

Realizing the Demographic Dividend in ASEAN: Investing in Early Human Development

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“Demographic Dividend” (ASEAN Secretariat, 2024)

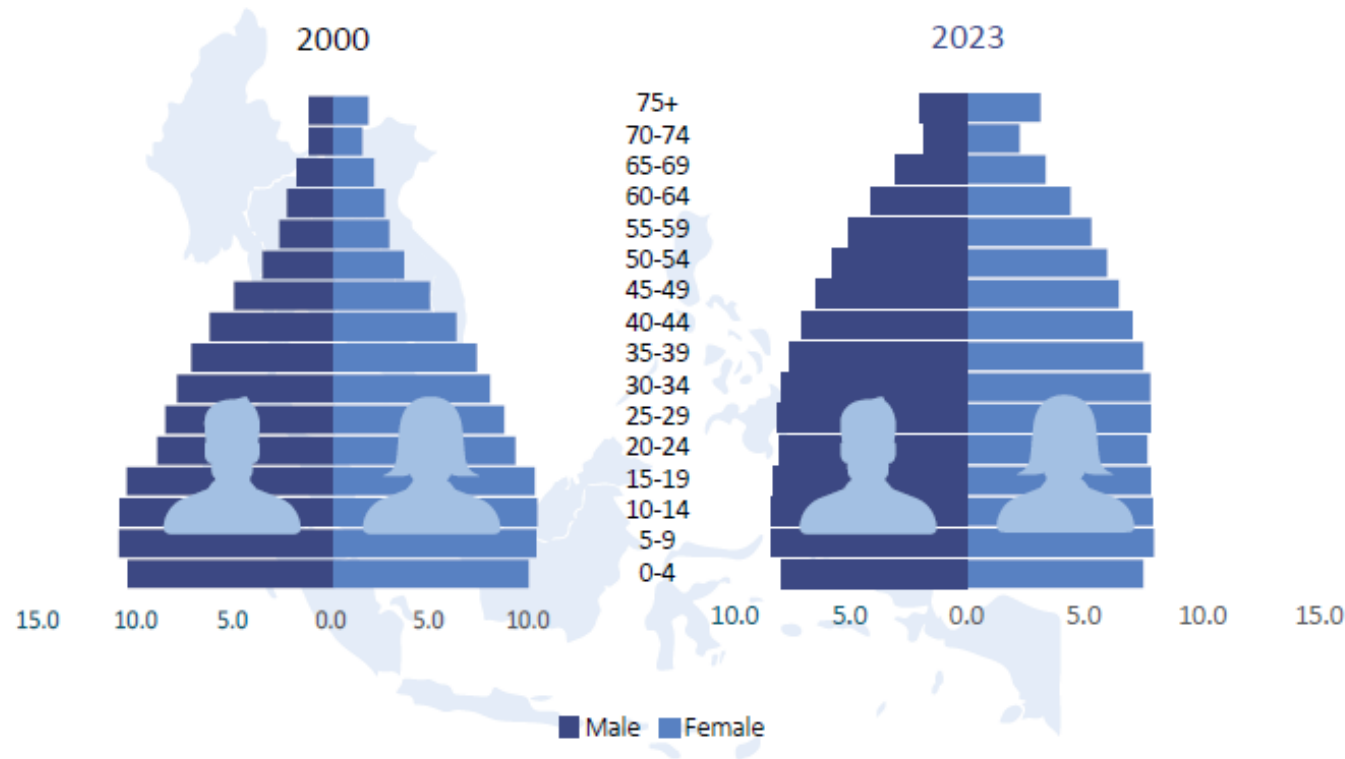
- refers to the **potential** economic boost when a growing share of the population is of working age, relative to dependents.
- This is a **temporary** window where a larger share of the population is in the prime working and saving years
- but it requires strategic **policy** to be fully realized, as some countries are already seeing their working-age population shrink
- To turn this potential into real gains, policy must proactively **invest in younger ages (early childhood through adolescence)**, strengthen systems for education and skills development, and ensure pathways to gainful, decent employment and sustained engagement.

Outline of my talk

- ASEAN's Demographic and Economic Context
- Why early human development is important
- Challenges, constraints and risks
- Strategic policy levers and best practices
- Policy recommendations
- Conclude

1. Demographic & Economic Context in ASEAN

Figure 1.1.2. Population pyramid (% of total), ASEAN total, 2000 and 2023



Source: ASEAN Secretariat, ASEANstats database

Source: ASEAN Key Figures, 2024, ASEAN Secretariate

ASEAN's position as the third-most populous region in the world, following India and China.

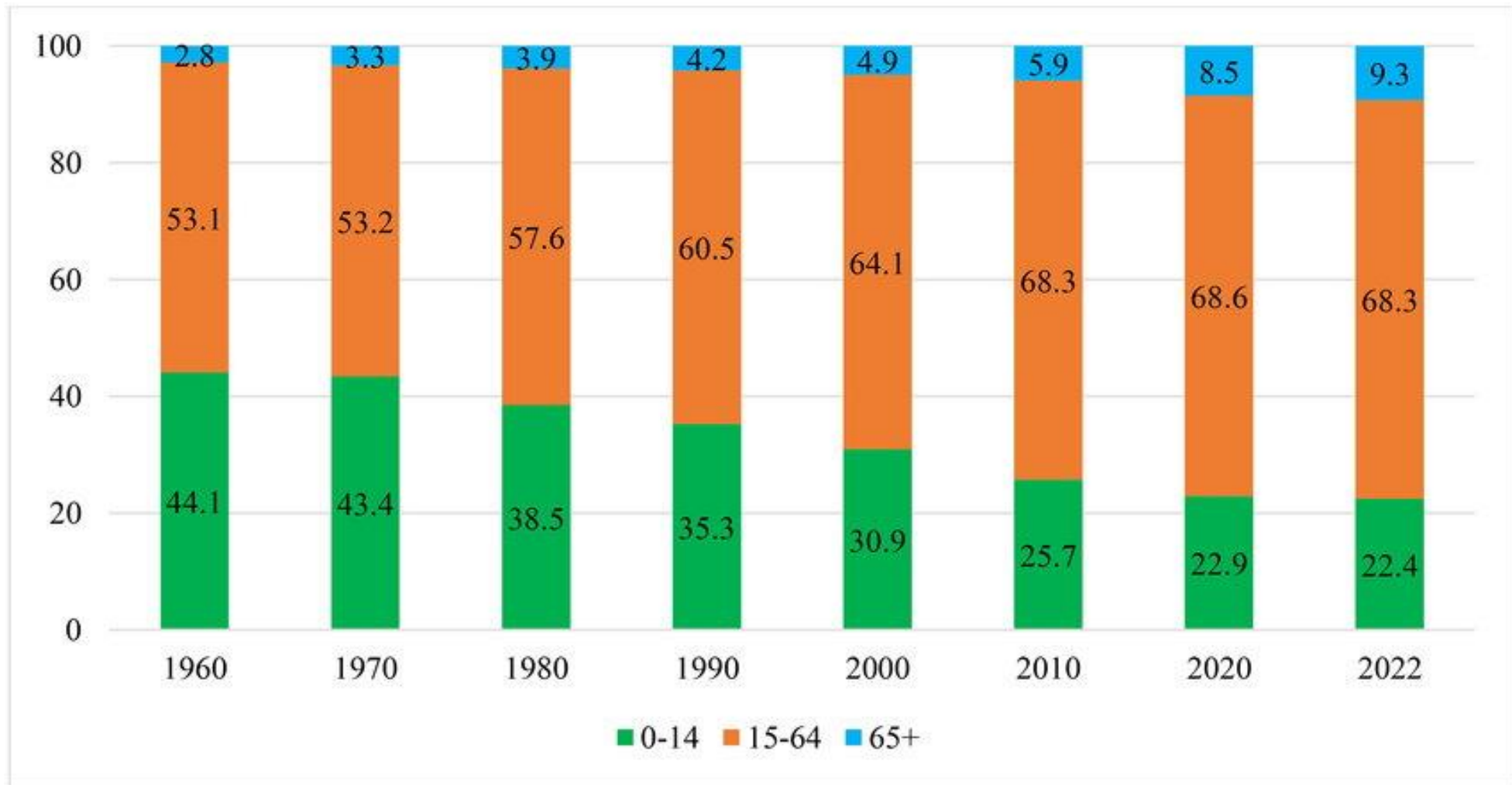
The total population of the ten ASEAN Member States (AMS) is **676.6 million**

The share of youth dropped from 41.9% to 32.1%.

Meanwhile, during the same period, the share of the **productive working-age** population increased to **60.1%** (from 53.2%)

With a collective GDP of over US\$4 trillion in 2024, ASEAN ranks as the third largest regional economy in Asia and the **fourth largest economy in the world**, after the US, China, and Germany.

