Chapter 3
Sustainable Migration:
Unraveling the Connections Between Urban Planning, Migration, and AI

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ABSTRACT

A revolutionized technological era paved way for advancements that spilled over the economy in its entirety. With Sustainable Development Goals (SDGs) as pole star, countries all around the globe have been striving to develop holistically, not just rake in growth numbers. In regards to this, the current chapter delved into three such variables which not only are impactful when they stand alone, but the dynamics of their relationship with each other open avenues for a better understanding of each of them in context of sustainable development; the variables being Migration, Urban Planning and Artificial Intelligence (AI). The interplay of Migration and Urban Planning is undisputed and the chapter attempted to present a comprehensive idea about how so; bringing in AI's influence on both in the later part. A conceptual framework relevant to this study was also formulated with the assistance of a thorough review of the existing body of literature.

1. INTRODUCTION

AI is set to revolutionize the global economy, with some observers seeing parallels to the industrial revolution. As a catalyst for productivity, AI will be expanding production frontiers and leading to reallocation between labour and capital, possibly causing major changes in many occupations and sectors. It presents unprecedented opportunities to solve intricate problems, improve prediction accuracy, enhance decision-making, drive economic growth, and improve quality of life (Ai, 2023). Generative AI (GenAI)

encompasses systems like advanced large language models capable of producing new content, including text and images, by learning from vast amounts of training data. In contrast, other AI models are more specialized, targeting specific tasks such as pattern recognition.

Achieving the Sustainable Development Goals (SDGs) by 2030 requires prompt and decisive action. AI has the potential to advance all 17 SDGs, helping to accelerate and broaden the necessary interventions (International Telecommunication Union, 2021) and to uncover new solutions and pathways for sustainable development in diverse fields such as healthcare, education, environmental conservation, and poverty alleviation. Achieving the full potential of AI for sustainable development requires careful consideration of its social, economic, and environmental implications. Issues such as algorithmic bias, data privacy, and job displacement underscore the need for ethical and responsible AI governance frameworks that emphasize human rights, equity, and sustainability (Council et al., 2024). Entering the era of sustainable development, led by the 17 SDGs, AI and DT—like digital twins, blockchain, virtual and augmented reality, and big data—hold great promise in driving global transformations that bolster economic, environmental, and societal progress to achieve the SDGs (Pigola et al., 2021).

Any notion or concept which keeps being predominant over an extended period is Sustainability. The four cornerstones of sustainable development process, i.e., sound governance, ecological prosperity, social addition and economic success are crucial to consider. The cooperation between authorities and enterprises must exist to ensure an economy's longevity (Sachs, 2015). In actuality, the 2012 SDGs will assist the economies in accomplishing the purpose. AI and pursuing these sustainability targets are intertwined. It is being extensively embraced by government and commercial units to go alongside sophisticated solution-based techniques.

As per a study that appeared in Nature, 82 percent of the SDGs' community outcome metrics- for instance SDG 1 on impoverishment, SDG 4 on high-quality learning, SDG 6 on hygiene and water quality, SDG 7 on accessible and reliable energy and SDG 11 on sustainable cities (United Nations, 2015)- may be efficiently impacted by AI-based technologies (Reilly, 2024). The rising UN accord that AI can act as a catalyst in accomplishing the SDGs has managed to garner attention. For the advancement of AI4SDGs, an array of UN member nations, pertinent academic institutions and businesses are joining forces. Every year, the International Telecommunication Union of the UN collaborates with other associated organizations to convene the AI for Good Global Summit. The intention is to present a forum for international discourse on how AI can solve more global concerns and expedite the attainment of SDGs. (Zeng, 2020)

AI can automate tasks like categorization, grouping, and prediction, helping innovators to focus on more cognitively challenging but less judgment-heavy support activities. This reduces the time and costs associated with data processing, freeing up more time for innovators to engage in creative problem-solving (Cockburn et al., 2019). Beyond the fundamental aspects of commerce, artificial intelligence has also emerged as an invaluable instrument in addressing social challenges. Among the problems AI can assist with are justice, economic development, workforce development, public safety and education among others (Shi et al., 2020).

This comes parallelly to SDGs which are intrinsically sustainable in the sense that holistic development was the core of its formation. So it wasn't unexpected that the concerns encompassed Migration and the associated aspects. One of the aims under SDG 10, 'Reduce Inequality Within and Among Countries' (United Nations, 2015), pertains to migration because of its direct and indirect implications to sustainable development. For both migrants and their communities, migration is an important gauge, according to the 2030 Agenda (Shi et al., 2020). The concept of migration involves the process whereby individuals

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