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Rethinking Digital Migration Governance in Southeast Asia: Protecting or Restricting Human Rights?

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Abstract

This article examines the governmentality and biopolitics of Southeast Asian digital migration governance through the framework of decolonial theory. It unpacks how digital technologies are deployed by states and institutions in the policing of migration, from biometric registration and algorithmic surveillance to the use of AI-assisted databases. The research investigates how these tools condition migrant behaviour, generate new inclusion/exclusion figures, and naturalize surveillance practices. At the biopolitical level, it analyses migrants and refugees as datafied subjects and examines the role of biometric technologies as mediators of access to rights, resources, and humanitarian aid. Decolonial theory is employed to examine the concept of data colonialism and argue that Western technologies and data sustain colonial dependencies and re-produce asymmetrical power relations in migration governance. Drawing on examples from Malaysia, Thailand, and Indonesia, the study demonstrates how digital migration governance enhances precarity among migrants and refugees amidst the expansion of state surveillance. Although disaster relief solutions are commonly couched in humanitarian rhetoric, such processes tend to facilitate environments of exclusivism, with limited input by the communities that they are intended to serve. This article interrogates current narratives by emphasizing the importance of decolonization in digital migration governance. It calls for the promotion of local knowledge, technological sovereignty, and community-driven alternatives, that centre the autonomy of migrants and refugees. In doing so, the research engages with broader discussions on the intersections of technology, migration, and power, and calls for more responsible regulation and governance of digital spaces.

Keywords: *digital migration governance, data colonialism, biopolitics, Southeast Asia, refugee rights*

I. INTRODUCTION

Migration governance in Southeast Asia has been radically transformed by the widespread adoption of biometric technologies, artificial intelligence (AI), and digital surveillance by state and humanitarian actors.[1] While these solutions are presented in the name of security, efficiency, and humanitarian aid distribution, they also bring new forms of surveillance, control and structural inequalities.[2] In this way, digital infrastructures, from social media platforms to predictive analytics, operate as technologies of migration governance, influencing the mobility, identity, and behaviour of displaced peoples, while projecting state power transnationally.[3]

This article critically examines the role of digital technologies in migration governance through the analytical frameworks of governmentality, biopolitics and decolonial theory. Drawing from Foucault,[4] the concept of governmentality implies that states direct and govern people's actions through everyday practices, rather than relying on force. This also encompasses digital devices, such as those used for biometric registration or algorithmic monitoring, which influence migrants' mobility and access to services. The concept of biopolitics studies how political power regulates human life by converting individuals into data points that can be organized, monitored, and controlled.[5] In the realm of migration governance, this means that individuals' access to rights and mobility may be determined by how digital systems categorize them. A decolonial view[6] suggests that these technologies replicate the global power hierarchies in which they are developed. Technologies developed in the Global North are used in the Global South and recreate historic patterns of inequality by constraining local agency. Taken together,

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1 Nick Cheesman, "How in Myanmar 'National Races' Came to Surpass Citizenship and Exclude Rohingya" (2017) 47:3 J Contemp Asia 461 at 463; Karin AC Johnson, "International Migration, Development, and Policy: Reconsidering Migration Transition Theory—A Way Forward" (2020) 4:1 Hatfield Graduate J Pub Aff 5; Petra Molnar, "Surveillance Sovereignty: Migration Management Technologies and the Politics of Privatization" in *Migration, Security, and Resistance* (London: Routledge, 2021).

2 Louise Amoore, "Biometric Borders: Governing Mobilities in the War on Terror" (2006) 25:3 Pol Geography 336; Katja Lindskov Jacobsen, *The Politics of Humanitarian Technology: Good Intentions, Unintended Consequences and Insecurity* (London: Routledge, 2015); Mark B Salter, "When the Exception Becomes the Rule: Borders, Sovereignty, and Citizenship" (2008) 12:4 Citizenship Studies 365 at 366.

3 Arne Hintz, Lina Dencik & Karin Wahl-Jorgensen, *Digital Citizenship in a Datafied Society* (Cambridge: Polity Press, 2019) at 45; Sandro Mezzandra & Brett Neilson, *Border as Method, or, the Multiplication of Labor* (Duke University Press, 2013) at 17–18.

4 Michel Foucault, *The Foucault Effect: Studies in Governmentality* (Chicago: University of Chicago Press, 1991) at 102–103.

5 Michel Foucault, *The Birth of Biopolitics: Lectures at the Collège de France, 1978-1979* (New York: Palgrave Macmillan, 1978); Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life* (Stanford: Stanford University Press, 1998).

6 Anibal Quijano, "Coloniality of Power and Eurocentrism in Latin America" (2000) 15:2 Intl Sociology 215 at 216; Nick Couldry & Ulises A Mejias, "Data Colonialism: Rethinking Big Data's Relation to the Contemporary Subject" (2019) 20:4 Television & New Media 336.

these themes highlight the ways in which digital migration governance redistributes power and exposes vulnerabilities in Southeast Asia.

From a biopolitical perspective, the digitalisation of migration governance constructs migrants and refugees as datafied subjects. Biometric registration and identity verification mediate migrant rights, asylum procedures, and humanitarian assistance based on a sender-receiver model.[7] Refugee populations are subjected to algorithmic categorisation at an intensified level which affects both their legal standing and their access to basic services, thus solidifying their dependence on state and international governance systems.[8] These administrative technologies are inherently non-neutral, as they are embedded with particular assumptions, values, and power relations.[9]

Building on decolonial theory, this study examines the phenomenon of data colonialism as a way in which Western-led digital infrastructures extract migrant data, which is then exploited under the auspices of humanitarian governance.[10] In the scope of this study, digital migration technologies are defined as "digital infrastructures and data-driven systems designed to regulate mobility, manage identity, and govern humanitarian assistance".[11] These include biometric systems, digital identification platforms, automated decision-making tools, and remote surveillance mechanisms deployed by states and international organizations. However, these technologies are rarely designed with any meaningful engagement and participation from the communities they are intended to serve. They frequently overlook local social, political, and economic contexts, and can install foreign governance models that entrench global inequalities, promoting dependency rather than fostering agency, sovereignty, and local ownership.[12][13]

Through case studies from Malaysia, Thailand and Indonesia, this article illustrates how digital migration governance can be used to exacerbate migrant precarity while intensifying state surveillance and bureaucratic control. Although framed in humanitarian terms, digital infrastructures often recreate exclusionary systems with little transparency or accountability.[14] Drawing on literature from critical ethnographic research in the field

7 Agamben, *supra* note 5; Amoore, *supra* note 2 at 337; Molnar, *supra* note 1. The "sender-receiver model" here is a metaphor used to critique how digital systems strip migrants of their active voice (agency). It argues that digitalisation turns a political relationship (a human claiming their rights) into a technical transaction (a machine transmitting a permission code).

8 Jacobsen, *supra* note 2 at 146; Salter, *supra* note 2 at 366.

9 Hintz, Dencik & Wahl-Jorgensen, *supra* note 3 at 45.

10 Couldry & Mejias, *supra* note 6 at 338; Achille Mbembe, "Bodies as Borders" (2019) 4:5 From the European South 5 at 10.

11 Mark Latonero & Paula Kift, "On Digital Passages: The Digital Identity of the Refugee" (2018) 4:1 Social Media + Society; Mirca Madianou, "Technocolonialism: Digital Innovation and Data Practices in the Humanitarian Response to Refugee Crises" (2019) 5:3 Social Media + Society at 3.

