which together entrench their marginalisation. Theoretically, the article engages with scholarship on platform capitalism, migration governance, and informality to show how digital infrastructures and stratified legal regimes co-produce new forms of labour exploitation. Migrants respond with informal strategies to navigate the contradictions between denied rights and urgent needs. These practices expose how platform logics of outsourcing and opacity align with state-driven hierarchies of legal status to corner migrants into the most vulnerable segments of the labour market. The article concludes that the convergence of precarity is not incidental but structurally embedded in the interplay between digitalised labour regimes and exclusionary migration policies, calling for a rethinking of protections that address both technological and legal dimensions of inequality.

Keywords

comparative ethnography; digitalisation; exclusion; food delivery; gig economy; irregular migration; migrant integration; migrant workers; migration governance; platform capitalism

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1. Introduction

Migrant workers play a crucial role in the food delivery sector. This prominence is the result of limited access to other sources of income and has led to extensive research highlighting the insecurity, volatility, and precarity featuring migrant-performed food delivery work across different settings. Moreover, this scholarship has emphasised the feeding loop between the exploitation of migrant food delivery and their lack of legal protections and institutionalised discrimination (Altenried, 2021). In so doing, the interdisciplinary academic literature on this topic suggests that, to a significant extent, far from providing a way out of destitution, platform work—a broader category encompassing food delivery—risks entrapping migrants in a downward spiral of restricted citizenship rights and pauperisation. Key features of platform work, such as algorithmic management, opaque work allocation, performance monitoring, and low pay, intensify exploitation and limit workers' autonomy, making the job more insecure and exhausting. Platforms often evade formal employer responsibilities by classifying workers as independent contractors or outsourcing them to third-party intermediaries. This practice strips migrants of essential labour protection, social security, and opportunities for collective bargaining (Defossez, 2021). The intersection of these platform features with migrants' precarious legal status further exacerbates their exposure to low pay, job insecurity, and hazardous working conditions.

This article draws on the consolidated literature on migrant work in the food delivery sector, but poses a novel contribution to it by highlighting the benefits of a comparative approach to exploring how the relationship between platform work and immigration is influenced by country-specific institutional frameworks. In particular, it analyses the implications of this type of work for irregular migrants in three countries: Italy, Poland, and Spain. This research is part of the Horizon Europe project "Dignity for Migrant Workers in Farm to Fork Labour Markets" (DignityFirm), which focuses on irregular migrant work within the farm-to-fork sector. In the DignityFirm project, "irregular migrant work" refers to "migrant workers from either inside or outside the EU and facing a totally or partially irregular condition of stay and/or employment. The irregularity of migrants' legal status lies in that neither the residence nor employment in the country fully conform to existing rules and regulations" (Schweitzer, 2024, p. 4). This definition goes beyond the simplistic binary view of regularity as merely "legal" or "illegal" status, acknowledging instead a broader and nuanced spectrum of vulnerabilities within a complex regulatory framework. Understanding irregular migrant work is particularly crucial for research on food delivery jobs, as many of the migrants who are over-represented in app-based food delivery work have undocumented residence status, making them more susceptible to exploitation (Popan & Jesnes, 2025). However, legal status is only one aspect of the irregularity and vulnerability spectrum. Factors such as employment status, contractual relationships, cultural and linguistic differences, and the presence or absence of support networks also influence the experiences of migrant workers in the sector, and their degree of "precariousness" (Kreshpaj et al., 2020).

This study aims to explore the complex relationship between the platform food delivery sector and migrant labour, with a particular focus on how legal frameworks and platform operating models intersect to produce new and often hyper-precarious conditions for migrant riders. First, it uses a comparative perspective to identify both common patterns and country-specific factors that affect migrant riders' experiences. Second, it examines how migrant riders, with particular attention to those in irregular or semi-regular work situations, navigate structural vulnerabilities linked to their legal status, employment arrangements, and socio-economic positions. Third, it contributes to the growing interdisciplinary scholarship discussing how the convergence of platform work regularisation and migration governance (re)produce irregular migrant work.

This article is structured as follows. First, the theoretical framework section situates the research within existing literature, highlighting debates on migration, digital platform economies, and precarious work. Next, the methodology section explains the research design, data sources, and analytical approach used. The core of the article is formed by three case studies—Italy, Poland, and Spain—each examining the interplay of regulatory frameworks, platform strategies, and migrant riders' conditions. Then the discussion section draws comparative insights, exploring how platform logics and migration governance converge to produce hyper-precarious migrant labour forces. Finally, the conclusion summarises the main findings, connects them to broader scholarly debates, and suggests avenues for further research.

2. Theoretical Framework

A rapidly expanding interdisciplinary scholarship frames the intersection of migration and digital economies through two opposite discourses. The first is migrant entrepreneurship. The literature on this topic emphasises the importance of both social capital for easing migrants' access to resources and information and the local regulatory environment for enabling migrants' entrepreneurial aspirations to thrive. By highlighting the "mixed embeddedness" (Kloosterman, 2010) of migrant entrepreneurs simultaneously into their social networks and "the socio-economic and politico-institutional environment of the country of settlement" (Kloosterman et al., 1999, p. 254; see also Barberis & Solano, 2018), this stream of literature shows how the "context of reception" (Portes & Rumbaut, 2006) is affected by the legal and political framework by providing opportunities to some while raising barriers for others.

Andrejuk (2022) builds on this literature to trace the implications of the "super-digitalisation" brought about by the Covid-19 pandemic for migrant entrepreneurship. Against a backdrop of enhanced precarity, she explores the trajectory of digital migrant entrepreneurship, a category encompassing workers performing commercial activities through online platforms, including within the gig economy. While noting the acceleration and proliferation of online activities across different dimensions of migrants' lives, she suggests that super-digitalisation, as a "defence mechanism" against the crisis induced by the pandemic, "has led to new structures of social advantage and disadvantage within migrant entrepreneurship" (Andrejuk, 2022, p. 6).