Population Age Structure Changes in ASEAN states, 1960-2022

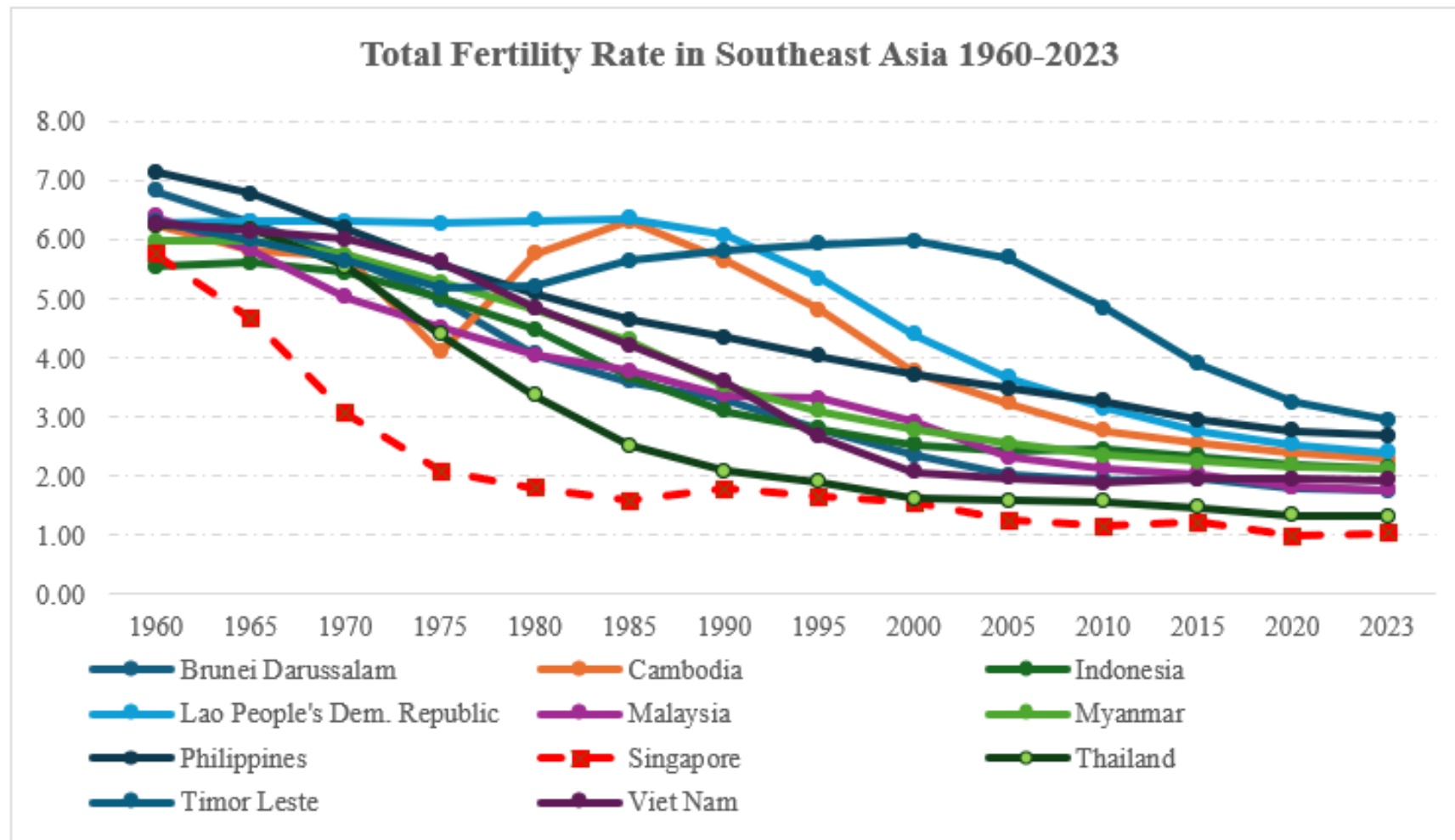


Demographic “window” is open now — but is narrowing

- The “Investing in ASEAN 2023” report highlights that with **383 million people under age 35**, ASEAN has a strong youth base, but it also warns that a lack of skills is a key bottleneck for investment and growth.
- the demographic “window” remains open — but it will not stay open indefinitely. As populations age further (especially in more advanced ASEAN economies), the dependency burden may rise again.
- Latin America’s notoriously **wasted demographic dividend of the 1970s and 1980s** – during which weak governance and a lack of openness to trade stalled growth – should be kept in mind as ASEAN looks to the future.

ASEAN heterogeneity

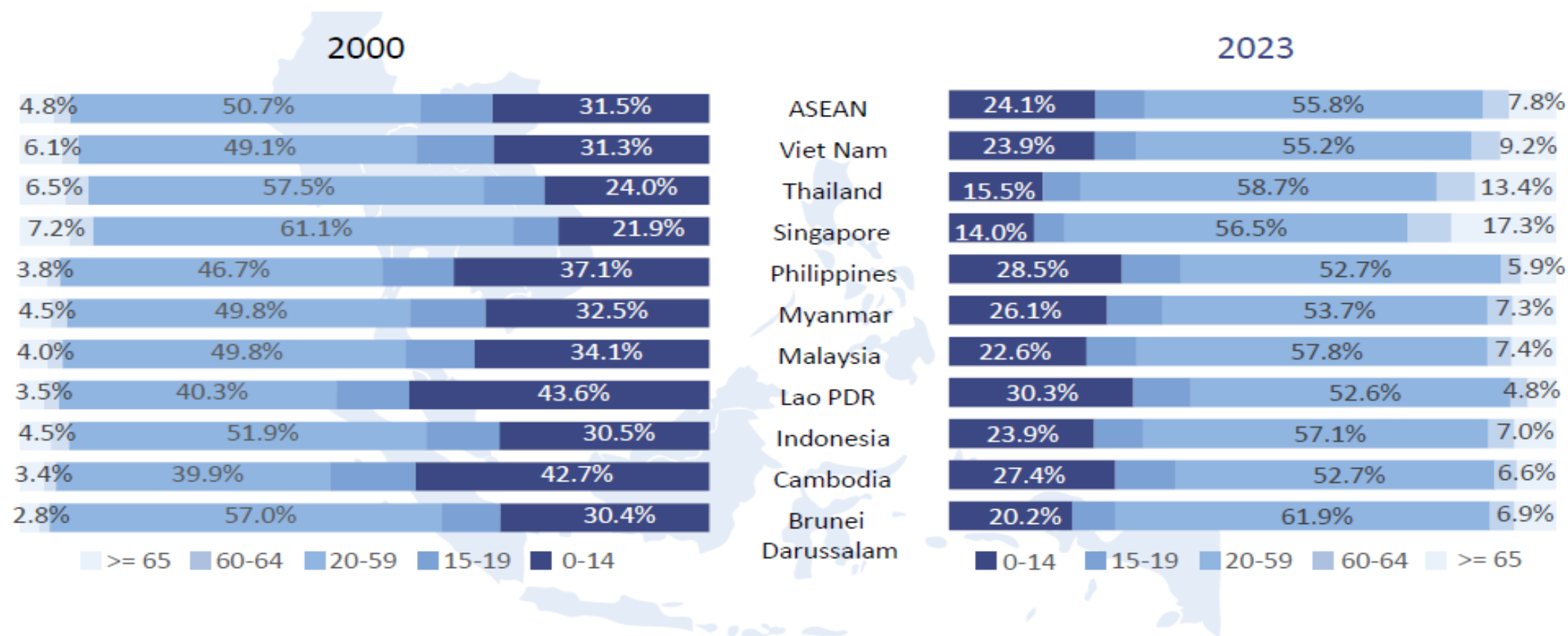
- Uneven progress in medical and socioeconomic development
- Average per capita income levels, for example, range from approximately US\$1,286 in Myanmar to US\$59,785 in Singapore.
- Different demographic stages
- One-size-fit-all strategy will not work, requiring tailored strategies



Source: United Nations, Department of Economic and Social Affairs, Population Division

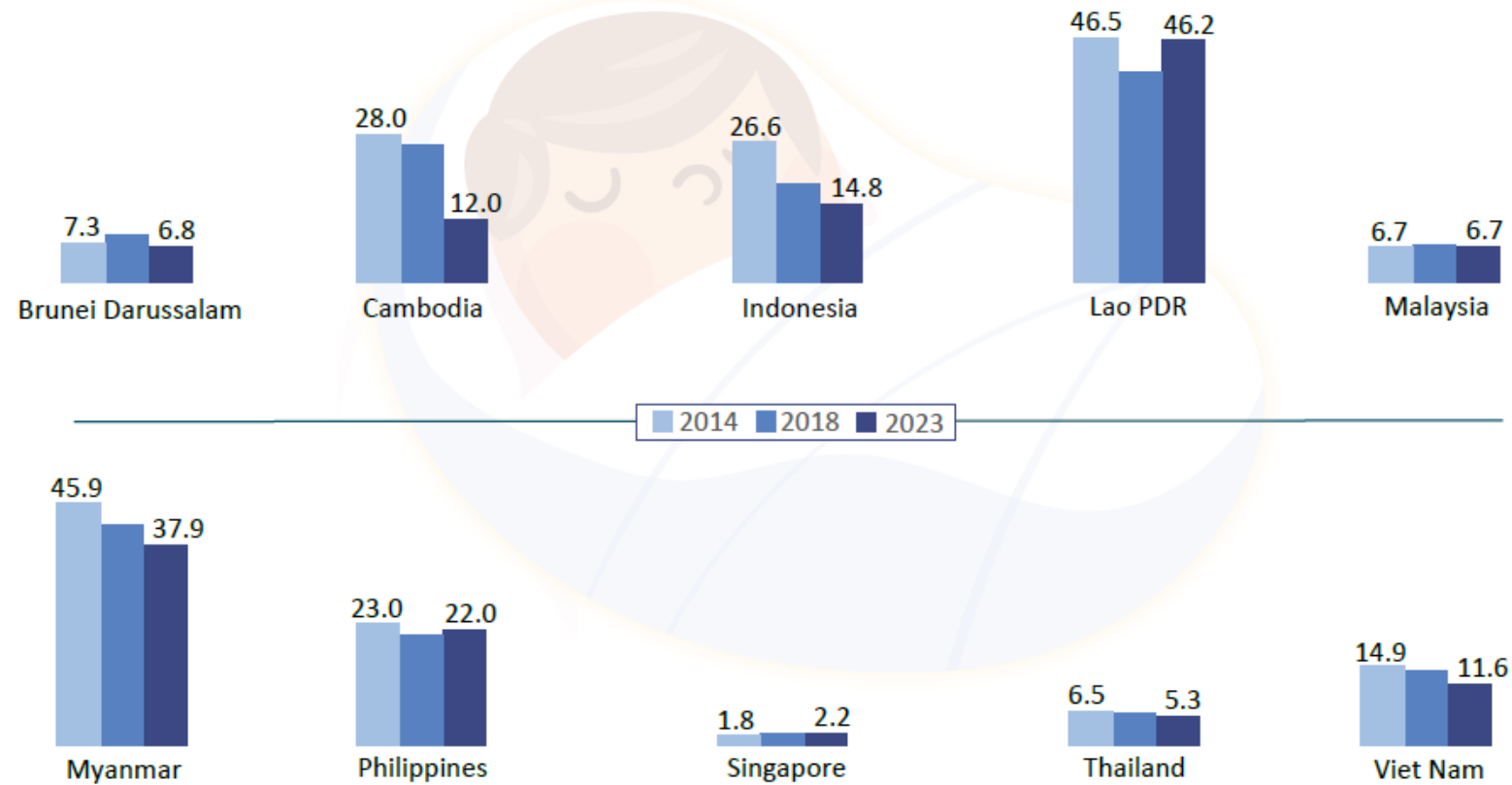
Source: Yeung and Abalos (2025), Lancet Regional Health Western Pacific