12 Quijano, *supra* note 6; Payal Arora, "Bottom of the Data Pyramid: Big Data and the Global South" (2016) 10 Intl J Comm 1681 at 1685.

13 Madianou, *supra* note 11.

14 Cheesman, *supra* note 1; Molnar, *supra* note 1.

of digital governance,[15] this study focuses on models of local knowledge, participatory models of management, and models of technological sovereignty, which are often proposed as alternatives to Western interventions based on how technology embeds and preserves power hierarchies.

This research ultimately seeks to answer the question of how digital technologies remould migration governance in Southeast Asia, particularly regarding biopolitical control and governmentality. It also examines how migrant governance can be decolonised by centring ethical data practices, adopting participatory decision-making models, and foregrounding the agency of migrants and refugees themselves. Moreover, this article also seeks to understand the human rights implications of digital borders. By critically engaging with the intersection of technology, migration and power, this article adds to wider discussions about digital sovereignty from a Southeast Asian perspective. Furthermore, it highlights the need to reconfigure the governance of migration to be more inclusive and equitable in the region.

II. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Recent literature views digital technologies as not only enablers of humanitarian assistance, but rather a means by which migration governance can deploy mechanisms of surveillance and control.[16] In particular, the micropolitics of Foucault[17] and biopolitics of Agamben[18] reveal the centrality of the state in deploying digital governance to regulate life, classify populations, and perpetuate exclusionary practices. However, Amoore argues that biometric borders are just one part of a larger surveillance network designed to track identities.[19] These digital tools serve security purposes, giving governments more power to control movement using data analysis and automated tracking.[20]

Research on digital migration governance in Southeast Asia remains limited, with Malaysia's refugee biometric system and Thailand's digitised border control serving as the two main examples.[21]. In these cases, technology is interrogated as a mechanism contributing to the vulnerability and institutional exclusion of migrants. For example, Nah et al. demonstrate that biometric refugee cards in Malaysia function as instruments of coercive control, where the delivery of aid is made conditional upon digital

15 Arora, *supra* note 12 at 1685.
16 Amoore, *supra* note 2; Cheesman, *supra* note 1; Johnson, *supra* note 1.
17 Foucault, *supra* note 5 at 102–103; Foucault, *supra* note 4.
18 Agamben, *supra* note 5 at 8.
19 Amoore, *supra* note 2.
20 Molnar, *supra* note 1; Matthias Leese, "Privacy, Data Protection, and Security Studies" in *Research Handbook on Privacy and Data Protection Law* (Edward Elgar Publishing, 2022) 214.
21 Alice M Nah et al, "A Research Agenda for the Protection of Human Rights Defenders" (2013) 5:3 J Human Rights Practice 401; Antje Missbach & Gerhard Hoffstaedter, "When Transit States Pursue Their Own Agenda: Malaysian and Indonesian Responses to Australia's Migration and Border Policies" (2020) 3:1 Migration and Society 64.

submission, thereby actively eroding the autonomy of refugees.[22] Similarly, Missbach and Hoffstaedter reveal that Indonesia's reliance on digital technology does not merely modernize governance but entrenches systemic vulnerabilities, directly undermining migrants' rights and dignity by prioritizing surveillance over protection.[23] These findings underscore the central argument that digital infrastructures serve to operationalize exclusion rather than facilitate genuine humanitarian support. In analogous contexts, the incorporation of digital databases into migration governance structures has led to a weakening of legal protections, as asylum seekers and undocumented migrants are increasingly subjected to opaque and automated decision-making processes. In this way, digitalization exacerbates privacy risks for undocumented persons whose data, often collected for humanitarian or administrative purposes, may be repurposed by law enforcement. Without robust data protection firewalls in place, the digital footprint of undocumented migrants can become a tool for surveillance, potentially exposing them to the risk of detention or deportation.[24] These processes place reliance on error-prone, and invisible digital systems. For instance, a refugee's safety no longer depends just on international law, but on a "clean" data record.

Despite a large base of research on digital governance and biopolitics, few articles examine the knowledge gaps caused by relying solely on Western philosophy and excluding local knowledge and perspectives.[25] This paper addresses these gaps by applying a decolonial perspective using Fairclough's critical discourse analysis to examine how the use of digital technologies within migration governance reproduces colonial legacies.[26] Responding to critical advances for decolonising methodologies, this research resists dominant narratives and reinforces local agency, participatory governance, and epistemic plurality.[27] Adopting a decolonial lens, it highlights the importance of moving beyond security-centred frames of reference to examine the history of colonial rule and racialised governance in which Western technologies are often entangled.[28]

22 Nah et al, *supra* note 21 at 412.

23 Missbach & Hoffstaedter, *supra* note 21 at 72.

24 Didier Bigo, "The (in) Securitization Practices of the Three Universes of EU Border Control: Military/Navy–Border Guards/Police–Database Analysts" (2014) 45:3 Security Dialogue 209 at 212; Petra Molnar & Lex Gill, *Bots at the Gate: A Human Rights Analysis of Automated Decision-Making in Canada's Immigration and Refugee System* (Citizen Lab and International Human Rights Program (Faculty of Law, University of Toronto), 2018)

25 Dipesh Chakrabarty, "Subaltern Studies and Postcolonial Historiography" (2009) 1:1 Nepantla: Views from South 9.

26 Norman Fairclough, *Analysing Discourse* (London: Routledge, 2003).

27 Couldry & Mejias, *supra* note 11; Walter D Mignolo & Catherine E Walsh, *On Decoloniality: Concepts, Analytics, Praxis* (Duke University Press, 2018).

28 Gurminder K Bhambra, *Rethinking Modernity: Postcolonialism and the Sociological Imagination* (Palgrave Macmillan, 2007); Encarnación Gutiérrez Rodríguez, "The Coloniality of Migration and the 'Refugee Crisis': On the Asylum-Migration Nexus, the Transatlantic White European Settler Colonialism-Migration and Racial Capitalism" (2018) 34:1 Refuge 16.

In addition, the governance of digital migration is increasingly aligned with the interest of global technology corporations and international security infrastructures, leading to ethical dilemmas involving data extraction, invasion of privacy, and corporate interests in migration policy.[29]

The development of digital migration systems is influenced not only by state agendas, but also by the commercial and political practices of transnational technology companies which design, finance and operate these tools. These actors prioritize efficiency, market growth, and data extraction, and their interests frequently diverge from those of migrants who desire safety, privacy, transparency, and agency over the use of their own data. Corporate and security-oriented models of governance consolidate control, often overlooking local governance structures and migrants themselves. In this context, decolonising the governance of digital migration necessitates a reorientation of power towards systems that can uphold ethical data practices, mechanisms for local accountability, and participatory models where migrant communities shape how technologies are designed, deployed and governed. Such an approach aligns governance with the lived realities of migrants rather than the institutional priorities of distant security and technology actors.

Using AI and predictive analytics for border surveillance can exacerbate existing inequalities. Biased algorithms often single out migrants from the Global South more than others, reinforcing existing power imbalances.[30] Decolonial critiques thus call on scholars and practitioners to interrogate these dynamics, and to consider how digital migration governance operates as an extension of historical mechanisms of colonial control. They also highlight the need for alternative frameworks based in justice and self-determination.

Placing digital migration governance in a broader historical and structural context, this article outlines avenues for future research that centres decolonial approaches. More specifically, it demands further engagement with Indigenous, feminist, and Global South epistemologies that resist the technocratic and securitised framing of migration management. Incorporating the voices of migrants and displaced populations is an important step towards creating more just and humane migration policies.[31] This research thus calls for a more reflexive and inclusive debate over the governance of digital migration—one that resists dominant paradigms and encourages a critical exchange between academia, policymaking, and impacted communities.

