



Mismatched: Multidimensional Labour Market Frictions and National Innovation Systems in Thailand and Indonesia

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Mismatched: Multidimensional Labour Market Frictions and National Innovation Systems in Thailand and Indonesia

By Min Ye Paing Hein

SYNOPSIS

Thailand and Indonesia face widening labour market mismatches as evolving demographic structures intersect with persistent skills gaps. In Thailand, an ageing workforce struggles with digital literacy, while youth remain concentrated in oversaturated non-STEM sectors. In Indonesia, many young people are NEET, disproportionately female, limiting the demographic dividend. While policies such as Thailand 4.0 and Indonesia 4.0 address skill gaps, multidimensional mismatches call for targeted interventions to optimise human capital across skills, sectors, demographics, and regions.

COMMENTARY

Thailand and Indonesia are navigating complex labour market challenges driven by demographic structures, skill imbalances, and uneven regional development. In Thailand, low digital literacy among older workers combines with heterogeneous motivation, while youth are concentrated in saturated non-science, technology, engineering, and mathematics (STEM) sectors. Indonesia faces high rates of youth “not in employment, education or training” (NEET), skill mismatches, and pronounced spatial disparities.

These multidimensional frictions constrain productivity, limit the deployment of human capital, and threaten long-term competitiveness. Addressing them requires policies that foster innovation, align workforce skills with evolving economic opportunities, and enhance adaptability across sectors, demographics, and regions.

Thailand

In Thailand, a rapidly ageing population coexists with a youth population concentrated in oversaturated service and non-STEM sectors. Significant gaps in foundational digital skills exist across age groups. Only 25.9 per cent of Thai youth achieve a baseline digital literacy threshold, while more than 80 per cent of older adults fall below this level. The data reveal a pronounced “grey divide”, with substantial disparities in digital competence between younger and older generations. This age-driven skill imbalance reduces productivity, limits knowledge transfer, and poses a threat to long-term competitiveness, especially in the context of a rapidly aging society.

Labour market mismatches are most pronounced among lower-wage and younger workers, according to a recent survey by JobsDB by SEEK, Thailand’s leading online employment platform. Forty-one per cent of employees earning under ฿13,000 per month feel that their jobs do not match their skills, compared with 18 per cent of higher-income workers. Younger employees actively seek new opportunities, while older workers often remain in mismatched roles for years, illustrating how demographic factors intersect with sectoral and skill misalignments to constrain labour allocation.

Despite these mismatches, Thai workers reveal two surprising tendencies. First, 48 per cent report feeling happy or extremely happy in their current positions, suggesting that underutilisation does not necessarily translate into dissatisfaction. Second, 92 per cent are open to pursuing careers drastically different from their original fields of study, demonstrating remarkable tolerance for horizontal mismatch.

While these findings indicate a potentially flexible and adaptable workforce, they also carry risks. Without strategic guidance to align training and employment pathways, such tolerance could reinforce inefficient skill allocation, lower productivity, and create suboptimal labour market equilibria. Similarly, widespread contentment in mismatched roles may reduce incentives to upskill or transition into better-aligned positions, perpetuating structural mismatches.

Thailand’s policy responses focus on innovation ecosystems and workforce development. Thailand 4.0 policy seeks to shift from traditional manufacturing to an innovation-driven economy, emphasising AI, robotics, biotechnology, advanced manufacturing, and the digital economy. The National Science and Technology Development Agency (NSTDA) and regional hubs support research, technology transfer, and vocational upskilling, while the One District, One IT Man programme assigns a digital officer to each district to promote digital literacy and bridge the urban-rural divide.

The National Innovation Agency has identified at least 16 innovation districts in and around Bangkok, with more planned in the Eastern Economic Corridor and provinces including Chiang Mai, Phuket, and Sakon Nakhon. These districts focus on sectors such as medical innovation, digital solutions, and creative industries. The Board of Investment provides merit-based incentives that link training, internships, and skill development to tax benefits. These measures can help reduce skill and sectoral

mismatches and promote regional development, but they remain insufficient without policies that explicitly target older workers and address the over-representation of young women among NEETs.

Indonesia

Indonesia faces labour market challenges similar to those in Thailand, but with a younger demographic profile, as reflected in a median age of 29.9 years in 2024, compared with 40.2 years in Thailand. Yet this demographic advantage has not translated into stronger employment outcomes, as the country's youth unemployment rate stands at 16 per cent, one of the highest in Asia.