Figure 1.1.3. Population age structure (% of total) by ASEAN Member States, 2000 and 2023



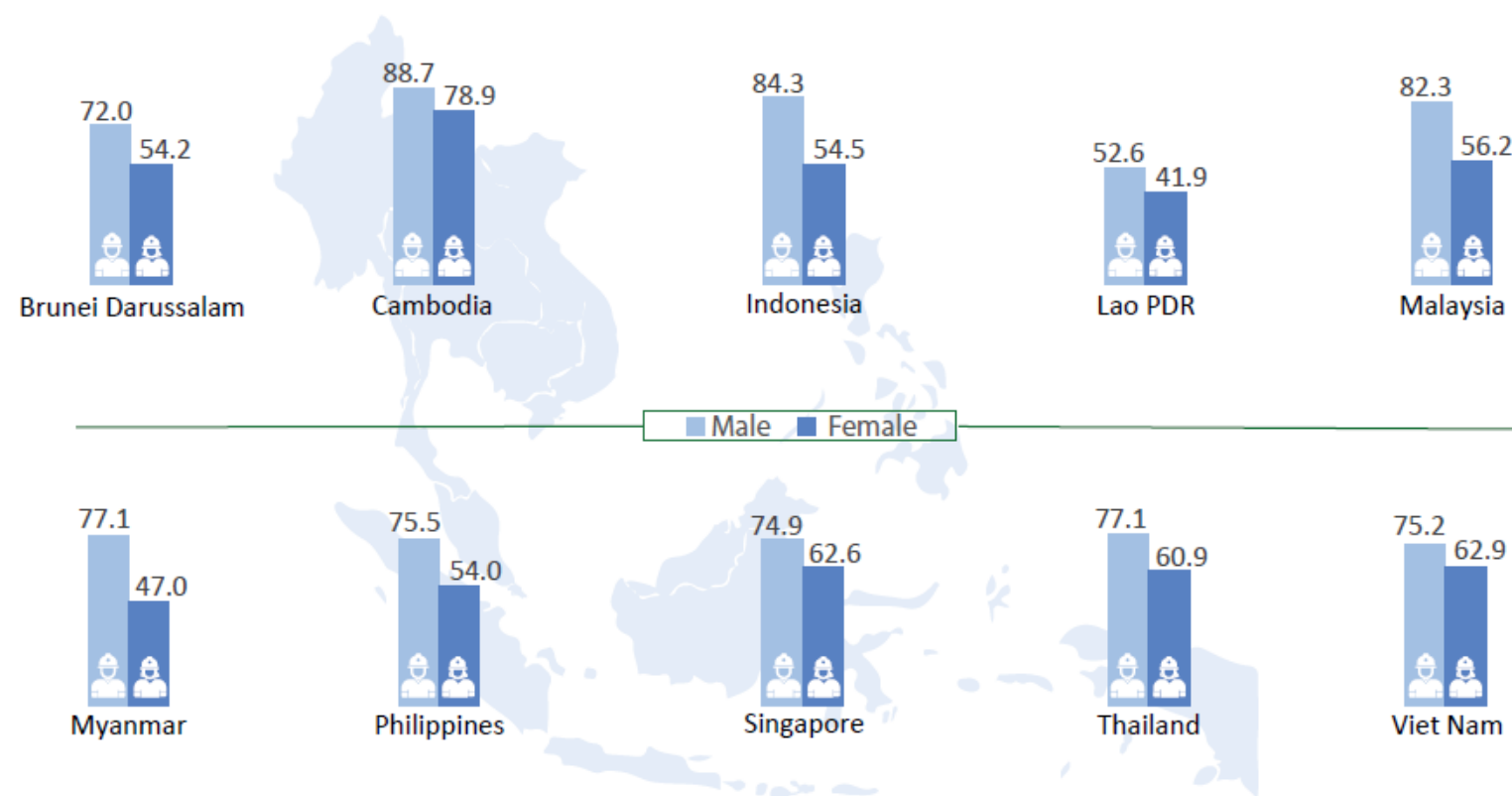
Source : ASEAN Secretariat, ASEANstats database

Figure 1.1.5. Infant mortality rate per 1,000 live births, 2014, 2018, and 2023



Note : The latest available data for Cambodia is 2021, Myanmar, Philippines, and Thailand is 2022
Source : ASEAN Secretariat, ASEANstats database

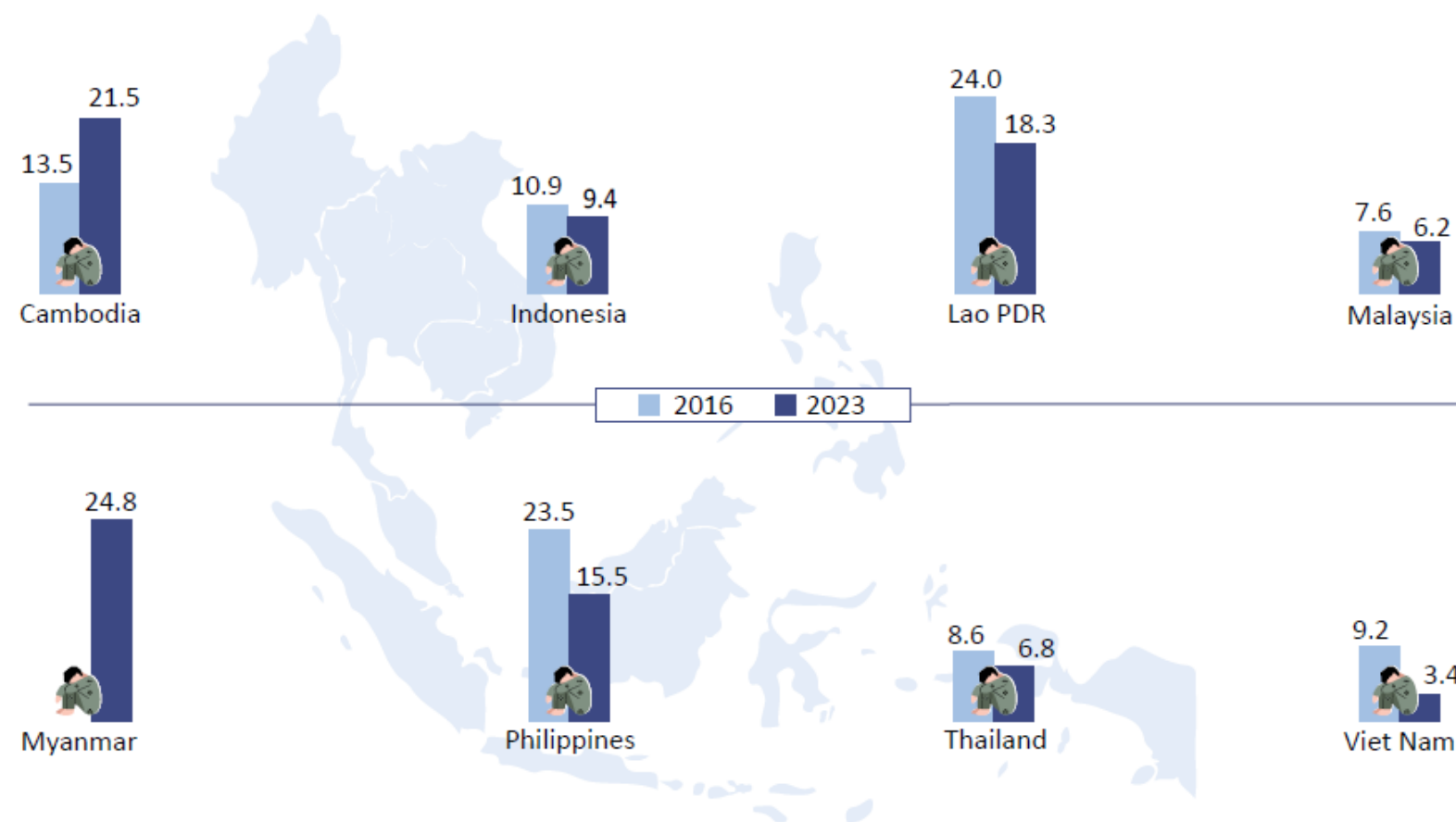
Figure 1.4.1b. Labour force participation rates (%) by sex by ASEAN Member States, 2023