On the one hand, migrants from diverse backgrounds, including both asylum seekers and those categorised as "skilled migrants," face significant challenges when seeking to find a job that matches their skills in the country of arrival. This is due to multiple factors, including "lack of familiarity with the new country's recruitment and employment markets, misrecognition of their overseas qualifications, complexities, and long delays for assessment of their overseas qualifications, language barriers, systemic discrimination, and lack of access to relevant career resources and support" (Andrejuk, 2022, p. 8; see also Abkhezr & McMahon, 2024). For most migrants, the mismatch between the qualifications they obtained in their country of origin and the formal requirements of the host country significantly narrows the range of employment opportunities they can target.

On the other hand, platform work has entry barriers low enough to attract migrants either with a working permit or able to work on behalf of someone else, seeking job opportunities with a smooth and quick recruitment process, in which no previous experience is required, and allowing them to reconcile financial independence and flexibility (Pautuzzi & Benton, 2019). App-based gig work in particular often looks appealing to entrepreneurial-minded migrants because of the promise of autonomy it encapsulates within partner agreements. On the downside, the lack of employment contracts entails that the workers bear all

the risks and costs associated with their activity. Therefore, for instance, in the food delivery sector, a business with a significant presence of riders with a migrant background, the vulnerability of migrant workers is exacerbated by the paradox that "the job is legally regulated but the employment relation is not recognized by the employer" (Elbert & Negri, 2021, p. 5). In this business niche, this relationship is triangular as the platform connects restaurants, riders, and customers. And yet, riders are the weakest link, exposed to a broad range of risks spanning from bearing the costs of health hazards, compounded by the lack of social protection, to wage depression because of labour oversupply.

This point takes us to the second theoretical lens to examine migrants' digital entrepreneurship, which is the concept of adverse digital incorporation. This notion takes stock of the limitations of the digital divide as an analytical and normative category for making sense of unequal access to connectivity and for planning interventions to redress this imbalance, which was initially viewed by scholars and policymakers as a key driver of inequality (Kshetri, 2014).

Adverse digital incorporation, instead, emerges from the awareness of the widespread penetration of digital technologies and falling costs of smartphones and data traffic, resulting in greater access to web- and app-based services for low-income users and, possibly, incorporation into the digital economy. The concept of adverse digital incorporation postulates the risk of negative externalities for those who accept being incorporated. This sometimes occurs because the downsides of this incorporation are ignored or underestimated. However, as suggested by Heeks (2022), more often than not, the negative effects of this adverse incorporation are entangled with benefits or are embedded into organisational structures or practices from which the users cannot opt out.

The study by Cavalcanti Zanforlin and Grohmann (2022) reveals how institutional actors, including NGOs and tech corporations, often shape migrant entrepreneurship initiatives. These efforts, while providing access to markets, also risk entrenching neoliberal ideals that equate entrepreneurship with self-worth and social contribution, thus shifting responsibility for integration onto migrants themselves.

Notably, flexibility—a core value in entrepreneurial discourse—is shown to be highly contextual. Several empirical studies (Holtum et al., 2021; Pollio, 2019) have thus shown that for migrant drivers, flexibility in the gig economy is often a necessity due to a lack of alternative income, leading to increased employment uncertainty and excessive work hours. Migrant drivers are "more likely to rely on the income from Uber to support themselves and their families" (Holtum et al., 2021, p. 305). This asymmetry in benefitting from flexibility underpins the exploitative dynamics of migrant participation in the platform economy.

Scholars like van Doorn and Vijay (2021) and Altenried (2021), for instance, argue that digital platforms exploit existing legal and social stratifications—particularly those related to immigration status—to extract surplus labour from migrant populations. Core to this critique are concepts such as algorithmic management, misclassification of workers, and information asymmetry (Duggan et al., 2020; Rosenblat & Stark, 2016). These features deepen precarisation by formalising risk transfer from employer to worker. Migrants are particularly susceptible due to the interplay of low entry barriers and legal ambiguity.

For instance, Inversi (2021) documents how Uber Italy subcontracted asylum seekers through third parties, a case that exemplifies systemic abuse and foregrounds the racialisation of gig labour. On this front, Gebrial

(2022) and van Doorn (2017) show how racial capitalism underpins the platform economy, with migrant workers disproportionately relegated to dangerous, low-paid roles. The "logics of obfuscation" (McMillan Cottom, 2020) conceal the systemic exploitation while promoting a narrative of inclusivity and opportunity. This tension between exploitation and inclusion became particularly evident during the Covid-19 pandemic. For instance, studies such as Aguilera et al. (2022) and Altenried (2021) underscored how the pandemic deepened migrant workers' dependence on precarious platform labour. Despite being deemed essential, riders and warehouse workers faced greater exposure to health risks, with little institutional support.

Finally, another growing body of literature explores how migrant workers organise, resist, and create alternative labour structures within digital economies. Recent studies document how migrant riders in Italy (Iazzolino & Varesio, 2023), London/Manchester (Popan, 2021), and Paris (Baril, 2024) actively resist platforms' algorithmic control and gamification, creating spaces for informal entrepreneurship and labour activism and use informal networks and acts of everyday resistance to counteract algorithmic control, including through the practice of borrowing or subleasing platforms' accounts (Baril, 2024). These networks also serve as incubators for worker-led initiatives, such as platform cooperatives that prioritise fairness and labour control (Cañada et al., 2023).

While providing a thorough overview of current working conditions for migrants in the platform economy, this literature features a limited number of comparative studies allowing for the analysis of the interplay of platform logics and migration governance across diverse regulatory settings (notable exceptions include Adhikari & Khatri, 2023; van Doorn & Vijay, 2021). Our contribution to this thematic issue thus specifically highlights the influence of laws in articulating the relation of platform work and irregular migration.