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29 Marie Godin, Derya Ozkul & Rachel Humphris, "Digital Technologies and Migration: Behind, beyond and around the Black Box" (2025) 51:14 J Ethnic & Migration Studies 3571; Mark Latonero et al, *Digital Identity in the Migration & Refugee Context: Italy Case Study* (2021).

30 Nicholas Eubank, "Social Networks and the Political Salience of Ethnicity" (2019) 14:1 Q J Pol Sci 1.

31 Mezzandra & Neilson, *supra* note 3 at 17–18; Nira Yuval-Davis, Georgie Wemyss & Kathryn Cassidy, *Bordering* (John Wiley & Sons, 2019).

Although existing studies demonstrate how digital technologies intensify surveillance, automate profiling and entrench precarity among migrants, perhaps the most significant impact of this literature is its insistence that digital migration governance is primarily a power asset. Research on biometric borders shows how digital systems shape who becomes visible, governable, or deportable, and exposes practices of governmentality. [32] Analyses of humanitarian datafication have demonstrated how biometric registration recategorizes refugees as data subjects in ways that shape access to rights and movement. [33] Analysis through a decolonial lens more generally shows how technology enables colonial relations of extraction and dependency while bypassing local governance arrangements and community power. [34] Taken together, these observations reinforce the central claim of this article that digital migration governance in Southeast Asia should be viewed as a historically-influenced configuration of governmental, biopolitical and colonial power that remoulds refugee protection through entrenched structural inequalities.

To analytically unpack these configurations, a singular theoretical lens would be insufficient to capture the multi-layered complexities of the phenomenon. Instead, this article draws on a triad of theoretical perspectives derived from governmentality, biopolitics, and decolonial theory. The synergy of these theories allows for a holistic analysis that moves from the macro-level of state rationality to the micro-level of the body, and finally to the deep historical structures that underpin contemporary global power relations.

Together, these three theoretical streams form a robust analytical framework that avoids technological determinism. They frame digital migration governance not as a neutral or inevitable development, but as a deeply political field of contestation where power is exercised, negotiated, and resisted.

1. Governmentality

As Foucault explains, governmentality involves indirect steering mechanisms embedded in institutions, technologies and policies. [35] In the digital age, migrant behaviour, mobility, and identity have become subject to biometric registration, AI-powered tracking and algorithmic governance, framed in the discourses of security and efficiency. These technologies also codify political hierarchies, broaden the state's ability to surveil and control people, and compound the marginalisation of displaced populations. [36]

32 Amoore, *supra* note 2; Btihaj Ajana, *Governing through Biometrics: The Biopolitics of Identity* (Springer, 2013).
33 Jacobsen, *supra* note 2 at 146; Madianou, *supra* note 11 at 5.
34 Quijano, *supra* note 6; Couldry & Mejias, *supra* note 6.
35 Foucault, *supra* note 4.
36 Jacobsen, *supra* note 2 at 146.

Migration governance is not monopolized solely by state actors, however. A complex ecology of domestic and global organisations, private technology companies, and humanitarian actors also function within this system, often without clear accountability structures.[37] Corporate actors, specifically technology companies that govern biometric databases, also contribute to the processes of bordering and racialisation, raising ethical questions surrounding data privacy, algorithmic bias, and the commodification of migrant identities.[38] The integration of digital technologies into migration governance thereby concentrates power away from migrants and local communities, increasingly undermining migrant rights in the interests of state security-oriented agendas and corporate interests.[39]

This study utilizes governmentality as an analytical lens to move beyond a simplistic model of top-down state coercion. This framework is essential for understanding the rationale that digital surveillance is logical and efficient. By applying this theory, the research investigates how digital infrastructures are designed to produce a specific type of "governable" migrant subject, one who is encouraged to voluntarily participate in their monitoring by providing biometric data and maintaining a legible digital footprint in exchange for access to rights or aid. This approach deconstructs "humanitarian" and "security" narratives, revealing them as a governmental strategy to render populations manageable from a distance, as demonstrated through case studies of digital migration governance in Southeast Asia.

Furthermore, the concept of governmentality is justified because it uniquely accommodates the complex web of actors involved. It provides the tools to map the relationships between state agencies, international NGOs, and private tech firms, showing how they collectively produce a powerful field of governance without a single, centralized authority.

2. Biopolitics

Drawing from Foucault,[40] biopolitics investigates how the power over life regulates populations. Within the biopolitical machinery of digital migration governance, migrants and refugees are datafied: their identities are transformed into digital profiles that are subject to algorithmic decision-making.[41] Agamben[42] coined the term "bare life" to identify the moment when migrants are stripped of political rights and legal personhood, becoming data points that, through biometric categorization, determine their access to asylum procedures, humanitarian assistance, and border crossings.

37 Hintz, Dencik & Wahl-Jorgensen, *supra* note 3 at 45.
38 Molnar, *supra* note 1.
39 Bigo, *supra* note 24 at 212; Madianou, *supra* note 11.
40 Foucault, *supra* note 5.
41 Amoore, *supra* note 2; Salter, *supra* note 2 at 366.
42 Agamben, *supra* note 5.

With the growing utilization of biometric technologies, predictive algorithms, and risk assessments, states of exception in which invasive surveillance and migrant precarity become a permanent condition, are increasingly the norm.[43] Data from AI-led migration risk scoring systems have been used to group migrants according to esoteric algorithmic models, leading to data commodification, automation of exclusion, and digital discrimination.[44] Migrants generally lack control over their own data, which is entered into governmental and humanitarian databases that often lack protection from misuse or third-party access.[45]

By perpetuating historical and existing structural inequalities, the militarization of border security with AI and biometric recognition consolidates already pervasive racial, ethnic, and socio-economic biases.[46] Migrants and asylum seekers who are excluded from national citizenship frameworks are further stigmatized as "security risks" or "data subjects" in algorithmically governed, opaque systems, often without due process or oversight.[47]

In this research, the theory of biopolitics will be used to trace the process through which a migrant is transformed from a political subject into a "data object." The analysis will examine key moments in this transformation, beginning with the act of biometric enrolment, where the body becomes the primary source of administrative identity. From there, it will investigate how algorithmic risk-scoring and sorting mechanisms operate on this data to assign value and threat-levels to individuals. This framework allows the study to connect abstract technological processes to their material consequences, showing how an algorithmic category can determine an individual's ability to access food, receive medical care, or have their asylum claim heard.

The justification for using biopolitics is its unique focus on life itself as the ultimate site of power. This lens is critical for understanding the profound stakes of digital migration governance, as it directs our attention to ways in which technology-driven decisions can sustain or endanger the biological existence of vulnerable individuals. It enables a powerful critique of systems that reduce human beings to manageable data points, thereby making their precarity an administrative problem to be solved rather than a human rights crisis to be addressed.

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43 Claudia Aradau & Tobias Blanke, "Politics of Prediction: Security and the Time/Space of Governmentality in the Age of Big Data" (2017) 20:3 Eur J Soc Theory 373 at 374; Özgün E Topak, "The Biopolitical Border in Practice: Surveillance and Death at the Greece-Turkey Borderzones" (2014) 32:5 Env and Planning D: Society and Space 815 at 820.

44 Btihaj Ajana, *Governing through Biometrics: The Biopolitics of Identity* (Springer, 2013); Sandra Ponzanesi & Koen Leurs, "Digital Migration Practices and the Everyday" (2022) 15:2 Communication, Culture and Critique 103.