Note : The latest available data for Cambodia, Lao PDR, and Myanmar is 2022

Source : ASEAN Secretariat, ASEANstats database

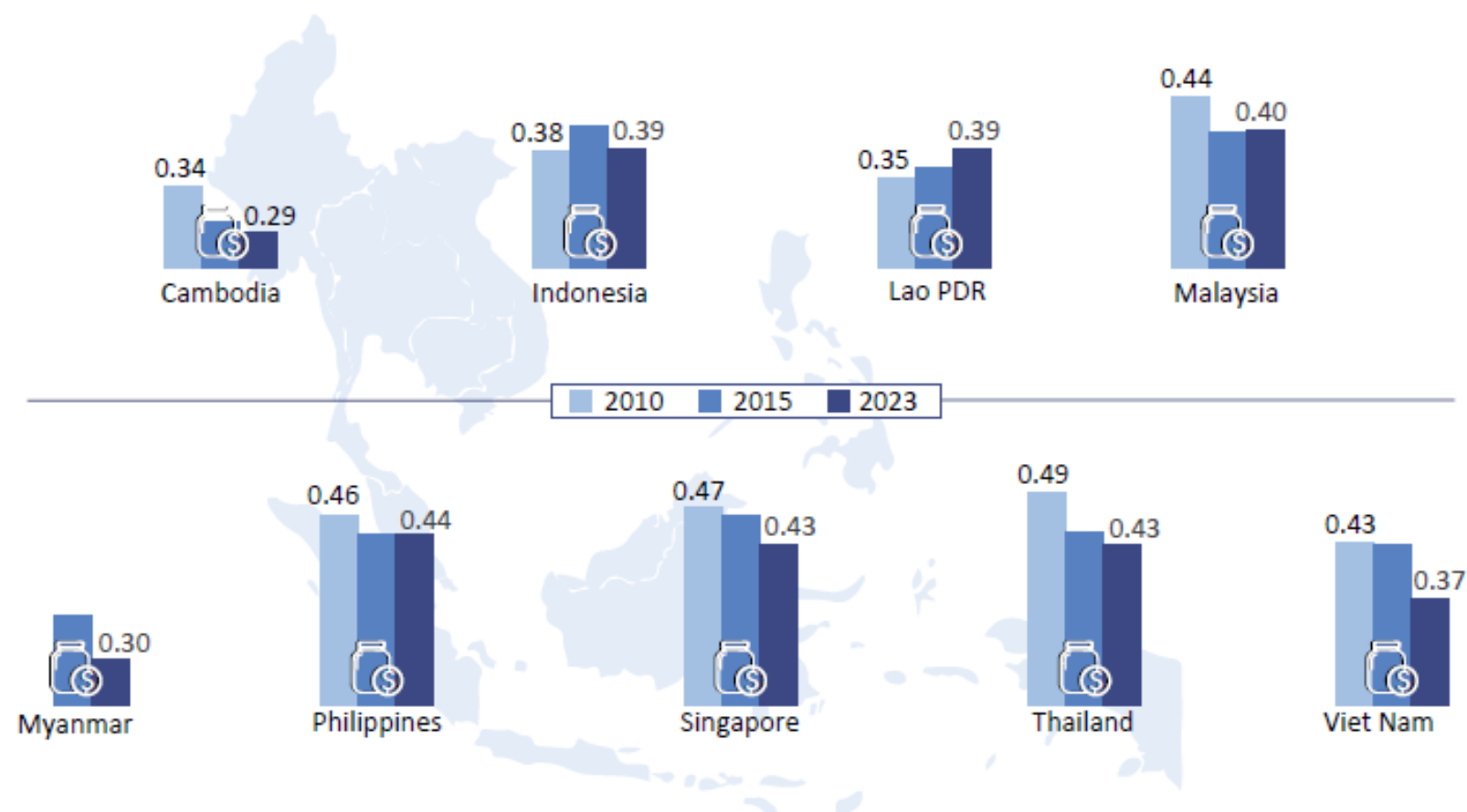
Figure 1.5.1. Population living below the national poverty lines (%) by ASEAN Member States, 2016 and 2023



- Notes :
1. The indicator is not applicable to Brunei Darussalam and Singapore
 2. The latest available data for Myanmar is 2017, Lao PDR is 2018, Thailand is 2020, Cambodia is 2021, Malaysia is 2022
 3. The data for Malaysia refer to proportion of households living below the national poverty line while for Viet Nam, the data refer to proportion of households living below the national multidimensional poverty rate

Source : ASEAN Secretariat, ASEANstats database

Figure 1.5.2. Gini Ratio by ASEAN Member States, 2010, 2015, and 2023



Notes : 1. The latest available data for Cambodia and Myanmar is 2017, Lao PDR is 2018, Philippines and Thailand is 2021, Malaysia is 2022
 2. The data for Myanmar prior to 2015 is not available
 3. The data for Brunei Darussalam is not available

Source : ASEAN Secretariat, ASEANstats database

(Early) Human development

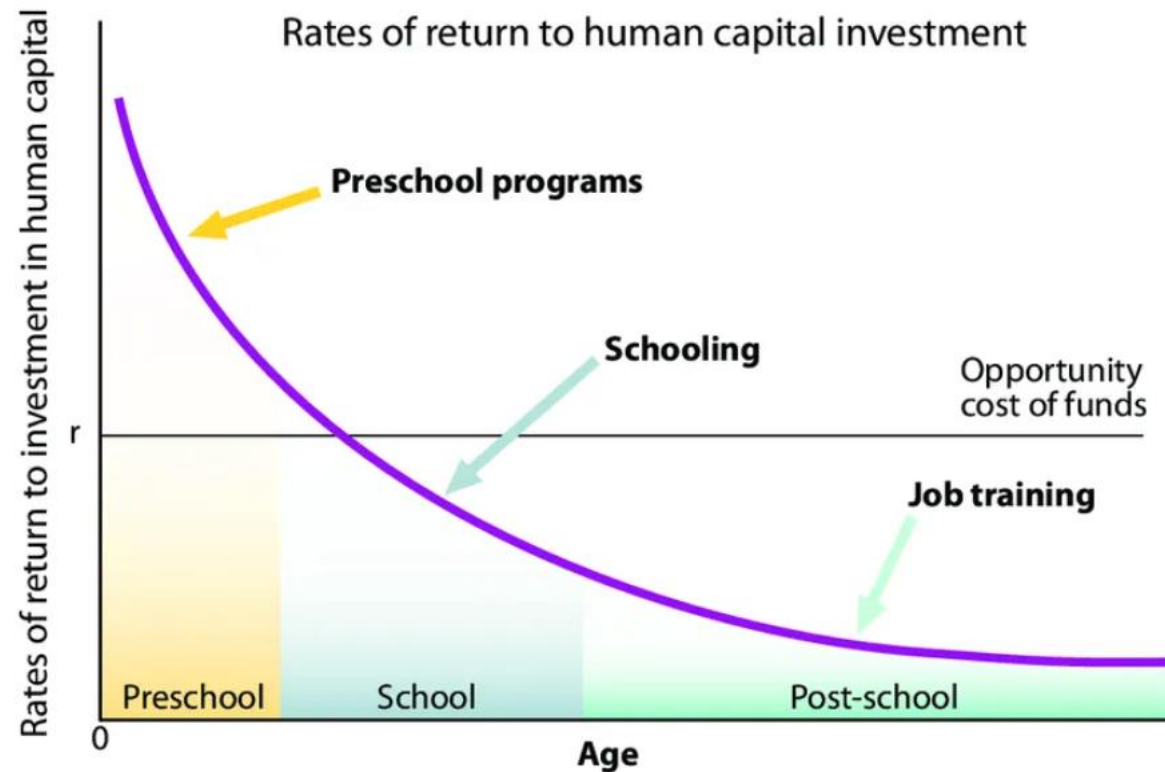
Productive, healthy physical
& social-emotional well-being

Vibrant economy & harmonious,
integrated and secure society



A lifelong, dynamic & cumulative process

Early childhood ► Middle childhood ► Adolescence ► Adulthood



- policy-emphasis on early childhood development (ECD), especially relevant when considering disadvantaged children: remediation later is more costly and less efficient.