3. Methodology

This study employs a comparative and multi-sited qualitative approach to examine how platform-mediated food delivery work intersects with national labour and migration regimes in Italy, Poland, and Spain. It focuses on two interrelated dimensions: First, it explores how digital platforms engage in practices of "regulatory arbitrage" (Pollman, 2019, p. 567), leveraging inconsistencies and gaps across labour and migration frameworks to shape employment relations; second, it analyses how the interplay between platform strategies and legal-institutional configurations contributes to the production of segmented and hyper-precarious migrant labour. This dual analytical lens enables a sociologically grounded understanding of how regulatory (non)interventions structure migrant riders' working and social conditions across diverse national contexts.

The article addresses this twofold dimension using comparative qualitative case-study research carried out in three EU member states: Italy, Poland, and Spain. Although characterised by different models of migration governance, the countries share structural similarities. The selected countries have recently faced substantial inflows of migrants seeking protection at their external borders, while simultaneously experiencing labour shortages that prompted the expansion of labour migration pathways (ICMPD, 2025). Eurostat data from 2023 indicates that all three are both immigration and emigration states, with Italians and Poles representing the largest groups of EU citizens residing in other member states. The case selection is further justified by the divergent labour market structures and migration policy frameworks across the countries, particularly regarding regular migration channels, national complementary protection schemes,

and regularisation mechanisms. Notably, none has yet transposed the Platform Work Directive (EU Directive 2024/2831), resulting in distinct regulatory environments for platform work. Nevertheless, dominant food delivery platforms—Glovo, Uber Eats, and Just Eat—operate or have operated in all three countries under investigation.

Adapting Kreshpaj et al.'s (2020) literature review on the notion of precariousness, we investigated riders' experiences across five dimensions of precarity: (a) legal status, including cases of non-compliance or semi-compliance with residence and work permits; (b) employment insecurity, encompassing contractual terms, temporariness, and multiplicity of jobs; (c) income inadequacy, relating to the sufficiency and stability of earnings; (d) lack of rights and protection, including absence of trade union coverage, social security benefits, and workplace rights; and (e) work and living conditions, referring to psychosocial factors such as lack of work-time control, long working hours, and hazardous physical work environments.

The primary method of data collection was semi-structured interviews, designed to capture the lived experiences of migrant riders and to trace platforms' strategies through expert analysis of the key stakeholders in the food delivery sector. Interviews were conducted between September 2024 and May 2025 across Italy, Poland, and Spain, amounting to a total of 120 interviews: 60 with migrant riders (20 per country) and 60 with stakeholders (20 per country), including trade union representatives, platform company representatives, employers' organisations, NGO workers, legal experts, and national or local government officials.

The interviews with migrant riders comprised both a narrative component, to focus on workers' experiences of precarity, their expectations and prospects, and a semi-structured component focusing on the five dimensions of precarity outlined below. Participants were selected to represent diverse migration profiles, including asylum seekers, irregular migrants, overstayers, and different countries of origin (Afghanistan, Bangladesh, Nigeria, Pakistan, Peru, Venezuela, and Ukraine). Most of the riders interviewed were residing in the same country they first entered, often through entry visa mechanisms linked to self-employed work for the food delivery platforms. Riders were recruited through researchers' personal contacts, grassroots organisations, trade unions, and direct contact at delivery hubs. All interviews were conducted in participants' preferred languages and lasted between 30 minutes and two hours.

4. Country Case Studies

4.1. Italy's Dual-Track

Online food delivery firms first made their foray into Italy in 2016, when international digital platforms such as Foodora, Deliveroo, Glovo, and Uber Eats launched their operations in the country. In line with European trends, the market expanded significantly during the Covid-19 pandemic and has continued to grow steadily ever since. As of 2025, the main food delivery platforms still operating in Italy are Just Eat, Glovo, and Deliveroo, while other platforms (Foodora and Uber Eats) have moved out.

As food delivery firms settled in, most riders were Italian students, attracted by the possibility of combining a part-time job with their studies or other work. However, with the passing of time, the presence of foreign workers has become more conspicuous. Despite the lack of systemic and official data on the presence of

immigrants in the food delivery sector, scholars have suggested that the share of migrant workers is consistent, with notable differences between large cities and small to medium towns, as well as between Northern and Southern regions of the country (Costalunga & Di Cataldo, 2025). Localised research has shown that migrants are primarily employed in large Northern Italian cities (Fasano & Natale, 2019) and feature a broad range of socio-economic and immigration statuses. Our study mainly focuses on the food delivery sector in Turin and has identified Bangladesh, Pakistan, Afghanistan, Nigeria, Morocco, and Peru as the main nationalities of riders. As for their socio-legal status, they range from international students to long-term residents, for whom food delivery represents a temporary fix to lack of employment or a source of extra income, to asylum seekers and irregular migrants, for whom this type of job is an essential, and often vital, source of income.

The regulatory framework of food delivery work was developed between 2019 and 2021, albeit triggered by social protests and the increased unionisation of the sector since 2016 (Costalunga & Di Cataldo, 2025). The first law on platform work was adopted in 2019 (Law Decree no. 101/2019, converted into Law no. 128/2019). It recognised that riders working occasionally are, in principle, self-employed and that the assessment of hetero-directed or subordinate work conditions had to be made on a case-by-case basis. At the same time, it established a set of minimum rights, such as the right to compulsory insurance covering occupational injuries and diseases.

However, the law only marginally influences the regulations of riders' work, which was instead shaped by court decisions and by private negotiations between employers' associations and trade unions. In February 2020, the Court of Cassation ruled that the rights and protections provided for employer-organised ("heterodirected") workers also apply to riders. Additionally, the Public Prosecutor's Office of Milan actively prosecuted unlawful or exploitative practices by platforms: It adopted preventive measures against Uber Eats, claiming that it was responsible for exploitation and gang-mastering against migrant workers (Mastrodonato, 2020), and it investigated several platforms for violations of health and safety measures.