Horizontal mismatches are widespread in Indonesia's labour market, with only around 53 per cent of graduates working in roles aligned with their field of study. Many young Indonesians lack both technical and soft skills, including teamwork, communication, and presentation, that are increasingly demanded by high-growth sectors such as technology, logistics, and renewable energy. These gaps limit upward mobility and constrain the country's ability to leverage its demographic dividend fully.

Regional inequalities further exacerbate these challenges. Skilled jobs are concentrated in urban centres like Jakarta, Surabaya, and Bandung, while rural areas remain dependent on low-productivity agriculture. In 2024, NEET rates ranged from 7.3 per cent in Bali to over 31 per cent in Papua Tengah, and about 58 per cent of workers remained in the informal sector, underscoring the persistent underutilisation of skills and constraints on inclusive growth.

Demographic factors interact with structural and sectoral mismatches in both countries. In Indonesia, high youth unemployment underscores age-driven labour market vulnerabilities: 16.16 per cent of individuals aged 15-24 are unemployed, compared with just 1.67 per cent of those aged 60 and above, highlighting the challenges of integrating a large young workforce into productive roles. In Thailand, by contrast, older workers are often employed in traditional manufacturing and low-tech services, while younger workers tend to concentrate in saturated service and retail sectors, reflecting a persistent sectoral misalignment.

These age-driven vulnerabilities are compounded by the large share of youth who are not in education, employment, or training (NEET). According to the Central Statistics Agency (BPS, August 2024), 20.3 per cent of youth aged 15 to 24, roughly nine million individuals, are NEET, compared with 15 per cent in Thailand, or about 1.4 million. Female youth are disproportionately affected, making up nearly two-thirds of NEETs in Indonesia and about 70 per cent in Thailand.

Indonesia complements Thailand's efforts through programmes linking education to labour market needs. The Merdeka Campus initiative enables students to gain practical experience outside their primary field of study for academic credit, thereby enhancing their employability and career readiness. Super-deduction tax incentives encourage firms to invest in R&D and workforce training. The National Research and

Innovation Agency unifies research policy and infrastructure, promoting international collaboration and skill development.

Challenges persist in Indonesia's national innovation system, including low R&D spending at just 0.3 per cent of GDP, a limited pool of skilled researchers, and risks of eroding institutional capacity. Policies must also focus on reducing high NEET rates, particularly among young women, to ensure the country can fully leverage its demographic dividend.

Policy Solutions

Both Thailand and Indonesia confront the challenge of balancing labour-intensive job creation with the growth of the digital economy. Labour-intensive growth, critical for inclusive employment, often occurs in agriculture, traditional manufacturing, and low-tech services, which may not require advanced digital skills. Simultaneously, the digital economy demands high-skilled, technology-literate workers, requiring the integration of digital literacy into vocational education, lifelong learning, and upskilling programmes to ensure inclusive growth across all sectors.

Gender-sensitive interventions are equally important. Given the over-representation of female youth among NEETs, policies should address barriers such as access to training, childcare support, flexible learning pathways, and targeted digital literacy programmes for women. Such measures enhance female labour force participation, improve skill alignment, and support broader economic development.

Regional disparities underscore the importance of geographically inclusive policy design. Thailand's innovation districts and Indonesia's urban-focused high-tech clusters risk concentrating high-skilled opportunities in major cities, leaving rural areas underserved. Expanding vocational and digital training programmes to secondary cities and rural regions can reduce spatial mismatches, ensure more equitable access to high-demand sectors, and strengthen regional economies.

Explicitly targeting NEET youth, particularly young women, and fostering intergenerational learning, where older workers share sector knowledge, institutional memory, and soft skills while younger workers contribute digital literacy and technical expertise, improves human capital utilisation and workforce adaptability. Policymakers should leverage demographic data alongside labour market information, digital literacy levels, and regional disparities to design dynamic, evidence-based programmes that integrate innovation, education, and workforce development.

Conclusion

Addressing labour market mismatches through demographic, sectoral, and spatial lenses is critical for sustainable and inclusive growth in Southeast Asia. By combining innovation, workforce upskilling, and targeted support for groups disproportionately affected, such as older workers and young women, Thailand and Indonesia can improve productivity, expand employment, and fully leverage their demographic potential in a rapidly evolving economy.

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