Source: "Skill Formation and the Economics of Investing in Disadvantaged Children" (Science), Heckman, James, 2006

Holistic Early Childhood Human Development



Multiple Domains



Multiple Contexts

Source: Singapore Longitudinal Early Development Study (SG-LEADS)
For more information, visit <https://sg-leads.org/>



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Early Development Study (SG-
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Highlights of Findings Based on SG-LEADS



Kids' test scores differ widely based on parents' income, education

New study finds pre-schoolers with better educated or higher income parents do better

Theresa Tan
Senior Social Affairs
Correspondent

Pre-school children with parents who are better educated or have a higher income tend to do significantly

Singapore that is based on a nationally representative sample of families with young children. The children tested are all part of the Singapore Longitudinal Early Development Study (SG-LEADS), which is funded by the Ministry of Education and aims to look into factors that affect early childhood development. The study found that:

Children's test scores

Based on their parents' educational levels



Based on their total annual family income (2018)



Percentile (%)

Percentile (%)

Note: In this study, the percentile refers to the percentage of the children that a child scores higher than.

Source: PROFESSOR JEAN YEUNG AND DR CHEN KUEJIAO, SUNDAY TIMES GRAPHICS

THE STRAITS TIMES

了解本地幼儿发展

新加坡父母工作时间很长，我们不清楚父母花多少时间和孩子在一起，做什么，提供多少情感支持。



PopulationMatters

Reducing inequality with early childhood development

More help for low-income so that no family 'gets trapped in a permanent underclass': DPM Wong, Nov 13, 2024 Straits Times

Higher-SES parents have a higher emotional value and educational expectations of their children, set more limits, and are more likely to provide an organized and stimulating home environment and have better executive functioning skills to plan for their children's future.

Infant vocabulary size predicted by parental education levels

Shared book reading narrow effects of socio-economic disparities on early language development



Better outcomes in family when dads take paternity leave: Study

The Big Read: Paternity leave helps but for men to take on fair share of parenting, a rethink of gender roles is needed



Budget 2023: Government-paid paternity leave to double to 4 weeks; mandatory for employers in due course

NDR 2024: Parents of newborns to get extra 10 weeks of shared leave



Government Paid Leave

SINGAPORE

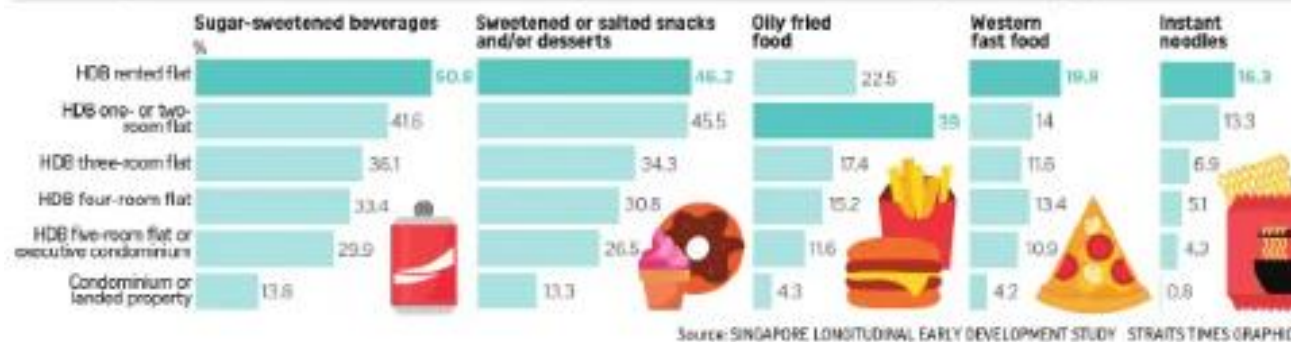
Children's dietary habits linked to behaviour: Study

Poor eating and nutrition habits in young children were found to be significantly linked to behavioural problems such as acting out or anxiety, data collected by researchers from the National University of Singapore has shown. The longitudinal study aims to study factors that affect child development. **B2**

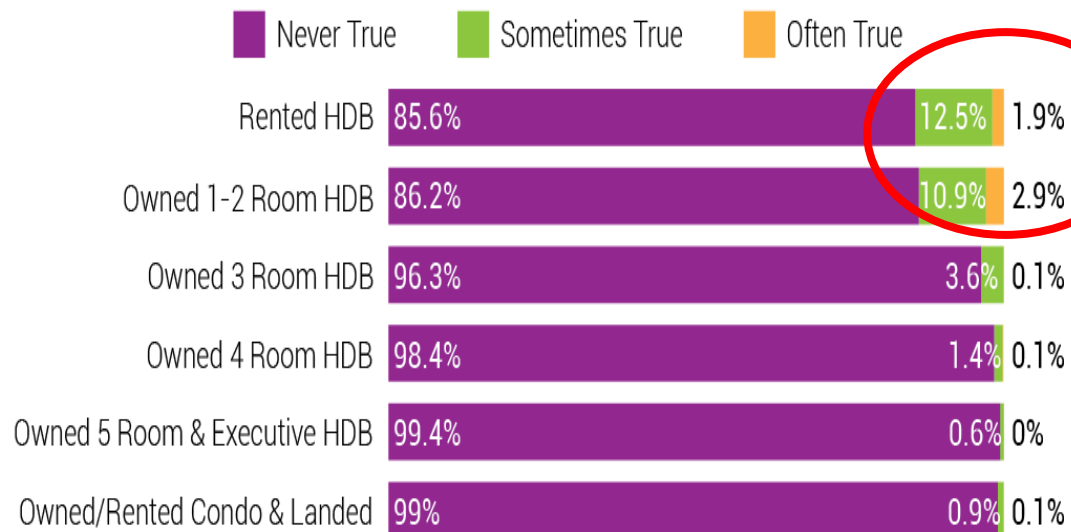
FOOD and NUTRITION

Eating habits of young children in Singapore

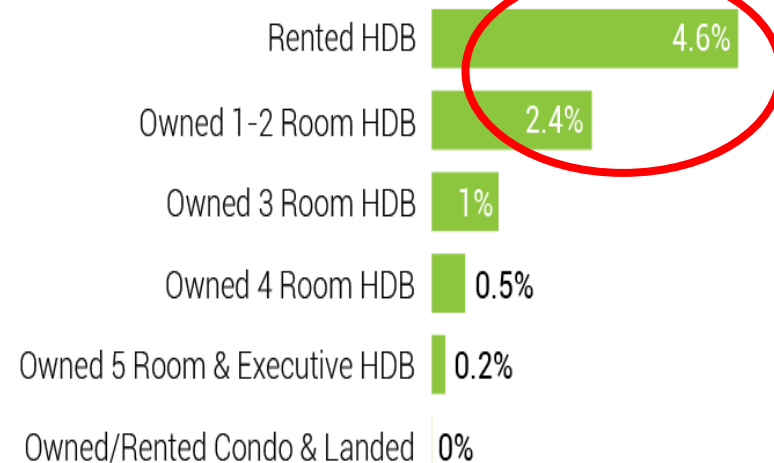
Children aged two to six who consume the following three times or more each week, by housing type



"My child was not eating enough because I just couldn't afford enough food."



% of PCGs Who Cut Child's Food Size/ Meals Because There Wasn't Enough Money For Food



How food insecurity affects preschool **children's behavior problems** in early childhood: The nutrition and family stress pathways

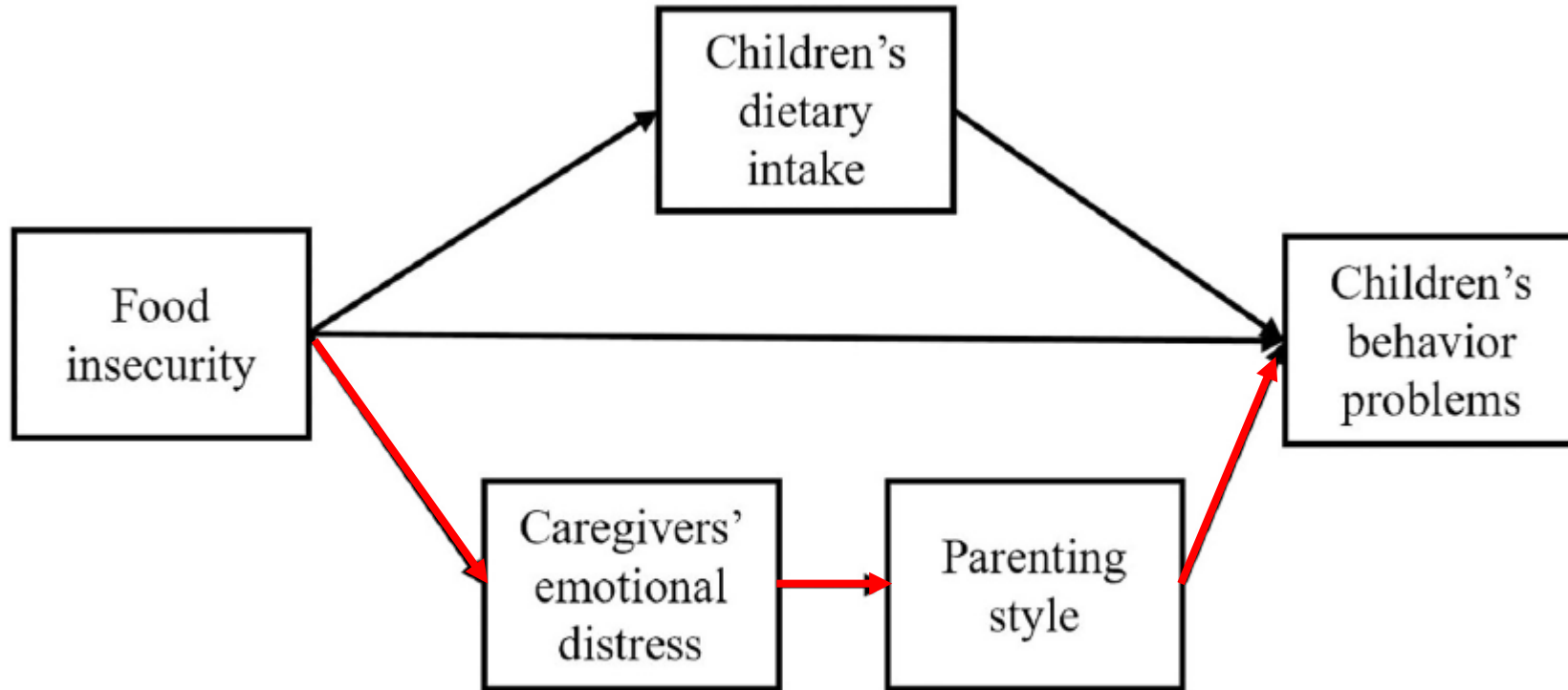


Fig 1. The conceptual framework.