Following this phase—characterised by attempted negotiations, workers' strikes, judicial activism, and heightened public attention to platform strategies—in September 2020, AssoDelivery signed an agreement with a small and newly formed union called UGL Rider, which consolidated the model based on the self-employment of riders. The agreement, although contested by the Ministry of Labour, other unions, and several Courts, remains the regulatory framework applied by Glovo and Deliveroo as of 2025. A few months after the UGL agreement, in March 2021, Just Eat accepted the demand to establish employment relations—admittedly for rebranding purposes and to avoid further judicial repercussions. It signed an agreement with the confederal unions (CGIL, CISL, UIL), which applied the Transport, Logistics, Freight and Shipping collective agreement.

As the outcome of legislative and judicial intervention occurred between 2019 and 2021, the Italian regulatory context currently presents a dual-track model, where riders can be employed by Just Eat or decide to travel as self-employed workers for Glovo or Deliveroo. In fact, many migrant riders, for whom food delivery is the main and only source of income, work for more than one platform at the same time, under both tracks. While Italian courts, when prompted, continue to recognise that riders have the same rights and protection as employees, policymakers have decided to refrain from additional regulatory interventions and to wait for the implementation of the newly adopted Platform Workers Directive, to be transposed by June 2026. Similarly, between 2023 and 2025, all the existing platforms have maintained the status quo, institutionalising the bipartite system.

Our qualitative research has revealed that challenging working conditions are common among all migrant workers and result from a combination of factors related both to the "algorithmic–bureaucratic" precarisation of migrant riders (Iazzolino et al., 2025) and to the inability of the regulatory framework to effectively improve their employment insecurity. Concerning work conditions, our research showed that migrants' main concerns are related to the lack of adequate protection during the job, the risks they face during adverse weather conditions (intense rain or snow, or extreme heat), and not being able to properly organise their working schedule: This is a recurring issue particularly among riders working with Glovo, because of the difficulties in "booking the slots" and maintaining the performance levels required to secure optimal time slots. The feeling of being "controlled" by the platforms is common among all workers.

The differences in the regulatory framework were not directly perceived as problematic by the riders, but some of the interviewees recognised the importance of having a subordinate contract for reasons related to the renewal of their residence permit and access to sick leave. However, others reported that it is not possible to sign a contract with Just Eat without a valid residence permit, as those possessing only 'receipts' of renewal applications are not eligible. They mentioned that accessing accounts with Glovo and Deliveroo is often easier, including by using other people's accounts. This confirms that the platforms exploit the precarity of migrants' legal status, as many do not have alternative job opportunities.

Overall, the immigration and socio-economic status of migrant workers play a significant role in exacerbating their vulnerability vis-à-vis the platforms. While all riders face similar working conditions, migrants with precarious legal status—such as asylum seekers, newly arrived, or undocumented migrants—experience disproportionately greater hardship.

Those in irregular situations reported accessing multiple platforms via accounts borrowed or subleased, most often from members of the same community who were temporarily absent from the city. Unlike in other countries, the practice of subleasing accounts has not been reported as systemic, since even migrants with precarious legal status can obtain the necessary documents—such as an ID card or a temporary residence permit—to open an account. Instead, subleasing has been described as a strategy to engage simultaneously with different platforms under distinct employment models.

Many migrants with precarious legal status also face intense economic pressure that cannot be alleviated simply by working a few hours on one platform. Examining the socio-legal factors shaping their socio-economic conditions is therefore crucial to understanding their additional "vulnerability," as many of them must repay debts contracted to migrate to Europe or provide regular remittances to their families. Additionally, the most "vulnerable" migrants report limited linguistic competence and reduced familiarity with digital platform communication.

By contrast, riders who have lived in Italy for several years, or international students with proficient English, can more easily navigate the barriers imposed by the platforms and face fewer economic constraints from their countries of origin. The structural vulnerability of the first group of migrants effectively subjects them to greater exploitation, as their limited alternatives leave them with reduced bargaining power.

At the same time, they recognised that precisely because of their precarious legal status, limited language proficiency, and the flexibility of platform work, riding often represents their only entry point into the Italian

labour market—at least initially. Consequently, they are left with no other alternative but to accept and even self-exploit under the working conditions imposed by the platforms, particularly Glovo and Deliveroo.

4.2. Poland's Contractual Bricolage

The food delivery sector in Poland has evolved into a dynamic and rapidly expanding segment of the digital economy, which was significantly accelerated by the Covid-19 pandemic (Polkowska, 2023). The first application for restaurant orders in Poland was Pyszne.pl (now owned by JustEatTakeaway), which began operating in 2010. Uber entered the Polish market in 2014, Glovo in 2019, and Bolt Food in 2020. As for today, the dominant players in the Polish on-demand food delivery market are global multinational corporations.

The platform economy in Poland has been relatively unregulated compared to some Western European countries (Kowalik et al., 2024; Owczarek, 2022). Only the work of passenger car drivers is regulated under the so-called Lex Uber, which equalised the legal status of app-based drivers and traditional taxi drivers (Polkowska, 2025). There is a lack of specific legislation dedicated to other platform workers. The prevailing contractual arrangements in food delivery, which we refer to as "contractual bricolage" due to the broad spectrum of various (il)licit work arrangements, contribute to the precarious status of migrants. Most workers are neither self-employed nor employed in the sense of the Labour Code, as they typically work under civil law contracts or rental contracts, rather than employment contracts (Jancewicz & Jóźwiak, 2025). Civil law contracts, often referred to as "junk contracts," are problematic as they can be terminated without notice or justification, and formal social security contributions for sickness and maternity are often voluntary or non-existent (Muszyński, 2019). Vehicle rental contracts are a significant aspect of the regulatory framework, characterised by their role in intermediary-based employment models and their impact on worker precariousness (Polkowska, 2025). Workers who have rental contracts are falsely presented as "lending" a bike or scooter to an intermediary and are reimbursed through platform earnings. Due to varying business strategies, a dual market has emerged in the food delivery sector in Poland. Pyszne.pl (JustEatTakeway) uses direct or agency employment based on a contract of mandate, while other platforms (Glovo, Uber Eats, Wolt, and others) use intermediaries that offer a variety of contracts, including combinations of civil law and vehicle rental contracts.