45 Hintz, Dencik & Wahl-Jorgensen, *supra* note 3 at 45; Ruppert, Isin & Bigo, *supra* note 7 at 2.

46 Bigo, *supra* note 6 at 212; Maša Galič, Tjerk Timan & Bert-Jaap Koops, "Bentham, Deleuze and beyond: An Overview of Surveillance Theories from the Panopticon to Participation" (2017) 30:1 Philosophy & Technology 9.

47 Molnar, *supra* note 1.

3. Decolonial Theory, Data Colonialism and The Call for Data Sovereignty

Digital migration governance is an extension of colonial power relations to the digital domain, where Global North technologies continue to reinforce dependencies in the Global South.[48] Imposed under the guise of humanitarianism, these systems lock in systemic inequality by making local governance structures adopt Western-designed surveillance systems, risk-based frameworks, and analytics for migration control.[49]

As Couldry and Mejias[50] theorize, data colonialism critiques the extraction, storage, and monetization of migrant data by international organizations and private actors, which reduces displaced populations to data points in global surveillance mechanisms. This type of digital pastoralism, by which governments and humanitarian institutions govern who is included, who is excluded, and the conditions of inclusion, reproduces historically colonial governance structures.[51]

Calls for "data sovereignty" have emerged as a counterbalancing socio-political force to the global digital asymmetries above. These calls seek the local governance of digital information, in order to resist dependence on extractive digitally governed regimes.[52] Decolonial scholars highlight the need for participatory governance models that re-empower migrants/refugees and host communities instead of treating them as passive objects.[53] The governance of digital identity verification, humanitarian databases, and algorithmic decision-making should be site-specific, enabling community-centred migration governance practices rather than reproducing Western dominance in digital infrastructures.[54]

Decolonial theory offers a unique fundamental historical and structural context that other frameworks may not. Although governmentality and biopolitics are proficient in examining the mechanisms of power, decolonial theory compels us to inquire about the origins of that power: Whose interests are prioritized in these systems, and how do they sustain global inequities? Whose benefit were these systems intended for, and how do they perpetuate long-standing global inequalities? This lens is essential for linking the specificities of digital governance in Southeast Asia to a global history of colonial extraction. This perspective underpins subsequent discussion on data colonialism and

48 Couldry & Mejias, *supra* note 11; Quijano, *supra* note 12.
49 Mbembe, *supra* note 11 at 10; Arora, *supra* note 12 at 1685.
50 Couldry & Mejias, *supra* note 11.
51 Stefania Milan & Emiliano Treré, "Big Data from the South (s): Beyond Data Universalism" (2019) 20:4 Television & New Media 319 at 324; Shirin Madon & Emrys Schoemaker, "Digital Identity as a Platform for Improving Refugee Management" (2021) 31:6 Information Systems J 929.
52 Tahu Kukutai & John Taylor, *Indigenous Data Sovereignty: Toward an Agenda* (ANU Press, 2016); Milan & Treré, *supra* note 56 at 324.
53 Mignolo & Walsh, *supra* note 27; Payal Arora, "Decolonizing Privacy Studies" (2019) 20:4 Television & New Media 366 at 1685.
54 Madon & Schoemaker, *supra* note 53.

the governance of digital migration, critiquing the neocolonial dynamics at play when technologies developed in and for the Global North are presented as universal solutions for the Global South. The decolonial framework is applied throughout the case studies to examine the entire supply chain of digital migration technologies, from their design and funding in Western technology centres to their implementation in Southeast Asia. Specifically, the analysis of data colonialism critiques the way in which "humanitarian" justifications can be used to impose foreign surveillance architectures that undermine local autonomy.

Additionally, the concept of data sovereignty will be employed as a methodological guide. This entails the deliberate identification and promotion of pre-existing, community-led practices of digital self-determination, data stewardship, and resistance that are frequently obscured by dominant narratives. In this way, the decolonial prism not only offers a potent critique but also assists in the identification and acceleration of pathways towards more equitable and just futures.

III. METHODOLOGY: A DECOLONIAL APPROACH TO DIGITAL MIGRATION GOVERNANCE

This study interrogates digital migration governance in Southeast Asia through in-depth case studies. It criticizes the standard scientific ways of knowing that enable powerful groups stay in control by pushing aside local knowledge. It instead suggests using diverse ways of knowing that centre local perspectives.[55] Using critical discourse analysis,[56] the study demonstrates how policy narratives, institutional rhetoric, and humanitarian discourses shape digital technologies into objective, necessary, and inevitable governance tools for migration. It breaks down the framing of biometric registration, algorithmic surveillance, and AI-powered databases, which often conceals the colonial and racialized histories that these technologies are based on and fails to recognize how these legacies continue to impact how migration is managed today.[57]

To achieve this, the study draws on a broad range of qualitative data sources. This approach is crucial for building a holistic picture of digital governance. Policy documents from governments and reports from institutional actors, namely the United Nations High Commissioner for Refugees (UNHCR) and International Organization for Migration (IOM), are analysed to reveal the prescribed logic and official rationale of digital migration systems. Simultaneously, media representations are analysed to understand the public justification and normalization of these technologies. These results are compared against academic literature, which provides a critical theoretical foundation for

55 Walter D Mignolo, "Geopolitics of Sensing and Knowing: On (de) Coloniality, Border Thinking and Epistemic Disobedience" (2011) 14:3 Postcolonial Studies 273; Quijano, *supra* note 12.

56 Fairclough, *supra* note 26.

57 Couldry & Mejias, *supra* note 6; Ruppert, Isin & Bigo, *supra* note 47 at 2.

the analysis.[58] Empirical depth is provided through comparative case studies from Malaysia, Thailand, and Indonesia. These countries were selected for their distinct yet interconnected roles as sites of origin, transit, and destination for migrants and refugees, as well as for their varied approaches to adopting digital governance infrastructures. This comparative lens allows the research to move from analysing discourse to examining practice, showing how regional governance regimes engage with digital technologies, how migrants resist and navigate their infrastructures, and how local agencies can interrupt hegemonic models of control.[59]

A central element in this approach is reflexivity, understood not as a passive acknowledgment of identity but as an active methodological practice. This involves a conscious and continuous reflection on the researcher's positionality in relation to structures of power and a critical interrogation of how academic inquiry itself can risk upholding dominant discourses.[60] Therefore, this study deliberately works to subvert the traditional researcher/subject dynamic. It foregrounds the voices and experiences of marginalised migrants and refugees, positioning them not as passive objects of study but as theorists of their own condition and primary producers of knowledge about the digital border. By prioritizing narrative and embodied knowledge over the abstract data favoured by state-centric systems, this research seeks to amplify alternative ways of knowing, doing, and resisting, contributing to a form of epistemic justice.[61] The aim is to catalyse a transformation from top-down digital governance to participatory, community-based practices where technology serves as a tool for political empowerment rather than subjugation.

Ultimately, this research is explicitly interventionist; it aims not only to document digital migration governance but to contest and actively change the dominant logics that structure it. By revealing the colonial structures and power asymmetries inscribed within digital infrastructures, the study calls for a radical rethinking of migration governance in the region. This is more than a critique; it is a forward-looking project that seeks to create analytical and political space for alternatives to emerge. It positions technological sovereignty, local autonomy, and participatory governance as tangible pathways toward more ethical, equitable, and decolonial futures across Southeast Asia. This entails envisioning models where migrant communities are co-designers of the systems that impact their lives, fostering digital ecosystems that support human dignity and collective autonomy rather than fortifying borders and deepening global inequality.