<https://doi.org/10.1371/journal.pone.0294109.g001>

Source: Chen and Yeung (2024), PLOS ONE How food insecurity affects children's behavior problems in early childhood: The nutrition and family stress pathways

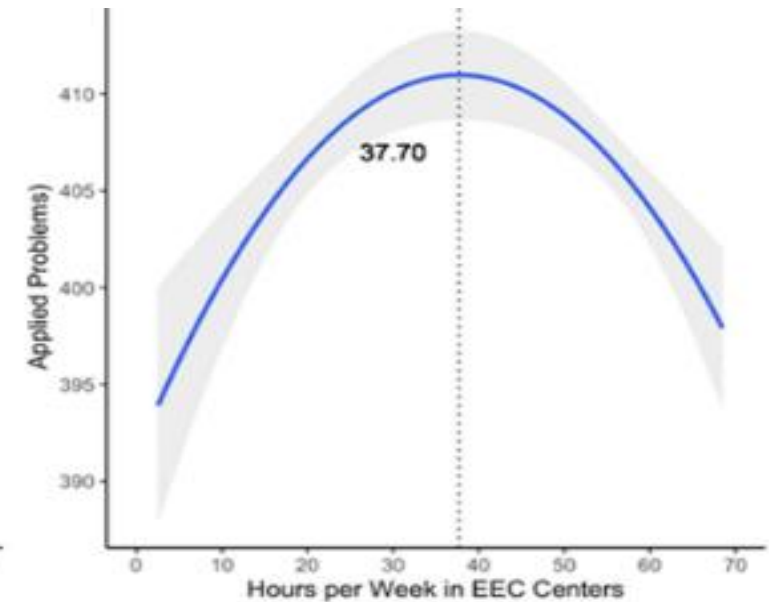
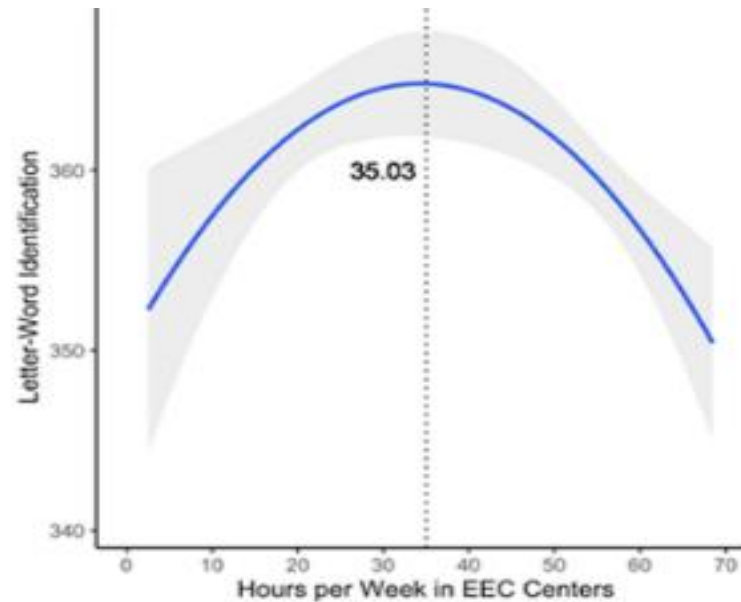
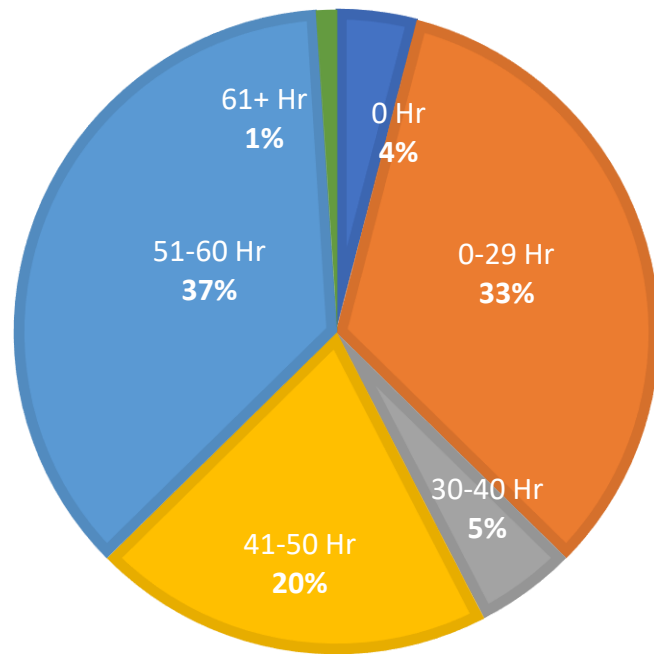
Methods: 2 waves of SG-LEADS data, Propensity Score Matching

Weekly hours in daycare & Child Development



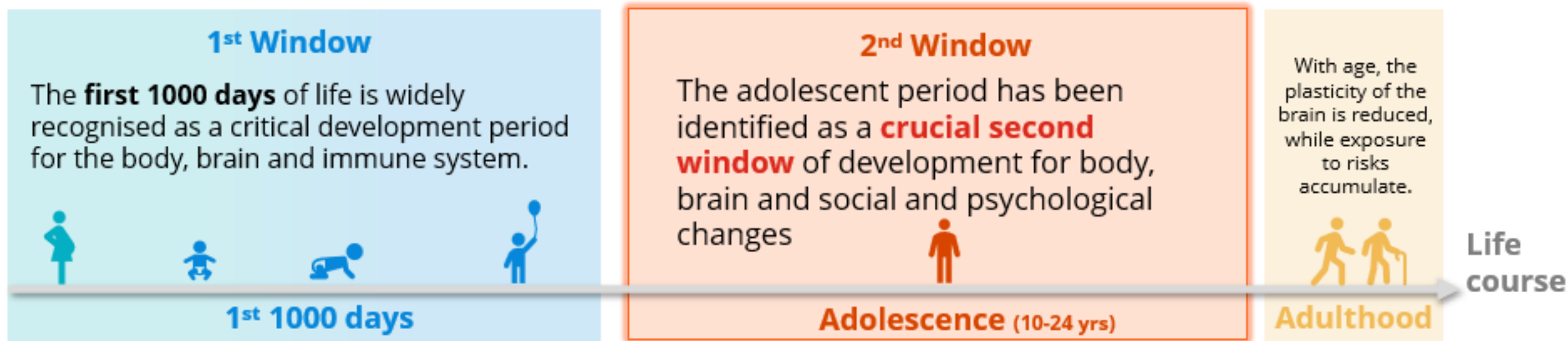
Almost 60% of Singaporean children spend more than 40 hours a week in daycare

Spending more than 35-38 hours a week in childcare centres is associated with lower test scores



Source: Bi, Ding and Yeung (2024), Partially consistent with findings in the U.S., France, and Australia, by Belsky, 2001, 2002, 2006; NICHD ECCRN, 1997, Berger et al., 2021; Coley et al., 2013, 2015 ; McCartney et al., 2010

Critical Windows for Intervention in Human Development Over the Life Course



- Adolescence (10 – 24 years) spans from the beginning of puberty until adult maturation is reached
- Critical developmental period characterised by rapid biological, cognitive and socio-emotional changes:
 - Development of psychological independence, identity formation and building of resilience
 - Educational achievements and future aspirations are set, which can impact lifelong socioeconomic position
 - Formation of initial non-family emotional relationships
 - Psychosexual maturation

Mental and physical health challenges in adolescence

Adolescence is a critical period for identity formation and building of resilience, influencing health, academic outcomes, and relationships.



Interplay between Mental and Physical Health



Academic Achievement and Human Capital



Digital Behaviours

Adolescent mental and physical health challenges **cause substantial social, educational, and economic impacts.**

Children who adopted and continued unhealthy lifestyle had higher risk of diseases like prehypertension: Study

Obesity among children on the rise in Singapore, but fat-shaming is not the answer

Child obesity is on the rise in Singapore. Tackling it will require mindset shifts as well as lifestyle changes.