While predominantly Polish nationals work in delivery, a sizable portion are Ukrainian, with other nationalities also represented, though typically in smaller numbers. According to one survey, 39% of delivery platform workers were migrants (Kowalik et al., 2024). Another study utilising mobile big data from 2020 showed that across different delivery platforms, the proportion of foreign workers ranged from 37.7% to nearly 46 percent, with Ukrainians forming the largest group among them (Beręsewicz et al., 2021). The most recent survey report commissioned by the Polish Association of Fleet Partners (PZPA) shows that among those working through intermediaries, there are almost as many foreigners (48%) as Poles (52%; PZPA, 2025). Among migrants, those from Ukraine (30%) and Belarus (8%) predominate, followed by workers from Georgia, India, and Uzbekistan (each at 1%), and in smaller numbers, Turkey, Azerbaijan, Zimbabwe, Turkmenistan, and Pakistan (PZPA, 2025).

For many migrants, platform work, including food delivery, serves as the most accessible entry point into the Polish labour market. Platforms offer apps in multiple languages, and fleet partners often employ staff who speak Russian and Ukrainian, simplifying the hiring process (Jancewicz & Jóźwiak, 2025). Migrants in the sector often face more precarious working conditions than Polish nationals due to the prevailing contractual models.

According to a survey, migrant workers in taxi and delivery platforms are three times more likely not to have a written contract compared to Polish workers (31.5% versus 10.3%). They are twice as likely to lack health insurance as their Polish counterparts and nearly four times more likely than Ukrainian migrants in Poland working in other sectors (Kowalik et al., 2024). The absence of health insurance is widespread among recent migrants, with a rate of 51.8% (Kowalik et al., 2024).

Our research in Poland enhances these findings. The fieldwork revealed that the work system on delivery platforms is an on-demand system characterised by high variability, depending on the season of the year, the day of the week, and the hours on a particular day. The contracts do not guarantee the consistency of working hours and days. There are periods when riders compete for orders, and there are periods when platforms compete for riders.

For many riders, delivery is their primary or only job, and they work more than 40 hours a week, often exceeding a five-day workweek. Payments are typically made every week; however, the income is unstable and inconsistent, as it depends on various bonuses and add-ons. The wage is based on so-called multipliers, which mainly depend on the season, week, hour of delivery, and the district (zone) of the city where the order pick-up point is located.

To calculate the final net amount, several components must be deducted from the remuneration, including social security fees and the "fleet partner" commission. The interviewees also reported that their income depends on the type of vehicle, as scooter and car users receive better-paid tasks. Income also depends on the availability of other working tools. Riders are charged for backpacks and work clothes, and those who do not have their own vehicle must rent one.

Some riders working on civil contracts have access to social security, including health insurance. Those working on a vehicle rental contract are not entitled to any social security services. The poor level of control over working conditions completes the picture. The labour inspectorate only checks the fulfilment of contracts—the accuracy and timing of salary payments and social security contributions. However, as our fieldwork revealed, the labour inspectorate is powerless against thousands of intermediaries who do not sign contracts and whose companies use virtual addresses, making them difficult to track down.

Protests by riders are sporadic, spontaneous, and mainly concern pay conditions, including multipliers that change rapidly and without warning. There are two trade unions representing riders, but their demands can only be addressed to direct employers (platforms or intermediaries), as there is no sectoral collective bargaining in Poland.

The Polish contractual bricolage working system, therefore, is characterised by varying levels of security and a low level of control over working conditions. Migrants who find employment in a highly unregulated environment are at risk of further exclusion. Although most food delivery workers in Poland have a regulated residence status, our research on working conditions shows that a binary approach to irregular migration is insufficient. The lack of legislative and policy frameworks, combined with employers' practices, shapes the conditions and vulnerabilities of migrant workers, pushing them into irregular employment defined by various temporal and status dimensions. Irregular wages and working hours jeopardise both the process of regularisation and the retention of regular status. The variety of contract types creates unequal

access to social security, including healthcare, resulting in a situation in which many workers find themselves temporarily suspended between regularity and irregularity in terms of status, employment, social security, and inclusion.

4.3. Spain's Regulated Exclusion

The Spanish food delivery sector emerged and began to develop in 2015–2016, coinciding with the launch of major digital platforms such as Deliveroo. Since then, it has rapidly evolved into one of the most dynamic segments of the European platform economy, more than tripling its revenue between 2019 and 2023, and consistently ranking among the top countries in terms of platform-based employment (Urzi Brancati et al., 2020). Crucially, this sector is highly dependent on urban scale, with activity concentrated primarily in the metropolitan areas of Madrid and Barcelona. The main market players currently operating in Spain are Glovo—now the market leader—alongside Just Eat and Uber Eats. The sector's growth has been facilitated by the widespread use of self-employment arrangements, which allowed platforms to reduce labour costs and respond flexibly to highly volatile demand.

The Spanish Riders Law (Royal Decree-Law 9/2021, Law 12/2021) marked a landmark regulatory intervention in the platform economy, establishing a legal presumption of employment for food delivery workers and mandating algorithmic transparency. This legislation emerged in response to mounting legal and social pressure, including a pivotal Supreme Court ruling in 2020 that recognised the dependent nature of rider-platform relationships. While the law formally acknowledged riders as employees and aimed to curb exploitative practices, its implementation has been fraught with resistance from platforms (EU-OSHA, 2022), particularly Glovo, which continued to operate under a self-employment model through 2024. This resistance has taken the form of legal appeals, technological adaptations to simulate autonomy, and the use of intermediaries to obscure employment relationships (Rodríguez-Piñero Royo, 2023). As a result, the law has produced what might be termed a model of "regulated exclusion": a framework that formally includes riders within the scope of labour protections while simultaneously enabling their circumvention through structural loopholes and weak enforcement. This paradox is reflected in the coexistence of four distinct rider profiles in Spain's food delivery sector: (a) directly employed platform workers, typically under Just Eat's model; (b) employees of intermediary firms, often subcontracted through temporary employment agencies; (c) self-employed riders, particularly under Glovo's model; and (d) irregular workers operating through subleased accounts, who represent the most precarious and invisible segment of the workforce.