58 Salter, *supra* note 2 at 366; Madianou, *supra* note 11.

59 Cheesman, *supra* note 1; Molnar, *supra* note 1.

60 Mitchell Dean, "Power at the Heart of the Present: Exception, Risk and Sovereignty" (2010) 13:4 Eur J Cultural Studies 459; Foucault, *supra* note 4 at 102–103.

61 Arora, *supra* note 12 at 1685; Mbembe, *supra* note 10 at 10.

IV. THE RISE OF DIGITAL BORDERS: BIOMETRIC GOVERNANCE AND REFUGEE MANAGEMENT IN SOUTHEAST ASIA

Migration governance in Southeast Asia is increasingly influenced by the rapid uptake of digital technologies as part of wider global trend. Governments in the region have integrated biometric registration, digital identity verification, and AI-augmented migration databases into their border management systems. These digital technologies are quickly changing how states and humanitarian actors manage refugee populations, transforming traditional border control mechanisms into complex digital systems of surveillance and population management.[62]

The increasing use of biometric governance across Southeast Asia is reshaping the management of refugees, whereby migration control systems are increasingly relying on digital identification systems, algorithmic surveillance, and data-driven decisions.[63] Although such technologies have been justified on the grounds that they will increase efficiency and security, there are major risks associated with state surveillance, data sovereignty and human rights violations.[64] In the cases of Malaysia, Thailand, and Indonesia, the introduction of the biometric databases shows how digital infrastructures can manifest structural inequalities and bolster state power under the auspices of humanitarian governance. This can be observed in UNHCR's biometric registration system in Malaysia, Thailand's migrant surveillance and work-permit monitoring schemes, and Indonesia's expanding use of digital identification for refugee management, each of which is examined in later sections of this paper.[65]

Through the lenses of governmentality, biopolitics, and decolonial theory, this section elucidates the theories at work behind the implementation of biometric governance. The analysis is situated in the context of refugee management in Malaysia, Thailand, and Indonesia, which involves pre-digital forms of both digital control at a state level, biopolitical categorisation of refugees, and digital humanitarianism as a function that extends from previous iterations of colonialism.[66] These technologies thus ostensibly enable structured refugee identification and service delivery, but in doing so, they also produce exclusions that leave refugees reliant on external governance mechanisms prioritizing state security and international humanitarian interests at the cost of refugee autonomy.[67] The following case studies demonstrate the specific but interrelated forms

62 Cheesman, *supra* note 1; Nah et al, *supra* note 21.

63 Amoore, *supra* note 2; David Lyon, "Surveillance, Snowden, and Big Data: Capacities, Consequences, Critique" (2014) 1:2 Big Data & Society; Molnar, *supra* note 1.

64 Couldry & Mejias, *supra* note 6; Madianou, *supra* note 11.

65 Salter, *supra* note 2 at 366; Katja Lindskov Jacobsen, "Experimentation in Humanitarian Locations: UNHCR and Biometric Registration of Afghan Refugees" (2015) 46:2 Security Dialogue 144.

66 Foucault, *supra* note 4 at 102–103; Agamben, *supra* note 5; Quijano, *supra* note 6.

67 Milan & Treré, *supra* note 53 at 324; Arora, *supra* note 55 at 370.

of biometric governance through which refugee management takes shape in Southeast Asia.

1. Malaysia: Biometric Registration and the Politics of Deportation

Malaysia has progressively incorporated biometric technology within its refugee and migrant management architecture, establishing biometric registration as a foundational mechanism for monitoring, regulating, and categorizing refugees.[68] While Malaysia is not a party to the 1951 Refugee Convention, it works with international actors including the UNHCR to carry out biometric registration initiatives that standardize identity verification and enhance access to limited services.[69] However, these systems have also been used by the Malaysian state as a part of wider migration management and deportation models that further entrench the precarity and vulnerability of refugee communities.[70]

Although biometric registration is presented as a tool of humanitarian inclusivity, critics argue that it serves primarily as a governmental technology of discipline and exclusion.[71] Adoption of ad hoc policies was the norm for the Malaysian government in relation to refugees, and data collection of biometrics has framed contextualised policies limiting the freedom of movement of those working without documentation (though it should be noted that some who do not work also face detention) and engaging in the process of asylum-seeking.[72] In fact, biometric identity verification has increasingly been adopted not for the protection of refugees, but to enable campaigns of deportation, particularly among Rohingya refugees and other stateless populations.[73] In this way, a biopolitical regime emerges wherein digital identity markers determine mobile populations' access to legal status and humanitarian aid, while simultaneously exposing them to state-led surveillance and the logistics of exclusion.[74]

Moreover, refugees often do not have access to the biometric information collected by global institutions such as UNHCR, which reinforces data colonialism as refugee identities become increasingly controlled by an assemblage of global institutions and state

68 Cheesman, *supra* note 1; Johnson, *supra* note 1.

69 Susan York Kneebone, "Comparative Regional Protection Frameworks for Refugees: Norms and Norm Entrepreneurs" in *Comparative Regional Protection Frameworks for Refugees*, ed by Susan York Kneebone (Routledge, 2017) 1; Molnar, *supra* note 1.

70 Hintz, Dencik & Wahl-Jorgensen, *supra* note 3 at 45.

71 Foucault, *supra* note 4 at 102–103; William Walters, *Governmentality: Critical Encounters* (London: Routledge, 2012) at 41.

72 Bigo, *supra* note 24 at 212; Salter, *supra* note 2 at 366.

73 Kerrie Holloway, Reem Al Masri & Afnan Abu Yahia, *Digital Identity, Biometics and Inclusion in Humanitarian Response to Refugee Crises* (2021), online: HPG Working Paper https://odi.org/en/publications/digital-identity-biometrics-and-inclusion-in-humanitarian-responses-to-refugee-crises; Human Rights Watch, *India: Halt All Forced Returns to Myanmar* (10 March 2021), online: https://www.hrw.org/news/2021/03/10/india-halt-all-forced-returns-myanmar.

74 Agamben, *supra* note 5; Amoore, *supra* note 2.

actors.[75] In Malaysia, for example, refugees have reported occasions where their biometric records were shared with immigration authorities, resulting in arrests, detentions, and deportations.[76] Although it was originally designed to confer protection and facilitate access to assistance, the UNHCR registration card has turned into a biometric state surveillance tool that enables law enforcement agencies to pursue and deport the now-undocumented refugees.[77]

On a broader level, Malaysia's implementation of biometric registration for refugees illustrates a securitized migration paradigm which has prioritized state interests of border crossing control over humanitarian concerns.[78] This exclusionary logic of biometric governance enforces digital borders, limiting refugees' mobility and access to basic services, and embeds algorithmic decision-making through humanitarian policies.[79] Biometric governance in Malaysia thus allows vital aspects of colonial administrative logics to continue, where technologies created for colonial subjects are utilized to manage stateless and marginalized populations.[80]

2. Thailand: Biometric Borders and Statelessness

Thailand has embraced biometric migration governance in the context of wider border securitization and national identification. One of the main transit and destination countries for refugees and stateless populations in Southeast Asia, the migration governance of Thailand makes use of biometric registration, AI driven surveillance, and border control technologies for the management of cross-border travel.[81] The collection of biometric data is framed by the Thai government in terms of redundancy, or the creation of overlapping identification records to ensure accuracy and prevent system failure; however, this method disproportionately impacts stateless individuals, asylum seekers, and undocumented labourers who do not have legal citizenship or resident status.[82]