NUS YEAR study and GUSTO: **1 in 10** 10-18-year-olds meet diagnostic criteria for **at least one mental health disorder**

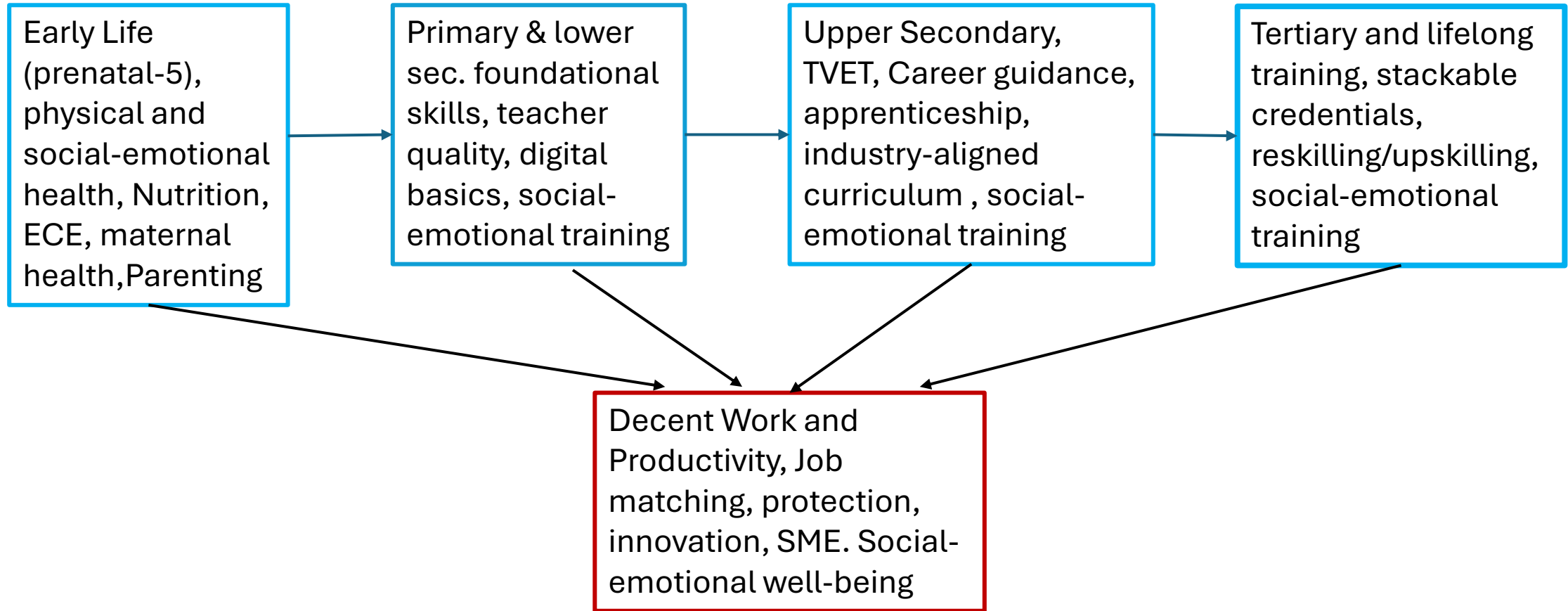
Some S'porean youth missed 24 days of school in past year due to depression, anxiety: Study

Excessive social media use linked to mental health symptoms among youths: IMH study

Three in five have encountered online harms, or know someone who has: Survey

Critical to understand **digital behaviours** for **creating policies** that promote healthy technology use

Life-course Holistic Investment Framework to Realize Demographic Dividend



Cross-cutting: inclusion (gender, rural/remote, disability), financing, governance, data

Emphasize early and continuous human capital formation, starting with maternal and child health, early childhood education, foundational learning, through vocational and tertiary education, to lifelong learning and productive employment. Cross-cutting priorities include equity, gender inclusion, digital access, and robust governance

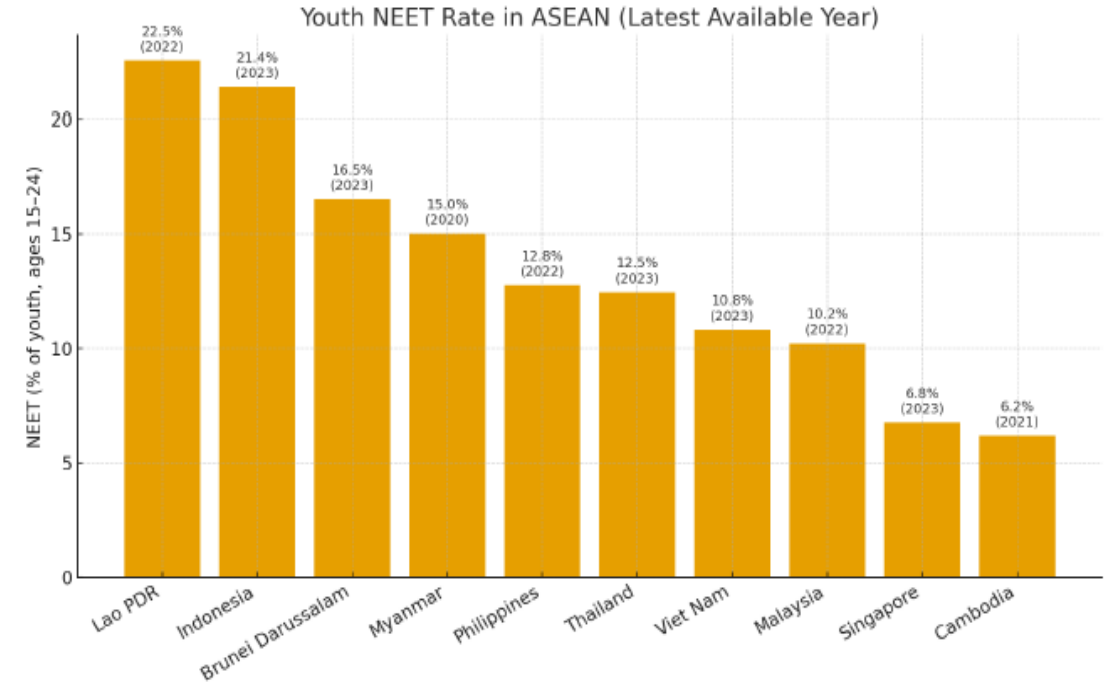
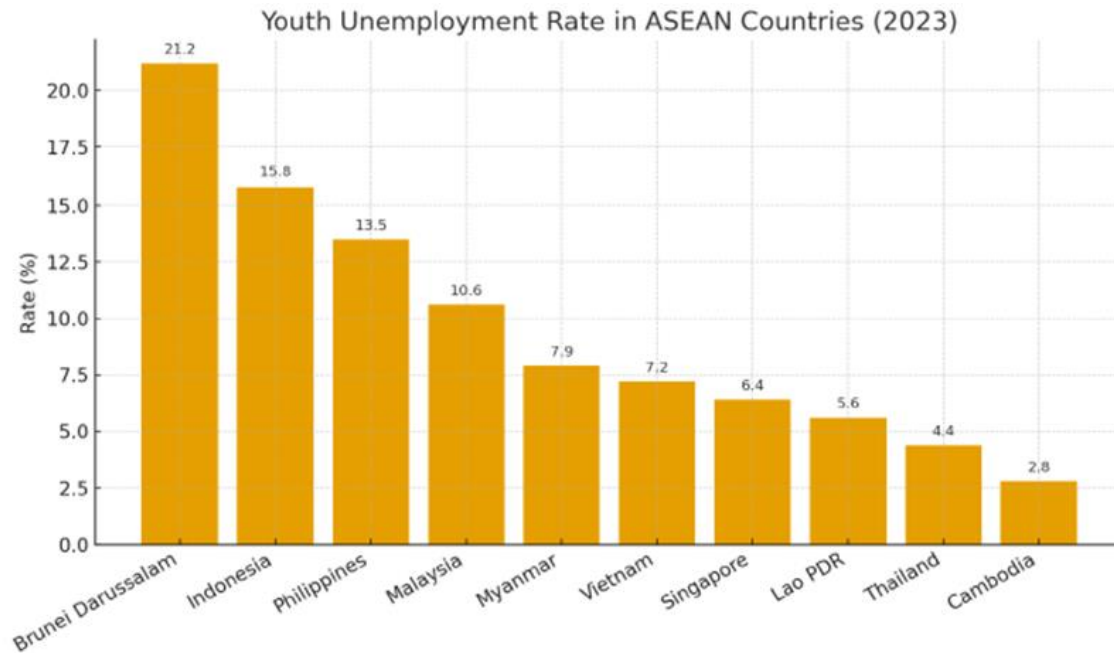
2. Challenges, Constraints & Risks

Insufficient investment in early life & human capital foundations

- Early childhood development (health, nutrition, stimulation, preschool) is often under-invested. If children begin school malnourished or behind, they may never catch up.
- Inequities in access to quality primary and secondary education remain stark across ASEAN states, especially in rural, remote, or marginalized communities.
- Poor quality of education (teacher shortages, outdated curricula, weak learning outcomes) weakens the ability of youth to absorb advanced skills.
- The region's education systems may lag in adapting to the demands of the Fourth Industrial Revolution, including digital literacy, critical thinking, and lifelong learning mindsets.

Mismatch, underemployment, and structural transformation

- Economic transformation (e.g. from agriculture to manufacturing or services) may lag behind skills supply, causing mismatches.
- Many young workers find themselves in informal or precarious employment without social protections.
- Some sectors that employ many youth offer low wages or limited upward mobility, undermining incentives to invest in further skills.
- The supply of tertiary graduates may exceed the demand for high-skilled jobs in some member states, leading to underemployment or brain drain.