The Spanish food delivery sector is now predominantly sustained by migrant labour, a shift from its early composition of young Spanish nationals. Although official data is lacking, estimates from Adigital (2019) suggest that the majority of riders are foreign nationals, particularly young men from Latin America—most notably Venezuela and Colombia—and South Asia, including Pakistan, Bangladesh, and India. The former are primarily active in Madrid, while the latter are more concentrated in Barcelona.

This demographic transformation reflects the sector's low entry barriers and the structural alignment between platform labour demand and the legal and economic vulnerabilities of migrant populations. Observations gathered across multiple Spanish cities have revealed the widespread and systemic nature of account subleasing, which has become a dominant mode of access to platform work for migrants with irregular or semi-regular legal status. This practice is not marginal but rather central to the functioning of the

sector. The prevalence of subleasing is closely tied to the permissiveness of platform onboarding systems and the legal constraints that prevent many migrants from registering accounts in their own names (Casas-Cortés, 2025). Three main rider profiles emerge from this context: (a) overstayers whose tourist visas have expired, a profile common among Southeast Asians; (b) rejected asylum seekers, who have fallen into administrative irregularity; and (c) asylum seekers with residence permits but without work authorisation, often due to bureaucratic delays (Moreno-Amador, 2023). These profiles reflect the diversity of legal statuses among migrant riders and how subleasing functions as a workaround to formal exclusion from the labour market.

For these people, subleasing a rider account often represents the "best of the worst options" for income generation and the simplest route into the labour market. However, this work is marked by extreme precarity and poor conditions. Riders using subleased accounts typically pay an informal "royalty" of around 30% of their earnings to the account owner, which, combined with already low margins, results in incomes well below the legal minimum and necessitates extended working hours. Irregular migrant riders frequently work 10 to 14 hours per day, seven days a week, with weekly earnings often as low as EUR 100–150. Their financial vulnerability is compounded by long, unpaid waiting times and the need to rent municipal bicycles. They operate without access to social security, union representation, or formal labour rights. The physical risks are severe, with long hours, inadequate equipment, and pressure for speed contributing to frequent accidents and, in some cases, fatalities. Beyond the workplace, precariousness extends into the social sphere: Riders often live in overcrowded housing shared with others from their communities, and their irregular legal status places them in a "grey zone" that limits access to public services and deters them from reporting abuse due to fear of deportation.

The Spanish food delivery sector exemplifies a model of "regulated exclusion," where formal labour protections coexist with the systematic marginalisation of migrant workers. While the Riders Law introduced a presumption of employment, it failed to address the legal and institutional barriers that prevent many migrants from accessing formal work. Overstayers, rejected asylum seekers, and applicants awaiting work authorisation remain excluded from regular employment due to the restrictive and fragmented nature of Spain's migration and asylum frameworks (Law 4/2000; Law 12/2009). These legal grey zones produce a structurally irregular workforce that is absorbed by platforms through practices such as account subleasing—now a normalised mechanism of labour access. Rather than correcting exclusion, the current regulatory configuration sustains it, enabling platforms to benefit from a flexible, invisible, and highly exploitable labour force. In this context, irregularity is not an anomaly, but a condition actively produced at the intersection of legal ambiguity and digital labour infrastructures.

5. Discussion

The relationship between digital platforms and immigration is both intimate and structurally embedded, unfolding across multiple, intersecting dimensions. At its core, this connection is shaped by the systematic incorporation of migrant workers whose irregularity—whether defined by the absence of residence permits, the lack of formal work contracts, or the denial of basic labour rights—renders them particularly exploitable. Far from being incidental, this dynamic reflects a mutually reinforcing process in which platform economies and migrant labour regimes co-evolve. As platform markets expand, they do so not in isolation but through the absorption of migrant workforces shaped by historical contingencies, economic imperatives, and legal frameworks that produce and sustain precariousness.

Historically, the emergence and consolidation of the platform food delivery market have closely mirrored key moments of intensified migration across national contexts. While the nature and drivers of these migration flows vary, a clear temporal alignment can be observed between the growth of such markets and the increase in immigration. In Italy, the post-2015 period witnessed the expansion of platform work following the so-called "refugee crisis," associated with sea arrivals from North and Sub-Saharan Africa. In Spain, the sector's development paralleled the influx of Venezuelan asylum seekers between 2016 and 2017. In Poland, the rapid growth of the platform economy unfolded alongside the mass migration from Ukraine since 2013, accelerated by the full-scale war of 2022.

Legally, the relationship between digital platforms and immigration is shaped by the ability of platforms to recruit from migrant populations whose status limits access to formal employment. Despite significant differences in labour, migration, and asylum policies across the countries analysed, platforms consistently absorb legally vulnerable workers whose status limits access to formal employment. In Poland, this dynamic is driven by the absence of labour demand regulation and the prevalence of civil and rental contracts—a model of "contractual bricolage." In Spain and Italy, precarity stems from the contradictions of migration and asylum regimes. Despite differing labour frameworks, both countries generate categories of migrants excluded from formal employment—either because they reside irregularly or are legally barred from working. While the platform food delivery sector inherently presents challenges for all workers, the situation for migrants is profoundly shaped by their legal, social, and economic vulnerabilities, making them a segmented and constrained workforce crucial to the platform economy.

Economically, the relation between digital platforms and immigration is shaped by a structural alignment between the labour demands of food delivery platforms and the livelihood strategies of migrants. Platforms rely on a workforce that is flexible, constantly available, and responsive to highly volatile demand patterns. At the same time, many migrants, particularly those in precarious legal or socio-economic positions, seek immediate and low-barrier access to income-generating opportunities. This convergence is reinforced by the sector's minimal entry requirements, limited oversight, and lack of effective regulatory controls. Across the cases analysed, these features have enabled platforms to absorb a wide range of migrant profiles, while fostering a labour regime in which economic necessity often compels workers to accept unstable and exploitative conditions.