A crucial component of Thailand's biometric governance is the National ID system, which mandates fingerprint and facial recognition scans for legal residents, as well as some migrant workers and refugees.[83] However, this system inherently disenfranchises stateless individuals, particularly the Hill Tribe, Rohingya refugees and displaced Myanmar nationals who do not have the necessary documentation to gain legal status.[84]

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75 Couldry & Mejias, *supra* note 6; Madianou, *supra* note 11.
76 Jacobsen, *supra* note 2 at 146; Molnar, *supra* note 1.
77 Lyon, *supra* note 65; Madianou, *supra* note 11.
78 Galič, Timan & Koops, *supra* note 48; Molnar, *supra* note 1.
79 Topak, *supra* note 45 at 820; Milan & Treré, *supra* note 53 at 324.
80 Quijano, *supra* note 6; Arora, *supra* note 55 at 370.
81 Jacobsen, *supra* note 2 at 146; Kneebone, *supra* note 71.
82 Bigo, *supra* note 24; Lyon, *supra* note 65.
83 Ruppert, Isin & Bigo, *supra* note 47 at 2.
84 Aradau & Blanke, *supra* note 45 at 374; Topak, *supra* note 45 at 820.

The state's utilization of biometric data, often implemented prior to comprehensive legal frameworks, exemplifies the mechanics of governmentality and biopolitics. This process generates new forms of inclusion and exclusion, effectively restructuring rights and redefining who becomes legally invisible.[85]

One of the main critiques of Thailand's biometric system is thus that it works to trap refugees and stateless persons in a state of precarity by denying them legal identity and mobility, while subjecting them at the same time to constant surveillance.[86] Rohingya refugees from Myanmar, for instance, are often held in detention at an immigration centre or housed within temporary shelters where their movements are tracked and their capacity to work and assimilate into Thai society is restricted with the use of biometric registration.[87] Within this system, the UNHCR and IOM register refugees, however their databases do not always align with those of the Thai government; therefore, when refugees try to access healthcare and social services, they face a barrier as they are still classified as illegal migrants and can be deported.[88]

The Thailand case offers an example of how biometric border control policies intersect with labor migration governance, as migrant workers in Cambodia, Laos, and Myanmar must register biometric data in order to obtain temporary work permits.[89] However, such systems introduce new vulnerabilities, as many migrants state that their biometric data is "shared between employers, immigration authorities, and private security firms," resulting in instances of worker exploitation, wage theft, and labour rights abuses.[90] This illustrates how biometric technologies not only regulate migration at the borders, but permeate everyday life, consolidating the state and corporate control over migrant populations.[91]

From a decolonial perspective, Thailand's biometric migration governance is both a continuation and a reinvention of historical colonial modes of racialized classification and exclusion, in that state-imposed identity systems determine who belongs and who does not belong to the national community.[92] The Hill Tribe population, like other groups, has endured decades of administrative exclusion.[93] Rather than solving this historical marginalization, digital identity technologies like biometric registration have

85 Foucault, *supra* note 4 at 102–103; Agamben, *supra* note 5.
86 Amoore, *supra* note 2; Madianou, *supra* note 11.
87 Cheesman, *supra* note 1; Johnson, *supra* note 1.
88 Human Rights Watch, *Thailand: Recent Refugees Pushed Back to Myanmar Pushbacks Endanger People Fleeing Airstrikes in Karenni State* (29 November 2023), online: https://www.hrw.org/news/2023/11/29/thailand-recent-refugees-pushed-back-myanmar.
89 Milan & Treré, *supra* note 53 at 324.
90 Molnar, *supra* note 1; Salter, *supra* note 2 at 366.
91 Couldry & Mejias, *supra* note 6; Madon & Schoemaker, *supra* note 53.
92 Quijano, *supra* note 6; Mbembe, *supra* note 10 at 10.
93 Arora, *supra* note 12 at 1685; Kukutai & Taylor, *supra* note 54.

contributed to the perpetuation of bureaucratic barriers to access to safety, citizenship, education, and healthcare, for stateless persons.[94]

3. Indonesia: Fragmented Governance and Digital Humanitarianism

Contrary to Malaysia and Thailand, Indonesia does not have a unified national framework for refugee protection since it is not a party to the 1951 Refugee Convention. By contrast, biometric refugee governance in Indonesia relies on a patchwork of policies of the UNHCR, IOM, and local authorities, resulting in a complex and often inconsistent digital governance landscape.[95] This fragmented approach leads to acutely uneven access to legal protections, digital identity registration, and basic services for refugees and asylum seekers.[96]

The UNHCR, for example, has been a leader in biometric registration of refugees, combining fingerprint, iris, and facial recognition information to generate digital identity profiles that dictate access to assistance, resettlement, and movement rights.[97] While purported as a means of reducing the burden of refugee management, critics have argued that it continues to promote dependency upon international governance structures, leading to a lack of agency on the refugees' part or, worse yet, an inability to integrate within local communities.[98] As Indonesia does not recognize refugees, registering them in this way does not afford them any legal rights, and even those who are registered are in a state of legal limbo.[99]

Security and accessibility of data is a key issue in Indonesia's biometric governance system. While UNHCR maintains the largest biometric database of refugees in the country, there is insufficient transparency over how this data is employed, who has access, or whether refugees can challenge decision-making based on algorithmic categorization.[100] Most refugees state their biometric records are actionable against them because national authorities and security agencies request UNHCR data to track movements of refugees, further solidifying the fear of surveillance and deportation.[101] Through the lens of governmentality, Indonesia's digital outsourcing of refugee management to international organizations is illustrative of a neoliberal governance framework in which state accountability is supplanted by digital humanitarianism.[102] It enables Indonesia to position itself as still non-committed to refugee rights, while benefitting from financial aid and migration control mechanisms which are run by

94 Hintz, Dencik & Wahl-Jorgensen, *supra* note 3 at 45.
95 Cheesman, *supra* note 1; Kneebone, *supra* note 71.
96 Jacobsen, *supra* note 2 at 146; Madianou, *supra* note 11.
97 Molnar, *supra* note 1.
98 Couldry & Mejias, *supra* note 6; Madon & Schoemaker, *supra* note 53.
99 Milan & Treré, *supra* note 53 at 325.
100 Ruppert, Isin & Bigo, *supra* note 47 at 2; Lyon, *supra* note 65.
101 Bigo, *supra* note 24 at 212; Salter, *supra* note 2 at 366.
102 Foucault, *supra* note 4 at 102–103; Walters, *supra* note 73 at 41.

external actors.[103] The way non-state actors' resort to biometric registration as opposed to state-run policies exemplifies an end-of-times for power over refugee governance increasingly bound in algorithmic systems operating out of democratic enfranchisement.[104]

From a decolonial perspective, Indonesia's refugee management model highlights the dominance of external legal mechanisms over domestic sovereignty. It reveals a system governed by international mandates, where refugees are controlled through imported frameworks and tools that frequently exclude local civil society organizations from meaningful participation.[105] Without locally rooted digital identity systems, refugees do not have a stake in how their data is collected, stored or used, further entrenching their political invisibility.[106] Alternative approaches that make the case for data sovereignty and participatory models of governance have since emerged, privileging community-led solutions that value autonomy of refugees outside of externally imposed biometric and governance structures.[107]

The cases of Malaysia, Thailand, and Indonesia demonstrate how biometric governance in Southeast Asia is inextricably entwined with state securitization, international humanitarian control, and digital colonialism. Despite being promoted as neutral technologies that render refugee governance more efficient, these technologies reproduce exclusionary governance structures that prioritize state sovereignty and the global data economy at the expense of migrants' rights and local governance autonomy.