Turning to the consequences of this relationship, one of the most salient findings to emerge from the study is the production of a specific and highly precarious migrant workforce. Across national contexts, migrant riders experience overlapping forms of vulnerability that reflect the structural entanglement of platform economies and migration regimes. These vulnerabilities manifest along five key dimensions: (a) legal and administrative status, with many riders lacking residence permits, work authorisation, or both; (b) employment insecurity, marked by unstable schedules, algorithmic control, and the constant threat of account deactivation; (c) income inadequacy, with earnings often falling below legal minimums; (d) exclusion from rights and protections, including limited access to social security, union representation, and workplace insurance; and (e) harsh working and living conditions, including long hours, physical strain, and overcrowded housing. While shaped by national specificities, these patterns converge in consolidating a segmented and disposable migrant workforce that is essential to the functioning of the platform economy yet systematically excluded from its protections. Despite variations in legal frameworks and migrant profiles, the convergence of platform logics and migration regimes results in a shared condition of exclusion from social rights and

socio-economic life. Notably, the more irregular the status of migrant workers, the more precarious their situation becomes, as heightened irregularity compounds vulnerability and deepens exclusion.

Delving further into the characteristics of this highly precarious migrant workforce, a second key finding concerns the emergence of a segment of workers who, while economically integrated through food delivery, remain socially and residentially excluded. This group is composed largely of recent arrivals and migrants in irregular or semi-regular administrative situations, for whom platform work represents the most immediate and accessible entry point into the labour market. Becoming a rider is widely perceived as the "best of the worst options"—a job that, while poorly paid and insecure, is easier to access than other forms of employment.

For many, this work is not an end in itself but a short-term strategy to secure a livelihood and, in some cases, to stabilise their legal status. In Spain and Italy, migrants lacking residence permits often turn to food delivery as a way to generate income while waiting to apply through regular channels. In these contexts, platform work is frequently chosen over employment in agriculture or construction, which, although traditionally open to migrant labour, are perceived as more physically demanding, less flexible, located farther from city centres (and thus community networks), and more difficult to access without formal contracts. In Poland, while many Ukrainian migrants have legal residence, platform work similarly functions as a transitional occupation. It offers immediate income with minimal bureaucratic barriers, especially for those who lack Polish language skills or are unfamiliar with the local labour market. Compared to sectors like manufacturing or logistics, food delivery is seen as more accessible and less dependent on formal recruitment.

Closely tied to this fragmented inclusion is the emergence of a new ecosystem of intermediaries that mediate access to and shape the functioning of food delivery work for migrant riders. These actors have become central to the organisation of the sector, operating in a grey area lingering outside of, but contiguous to, food delivery platforms. Operating at the intersection of digital platforms, migration regimes, and informal economies, they influence not only the conditions of work but also the very possibility of labour market entry for migrants. They play multiple roles, offering legal and administrative consultancy, assisting with visa procedures or self-employment registration, or even renting essential equipment (e.g., bicycles, scooters, branded backpacks), often at high cost. Most notably, in Spain and Italy, the subleasing of platform accounts has become widespread—a hallmark of Spain's "regulated exclusion" and Italy's "dual track" models. In Poland, a more institutionalised model has emerged through "fleet partners," who contract with platforms and then "employ" riders under civil or rental contracts—a defining feature of the "contractual bricolage" model.

Among the various forms of intermediation observed in the study, the irregular subleasing of platform accounts emerges as a particularly exploitative and structurally embedded practice, albeit one which is hardly clean-cut. This arrangement typically involves a migrant with legal status—often holding a valid residence permit and a formal contract with the platform or an intermediary—informally renting out their account to another migrant in an irregular situation. While this practice enables undocumented riders to access income-generating opportunities, it also creates a highly asymmetric relationship marked by dependency and vulnerability. Account holders often retain control over the platform interface and payment flows, leading to abuses such as disconnections or withheld earnings. Moreover, while riders are covered by their platforms in case of road accidents during delivery (but not while waiting for a request or travelling to a

restaurant for a pickup), those using someone else's account remain uncovered. What began—and in some cases still operates—as a community-based coping strategy rooted in kinship and local ties often evolves into a market-oriented mechanism of exploitation. Some interviewees blurred the line between solidarity and exclusion, problematising the often-vilified role of intermediaries and at times justifying account-holders' entitlement to a commission for lending their accounts. Overall, however, these dynamics are generating growing tensions within migrant communities, fostering mistrust and internal fragmentation. Account subleasing thus emerges not merely as a workaround to legal exclusion but as a mechanism of control and extraction that reshapes intra-community relations.

This model of fragmented inclusion, where migrants are economically integrated yet remain precariously positioned, also reveals a further implication: In specific contexts, platform work is not only a pathway to integration but a channel of entry into the country itself. This dynamic was observed most clearly in Spain, where food delivery platforms have become embedded in the migration trajectories of South Asian nationals, particularly from Pakistan and Bangladesh. Fieldwork conducted in Barcelona shows that, for many in this group, the decision to become a rider is not made post-arrival but is premeditated and structured before departure. Migrants often enter Spain on tourist visas with the explicit intention of overstaying and working in food delivery. Upon arrival, they activate pre-existing community ties to secure access to subleased accounts and navigate informal housing and employment markets. Thus, the platform becomes not only a site of labour incorporation but a structuring device in the migration process.

The comparative analysis of Italy, Poland, and Spain reveals that, despite significant differences in regulatory frameworks—from Spain's "regulated exclusion," to Italy's "dual track," and Poland's "contractual bricolage"—food delivery platforms consistently extract value from the most precarious segments of the migrant workforce. This convergence underscores the capacity of platform capitalism to adapt to and exploit diverse legal environments, producing similar conditions of vulnerability and exclusion across national contexts. The regulatory frames do not mitigate but rather enable this exploitation, providing the structural conditions through which platforms incorporate migrant labour while externalising risk and responsibility.

6. Conclusion

This article has explored the complex entanglements between platform food delivery work and migrant labour, focusing specifically on the experiences of irregular and semi-regular migrant workers in Italy, Poland, and Spain. Drawing on and extending a robust body of interdisciplinary research, it has highlighted how platform work, far from offering upward mobility or economic integration, often entrenches migrant workers in cycles of precarity, legal vulnerability, and socio-economic exclusion. The comparative approach adopted here reveals that, despite differences in national legal and regulatory frameworks, platform economies consistently absorb and exploit migrant workers in structurally similar ways. Across all three contexts, food delivery platforms capitalise on the vulnerabilities produced by migration regimes, labour market segmentation, and the lack of adequate labour protections, thereby reinforcing existing hierarchies and producing new forms of hyper-precarious employment.

A key insight from this research is that the relationship between platform work and immigration is not incidental but structurally embedded. The study has shown that digital platforms actively draw from migrant labour pools shaped by restrictive migration regimes, limited access to formal employment, and the urgent

need for income. Whether through Italy's "dual track" system, the "contractual bricolage" of Poland, or Spain's "regulated exclusion," platforms have developed strategies to exploit legal ambiguity and externalise responsibility. This convergence reflects a broader systemic logic: As platform economies expand, they do so through the selective incorporation of migrant workers whose irregular or semi-regular legal statuses make them particularly exploitable. Migrants are thus not merely passive participants in the platform economy but structurally positioned at its core. They are integral, forming the human infrastructure that enables the functioning of digital platforms—yet disposable, as existing migration regimes secure a steady supply of legally precarious migrant labour.

Importantly, the study sheds light on the emergence of fragmented inclusion as a defining feature of migrant participation in food delivery work. Migrant riders are often economically integrated into national labour markets, yet socially, legally, and politically excluded. This form of inclusion allows them to generate income and sustain livelihoods, but it also reinforces their marginalisation by denying them access to rights, protections, and stable legal status. For many, becoming a food delivery rider is not a career choice but a survival strategy—a "best of the worst" option that provides immediate, albeit precarious, access to the labour market. In some cases, platform work even shapes the migration trajectory itself, functioning as both a labour market niche and an informal mechanism of entry, as seen in Spain with South Asian migrants.

Furthermore, the study highlights the pivotal role played by intermediaries—ranging from formal fleet partners to informal account holders—in shaping migrant workers' experiences. These actors mediate access to platform work, structure contractual relationships, and, in many cases, perpetuate exploitative arrangements such as account subleasing. This informal infrastructure not only reflects the inadequacies of regulatory oversight but also reveals how exploitation can be reproduced within migrant communities themselves. Practices like account renting, while originally emerging as survival strategies, have evolved into mechanisms of control that deepen fragmentation, dependency, and intra-community tensions.

Ultimately, this research contributes to broader theoretical debates on the intersection of digital capitalism and migration governance. It underscores how platform economies do not merely respond to labour market dynamics but actively shape and are shaped by migration regimes. The conditions that render migrant labour precarious—legal irregularity, lack of documentation, and exclusion from social rights—are not peripheral to the functioning of the platform economy but central to its profitability. The study's comparative perspective reinforces this point by demonstrating how platforms navigate and exploit different legal terrains to consistently extract value from legally and economically vulnerable populations.

The findings call for a critical rethinking of platform work regulation and migration policy. Regulatory frameworks that continue to treat platform workers as independent contractors or fail to address the structural vulnerabilities of migrant labour only perpetuate exploitation. If platform capitalism is to be made more equitable, future interventions must take into account the deeply embedded nature of migrant precarity within digital economies. This means not only enforcing labour protections and clarifying employment relationships but also reconfiguring migration governance to ensure that economic inclusion does not come at the cost of legal and social exclusion.

The analysis offers insights that transcend the food delivery, illuminating the structural dynamics at the intersection of market demand, state regulation, and migrant labour. The market's capacity to absorb

migrant workers outside legal norms, the alignment between labour demand and migrant livelihood strategies, and the production of a precarious workforce that is economically integrated but socially excluded are, in fact, not sector-specific. Agriculture exemplifies these dynamics: Informal hiring, seasonal dependency, and the emergence of irregular intermediaries mirror the mechanisms observed in platform work (Garofalo Geymonat et al., 2023; Molinero-Gerbeau, 2021). These parallels suggest that labour precarity is shaped less by sectoral features than by systemic tensions between economic imperatives and migration control. In this light, the specificity of food delivery serves as a revealing lens through which to understand wider configurations of regulated exclusion and fragmented inclusion across precarious labour markets. Nevertheless, key features of platform work, such as algorithmic management, opaque work allocation, performance monitoring, and low pay, intensify exploitation and limit workers' autonomy. Platforms frequently evade formal employer responsibilities by classifying workers as independent contractors or outsourcing them to third-party intermediaries, stripping migrants of essential labour protection, social security, and collective bargaining opportunities.

A promising avenue for future research lies precisely in examining similarities and differences between food delivery and other migrant-labour-intensive sectors (digitalised and traditional). This would allow for a deeper understanding of how structural dynamics of precarity unfold across diverse labour regimes. A second promising avenue lies in exploring how migrant workers organise, resist, and reconfigure their roles within digital economies. While this article has focused primarily on structures of exploitation and precarity, it is equally important to explore how migrants actively challenge platform power. Emerging evidence points to new digital dynamics of resistance—ranging from informal networks and everyday acts of subversion to the formation of cooperatives and participation in labour activism. These practices reveal that migrant workers are not merely passive recipients of platform exploitation but also agents capable of shaping alternative labour structures. Investigating how stable job conditions, pathways to regularisation, and collective organising contribute to building more equitable digital labour environments would enrich our understanding of both resistance and resilience in the platform economy.

Conflict of Interests
The authors declare no conflict of interest.

Data Availability
The data that support the findings of this study are available from the corresponding author upon reasonable request.

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