4. Data Colonialism and the Governance of Digital Migration

In Southeast Asia, digital migration governance has been framed as an efficient technology for managing refugees in order to ensure stability; however, digital migration governance can exacerbate asymmetrical power dynamics and imbue existing inequalities into these tools.[108] The proliferation of biometric registration, AI-enabled surveillance, and algorithmic decision-making is part of a wider trajectory of data-driven migration management, in which state and international institutions use technological infrastructures developed largely in the Global North to monitor and regulate populations in the Global South.[109] Although such technologies are often justified as a means of improving security, identity verification, and fraud prevention, their implementation has often disenfranchised migrant voices and circumvented local governance capacities.[110] The result is that refugees and stateless persons are pushed to

103 Aradau & Blanke, *supra* note 45 at 374.
104 Ajana, *supra* note 34; Couldry & Mejias, *supra* note 6.
105 Quijano, *supra* note 6; Mbembe, *supra* note 10 at 10.
106 Madon & Schoemaker, *supra* note 53.
107 Kukutai & Taylor, *supra* note 54; Milan & Treré, *supra* note 53 at 325.
108 Couldry & Mejias, *supra* note 6.
109 Madianou, *supra* note 11.
110 Arora, *supra* note 12 at 1685; Mbembe, *supra* note 10 at 10.

the outskirts of digital governance architectures subjected to rigid categories, increased scrutiny, and opaque decision-making processes that have a powerful effect on their access to rights and resources.[111]

The examples of Malaysia and Thailand show that biometric governance is rolled out in the absence of transparency and accountability, raising concerns over potential data misuse, surveillance, and exclusion.[112] It enables tracking for aid delivery and migration, but it is also used for deportation and law enforcement without the informed consent of those affected,[113] especially in the case of biometric refugee registration in Malaysia by UNHCR and state authorities. Similarly, Thailand's biometric border control and refugee monitoring systems disproportionately surveil undocumented migrants, stateless persons, and asylum seekers, built within exclusionary legal frameworks that restrict mobility and deny access to essential services.[114] These biometric governance logics disguise themselves as mechanisms of humanitarian protection, but in reality serve as forms of digital border securitization and migrant criminalization,[115] placing Western-imposed technological solutions directly into the hands of a regional security rationale.

The SIMKIM database in Indonesia is another example of externally sponsored data-driven governance embeddedness, that uses biometric data collection to monitor and control refugee movement while cutting access to fundamental rights.[116] Despite Indonesia not being a signatory to the 1951 Refugee Convention, the country has subsidiary third-party migration management to international agencies, creating a discontinuous system whereby biometric registration operates without formally recognized refugee protections.[117] This is part of a wider phenomenon of data colonialism where digital governance infrastructures favour state security and humanitarian actors over the interests of migrants themselves.[118] Specifically, these systems are increasingly driven by transnational technology companies and security apparatuses whose priorities—efficiency, data extraction, and risk management—frequently diverge from migrants' needs for safety and privacy. Consequently, this corporate-oriented governance concentrates control in external hands, effectively disempowering local structures and the migrants themselves. Weak local agency manifests in the configuration of these systems, as well as in transferring outsourcing of

111 Quijano, *supra* note 6; Ruppert, Isin & Bigo, *supra* note 47 at 2.

112 Johnson, *supra* note 1; Rapeepong Suphanchaimat et al, "A Cross Sectional Study of Unmet Need for Health Services amongst Urban Refugees and Asylum Seekers in Thailand in Comparison with Thai Population, 2019" (2020) 19:205 Intl J for Equity in Health

113 HRW, "Thailand: Recent Refugees Pushed Back," *supra* note 90.

114 Milan & Treré, *supra* note 53 at 324.

115 Couldry & Mejias, *supra* note 6; Lyon, *supra* note 65.

116 Antje Missbach & Gunnar Stange, "Muslim Solidarity and the Lack of Effective Protection for Rohingya Refugees" (2021) 10:5 Social Sciences 1; Nah et al, *supra* note 21.

117 Jacobsen, *supra* note 67.

118 Couldry & Mejias, *supra* note 6.

governance to external actors, which only solidifies the dependency of migrants on institutions beyond control, further deepening their precarity.[119]

Data decolonization requires the creation of alternative frameworks of governance that centre on migrant agency, local knowledge, and participatory decision-making.[120] Hacktivist[121] movements in Indonesia and elsewhere in Southeast Asia are beginning to critique the hegemonic structures behind Western-inflected digital governance, advocating for localized digital solutions that serve to empower migrants rather than surveil them.[122] Based on community-driven technological sovereignty, these initiatives provide promising avenues for resisting extractive systems of governance and developing more ethical migration management systems.[123] A shift towards inclusion, transparency, and respect for the rights of migrants—embodied by local actors at the governance table—will inevitably lead Southeast Asia toward an alternative model on the governance of its digital migration systems.

Elsewhere, examples from other regions demonstrate that more community-focused and ethical forms of digital governance are feasible. Models of Indigenous data sovereignty, including those based on Māori and First Nations principles, grant communities local control over the ways in which their data are generated, stored and used according the terms of transparency and collective decision-making.[124] Cities such as New York and Barcelona have also implemented municipal ID programmes that enable all residents, including people without access to regular migration status, to obtain identification that does not put them at risk of being caught by immigration authorities in the process of using public services, illustrating how identity systems can serve to facilitate inclusion and protection rather than surveillance.[125] In East Africa, grass-roots

119 Madon & Schoemaker, *supra* note 53.

120 Kukutai & Taylor, *supra* note 54.

121 A hacktivist is someone who infiltrates computer networks without authorization to pursue political objectives (https://dictionary.cambridge.org/dictionary/english/hacktivist). However, at its core, it refers to individuals or groups who use computer hacking techniques and advanced technical skills to promote a political agenda or social change, rather than for personal profit (like cybercriminals) or destruction (like cyberterrorists). These are not standard policy-makers or traditional NGOs. They are programmers, coders, and digital experts who operate outside the state. Unlike cyber-criminals who steal data for money, these hacktivists are ethical disruptors. By "advocating for localized digital solutions," they are trying to build new, independent technologies that actually help migrants (e.g., secure communication tools, encrypted data storage) rather than tracking and policing them.

122 Missbach & Stange, *supra* note 118.

123 Arora, *supra* note 12 at 1685; Couldry & Mejias, *supra* note 6.

124 Tahu Kukutai & John Taylor, eds, *Indigenous Data Sovereignty: Toward an Agenda* (Canberra: ANU Press, 2016); First Nations Information Governance Centre, *Exploration of the Impact of Canada's Information Management Regime on First Nations Data Sovereignty* (2022).

125 City of New York, "IDNYC: Municipal ID Program" (2024), online: *Project New Yorker* https://projectnewyorker.org/nysid-vs-idnyc/; City Council of Barcelona, "Seventeen Social, Economic and Environmental Objectives" (2020), online (pdf): https://ajuntament.barcelona.cat/agenda2030/sites/default/files/2021-01/Barcelona%E2%80%99s%202030%20Agenda%20-%20SDG%20targets.pdf.

organisations and refugee-led groups now have the support to start creating their own digital tools, potentially allowing displaced communities to contribute directly to designing technologies that affect them.[126] These cases demonstrate that decolonising digital migration governance can be developed through practical designs that centralise community authority, ethical data use and meaningful participation—values that could help Southeast Asia to transition away from extractive digital systems and better serve migrant agency.

5. Human Rights Implications

Building on the preceding analysis of digital migration governance through theoretical frameworks and regional case studies, this section pivots to a dedicated examination of human rights implications. This section contends that, although digital technologies are typically portrayed as instruments for enhancing efficiency and delivering humanitarian assistance, their use in migration management often intensifies pre-existing vulnerabilities and results in extensive human rights abuses.[127] One of the most direct implications is the erosion of the right to privacy. The use of biometric registration, algorithmic surveillance, and AI databases as core components of modern migration management creates a state of constant monitoring where migrants' personal data—from fingerprints to movement patterns—is collected, stored, and analysed, often without their full and informed consent. This process of "datafication" transforms persons into collections of data points. Establishing a system of widespread surveillance that infringes upon the concept that a person's life should not be subjected to arbitrary interference.[128] The individual frequently lacks awareness of the specific data being gathered, those who are accessing it, or the way it influences decisions on their future. Migrants and refugees cannot meaningfully say "no" to a biometric scan if it is the only way to get food for their family.[129] It allows the government to unfairly and continually intrude on a person's life, turning them into a digital file that needs to be handled, instead of a person with rights.

The use of opaque algorithms for making key decisions regarding a person's life, including their legal status or access to humanitarian aid, violates the right to due process. For example, if a migrant is denied asylum by an automated system, they may have no

126 Refugee-Led Research Hub, "Home Page" (2022), online: https://www.rsc.ox.ac.uk/research/refugee-led-research-hub; UNHCR, "UNHCR Submission for Global Digital Compact" (2023), online (pdf): https://www.un.org/digital-emerging-technologies/sites/www.un.org.techenvoy/files/GDC-submission_UNHCR.pdf.

127 ENNHRI, *Technologies, Migration, and Human Rights: The Role of European NHRIs* (2024), online: https://ennhri.org/wp-content/uploads/2024/09/Technologies-migration-and-human-rights-the-role-of-European-NHRIs-an-ENNHRI-scoping-paper.pdf.

128 Marion Albers, "Surveillance and Data Protection Rights: Data Retention and Access to Telecommunications Data" in *Personality and Data Protection Rights on the Internet* (Springer, 2022) 69.

129 Jacobsen, *supra* note 2; Mirca Madianou et al, "The Biometric Lives of Migrants: Borders, Discrimination and (In)Justice" (2020) AoIR Selected Papers of Internet Research.

way of knowing why the decision was made or how to challenge it effectively.[130] The opaque nature of decision-making deprives individuals of a fair hearing and an effective recourse, which are fundamental principles of justice. They are left with no concrete grounds for appeal. It creates a one-way street of authority where decisions are handed down without explanation, and individuals are left without the tools to challenge them, undermining accountability and fairness.

Lastly, one of the most prominent implications of the system is that the digitalization of borders can create new, often invisible, barriers that impede the right to freedom of movement and the right to seek asylum. Prior to an individual's arrival at a physical border, their data may have been utilized to evaluate them as a risk, perhaps impeding their capacity to travel or submit an asylum request. These technologies can prevent individuals from using their internationally recognized right to leave any country and seek shelter from persecution by assessing them ahead of time based on data profiles. Using predictive analytics and risk profiling on data from visa applications, travel records, and additional sources, these systems can designate an individual as "undesirable" or "high-risk" far in advance of their journey. This may result in a visa rejection or an airline being directed to deny boarding.[131] The rapid progression of technology surpasses international law, creating a gap in legal frameworks that allows for the misuse of technology to restrict movement and infringe on human rights.[132]

VI. CONCLUSION: TOWARDS DECOLONIAL ALTERNATIVES

Biometric surveillance, AI tracking, and algorithmic accountability have now become part and parcel of regional migration governance in Southeast Asia,[133] with the humanitarian frame providing a sense of compulsion for the state, to effectuate and perpetuate exclusions. This study has shown how governmentality, biopolitics, and decolonial theory can expose the power asymmetries embedded in the governance of digital migration and the way in which technology serves to perpetuate social inequality rather than ameliorate it.[134] Examples from Malaysia, Indonesia, and Thailand further demonstrate that biometric registration and digital identity verification processes disproportionately impact marginalized migrants, increasing their vulnerability and reliance on international governance mechanisms.[135] These technologies are not implemented in neutral or benevolent ways and often reproduce colonial forms of

130 Raimy Reyes, "Artificial Intelligence Technologies and the Right to Seek and Enjoy Asylum: An Overview" in *Artificial Intelligence and Human Rights*, ed by Jeroen Temperman & Alberto Quintavalla (Oxford: Oxford Law Pro, 2023) 311.

131 Reyes, *supra* note 132.

132 Zeina Abu-Meita, "International Law and Its Discontents: Technology Laws" (2019) 7:1 Griffith J L & Human Dignity 129.

133 Couldry & Mejias, *supra* note 6; Madianou et al, *supra* note 131.

134 Foucault, *supra* note 4 at 102–103; Agamben, *supra* note 5.

135 Johnson, *supra* note 1; Suphanchaimat et al, *supra* note 114.

control where local governance and migrant autonomy are subordinated to digitally oriented infrastructures imposed by the West.[136]

Alternative approaches to migration governance in Southeast Asia place emphasis on the radical reconfiguration of digital sovereignty, community-led governance, and decentralized technological frameworks. For example, bottom-up humanitarian networks in Indonesia have begun developing locally embedded identity verification models that allow refugees to co-create their digital identities while circumventing intrusive biometric systems.[137] These efforts challenge the dominance of Western shields of digital humanitarianism and advance more just, egalitarian, and migrant-oriented governance regimes.[138] Similarly, community-managed databases and localized digital tools in Malaysia and Thailand illustrate how migrants actively intervene in digital administrative processes. By reclaiming control over how their data is recorded and managed, they reshape these governance practices to better assert their rights and facilitate mobility.[139]

The increasing pressure from civil society actors, tech developers and academia for ethical digital governance frameworks highlights the need for moving beyond extractive biometric systems towards more inclusive and sustainable innovation.[140] It is only by making migration governance frameworks transparent, participatory and contextualised within local expertise that Southeast Asia can gradually move away from the colonial paradigms that still prevail today in global digital governance. The findings of this study demonstrate the imperative for policy responses based on digital sovereignty, which are alternatives to the hegemonic approaches to algorithm-driven migration control and more aligned with participatory, just, and rights-based frameworks of governance.[141]

It is necessary to ensure that decolonial theory and practice evolve and are institutionalised in order to effectively interrupt and ultimately dismantle digital biopolitical regimes whilst renewing and rebuilding community-based models of governance. Ensuring that migration control does not persist as an exclusionary, punitive apparatus[142] will be vital, particularly as externally imposed biometric systems proliferate, increasingly constraining local agency in digital migration governance. We call on policymakers, humanitarian practitioners, and digital governance practitioners to design frameworks that emphasise migrant authorship and resist the exploitative logics of digital colonialism to facilitate a more ethical, autonomous, and locally owned system of migration governance in Southeast Asia.

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136 Madianou, *supra* note 11.
137 Missbach & Stange, *supra* note 118.
138 Couldry & Mejias, *supra* note 6; Arora, *supra* note 12 at 1685.
139 Suphanchaimat et al, *supra* note 114; Nah et al, *supra* note 21."
140 Missbach & Stange, *supra* note 118; Couldry & Mejias, *supra* note 6.
141 Arora, *supra* note 12 at 1685; Madon & Schoemaker, *supra* note 53.
142 Missbach & Stange, *supra* note 118.

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