Brunei Darussalam and Indonesia record the highest combined rates, indicating underutilized human capital. Singapore and Cambodia show the lowest, reflecting smoother education-to-work transitions. Lao PDR and Myanmar exhibit high NEET shares despite modest unemployment, suggesting structural barriers like informality and limited TVET pathways. Overall, skills mismatch and unequal access to training constrain ASEAN's ability to fully capture the demographic dividend.

Labor market and youth employment dynamics

- Many youths remain in jobs that are temporary, informal, or mismatched to their education levels.
- The youth NEET (not in employment, education, or training) rate in Southeast Asia is nontrivial – especially for women.
- A challenge is the **skills gap**: many firms report difficulty finding workers with appropriate skills.
- Foreign direct investment (FDI) has some causal linkage to youth employment in some ASEAN-5 countries, indicating that attracting the right kind of investment can help create job opportunities.

Institutional, governance, and financing constraints

- Coordination across ministries (health, education, labor, finance) is often weak; policies can be siloed rather than integrated.
- Public budgets are constrained. Many governments have difficulty mobilizing sustainable financing for large-scale human capital development.
- Monitoring and evaluation systems (for youth programs, job matching, lifelong learning) may be weak or fragmented.
- Social safety nets, labor protections, and active labor market programs may not reach vulnerable youth segments (e.g. women, rural youth, ethnic minorities).

Risks from external shocks and demographic shifts

- Crises such as pandemics, climate change, or economic downturns can disproportionately affect youth (job losses, school disruptions).
- As the demographic window narrows with ageing, the pressure will shift to elderly dependency; delayed action may limit leeway.
- Rapid technological change may render certain skills obsolete; unless systems adapt, many youth may be left behind.

3. Strategic Policy Levers

To unlock the dividend, ASEAN countries should pursue a multi-pronged, sequenced strategy.

- **3.1 Invest early: from pre-birth to adolescence**
 - **Nutrition & health:** Maternal health, immunization, food security, and early interventions (e.g. deworming, micronutrients) enhance cognitive development.
 - **Early childhood education (ECE):** Expand affordable, quality pre-primary programs, especially for disadvantaged groups.
 - **Bridging programs:** For children who have dropped out or are lagging, bridge courses can bring them back into the mainstream.
 - Investing early smooths the path toward higher learning attainment, reducing remedial burdens later.

3.2 Strengthen secondary, technical and vocational education & training (TVET)

- Align curricula with industry needs and future growth sectors (e.g. green technologies, digital, healthcare).
- Foster stronger public–private partnerships so firms have “skin in the game” (e.g. apprenticeships, co-design of courses).
- Promote modular, stackable credentials and lifelong learning pathways to enable upskilling and transitions.
- Support soft skills, entrepreneurship, digital literacy, and “future skills” (critical thinking, adaptability).

3.3 Facilitate smoother education-to-work transitions

- Career guidance and counseling services should be strengthened, starting at secondary school, to help students understand labor market pathways.
- Internship, apprenticeship, and on-the-job training programs can offer the “first job” bridge.
- Job matching and labor market information systems should be more responsive, inclusive, and accessible (e.g. via digital platforms).
- Provide incentives to formalize firms and jobs so that youth can access social protection and benefits.

3.4 Activate youth engagement, voice, inclusion

- Involve youth in policy design, monitoring, and evaluation (youth advisory councils, participatory budgeting).
- Tailor interventions for marginalized groups: women, rural/remote youth, ethnic minorities, persons with disabilities.
- Promote civic and volunteer programs to build social capital and engagement.

3.5 Mobilize financing & institutional capacity

- Increase public spending in human capital development (education, health, social protection) prioritized over less productive subsidies.
- Leverage blended finance, international development funds, and impact investments focused on youth.
- Incentivize firms to invest in training (e.g. tax credits, matching grants).
- Enhance interministerial coordination and establish youth-focused agencies or task forces.
- Build robust monitoring, evaluation, and data systems to track progress and enable course corrections.

3.6 Attract investment and industry aligned with youth employment

- Promote economic sectors that generate large-scale, quality jobs for young workers, especially in manufacturing, green tech, digital economy.
- Use investment incentives to encourage firms to locate in regions with youth underemployment, linking them to training hubs.
- Ensure that investment policies require or encourage workforce development commitments (e.g. training quotas, local sourcing).
- One example: in ASEAN-5, some empirical work suggests that FDI inflows can positively affect youth employment, especially when linked with skill development frameworks.

Selected Best Practices across ASEAN

Viet Nam – Early Childhood Development & Legal Reforms

- A study of the “Learning Clubs Intervention” in rural Viet Nam found significant long-term economic benefits of maternal/child and early childhood development interventions.
- The country has adopted key legal steps for universal preschool (ages 3-5) and tuition exemptions for some 5-year-olds in hard-to-reach areas.
- This shows how investing at early ages (health + stimulation + preschool) links directly to future productivity and employment readiness.
- **Policy takeaway:** Early-life interventions are essential input to the human-capital pipeline; Viet Nam’s experience underscores cost-benefit and legal frameworks for ECE as part of a demographic-dividend strategy.

Malaysia – TVET, Dual-Training and Skills Hub Strategy

- Malaysia is expanding its vocational training architecture, dual-training models and public-private skills partnerships.
- While less specific on youth employment alone, this strategy aligns with enabling youth transitions into productive employment in the context of fast-changing labour demand.
- **Policy takeaway:** A national strategy that focuses on aligning training, industry demands and workforce transitions can serve as an example of the “skills & employment” pillar for ASEAN states.

Indonesia – Digital Skills and Youth Employment Platforms

- The “Skill Our Future” programme targets Indonesian youth with digital skills, certification and job-readiness training (400,000 youth targeted, 40,000 in 2024) in underserved communities.
- The “Bridges to the Future: ASEAN Youth Employment (BTF:AYE)” initiative (2021-22) by the ASEAN Foundation and partners ran in Indonesia (and Viet Nam) to equip vulnerable youth with digital skills matched to jobs.
- Combined with national programmes such as Prakerja (vocational training + financial credit) this forms a strong youth transition ecosystem.
- **Policy takeaway:** Indonesia is leveraging the digital economy and multi-sector partnerships to close the skills-to-jobs gap—an important model for the youth-transition pillar of your brief.

Thailand – Industrial Policy Linking Skills & Employment

- Thailand's emphasis on the Eastern Economic Corridor (EEC) integrates FDI, industrial clusters and skills-ecosystem development (vocational training, industry linkages).
- This is a demonstration of how youth-employment transitions benefit from place-based industrial-skills planning.
- **Policy takeaway:** Investing in regional growth areas and linking them to youth training pathways strengthens the employment side of the demographic-dividend equation.

Brunei Darussalam – Inclusive Youth Employment and Upskilling

- In Brunei, youth-employment programmes emphasise vulnerable groups, digital up-skilling and private-sector linkage; the BTF:AYE initiative included Brunei as part of ASEAN youth employment efforts. aseanfoundation.org
- This signals the importance of inclusive targeting (gender, disability, remote youth) in the youth-transition strategy.
- **Policy takeaway:** Smaller AMS can offer replicable models of inclusive youth-employment programming emphasising digital skills and labour-market entry.

Singapore

- Early Childhood Development: EYDF 2023 & Preschool Subsidies
- Singapore's EYDF 2023 promotes holistic early years education (birth to age 3).
- • Preschool subsidy expansions aim for 80% access to government-supported preschools by 2025.
- • Focus on quality standards and inclusion (urban/rural/low-income).
- • Policy takeaway: Early investments in childhood education ensure readiness for schooling and lifelong learning

Youth Transition: SkillsFuture and Work-Study

- SkillsFuture is a nationwide initiative for skill development and career guidance for students.
- Work-study programmes provide paid work + training, bridging the education-to-work gap.
- Jobseeker support schemes help youth transition into decent jobs with training stipends.
- Policy takeaway: Seamless education-to-work transitions via digital platforms, skills matching, and financial support

Digital & Foundational Skills for Youth: National Digital Explorer

- National Digital Explorer programme empowers youth with digital literacy (ages 9–18).
- • Emphasises hands-on learning in digital tools, coding, and entrepreneurship.
- • Builds future-ready youth for technology-driven economies.
- • Policy takeaway: Early investment in digital and foundational skills enables youth to compete in a tech-driven future

Quality Assurance & Workforce in Early Childhood Sector

- **Initiative:** Strengthening the Early Childhood Workforce
- Through the “Early Childhood Care & Education (ECCE)” policy reforms, Singapore introduced the Singapore Pre-school Accreditation Framework (SPARK) and the ECDA’s professionalisation agenda to raise preschool quality and educator capacity. [MSF Development+1](#)
- By improving the early years ecosystem (both supply and quality), the policy ensures children enter school ready, reducing remediation later.
- **Take-away:** This reinforces that “investing early” isn’t only about more funding, but also about system quality, regulation, and workforce development.

4. Policy Recommendations

- **Adopt a life-course and holistic human development approach**
Early investment (health, nutrition, ECE) + continuous investment through schooling and adult learning.
- **Prioritize quality, relevance, and equity in education**
Focus not just on access, but on learning outcomes and alignment with labor market demands.
- **Strengthen TVET and lifelong learning systems**
Make technical training flexible, modular, and responsive to evolving demands.
- **Enhance youth-to-work pathways**
Develop integrated programs (internships, apprenticeships) and robust labor market information systems.
- **Ensure inclusive youth engagement**
Target vulnerable groups intentionally, and remove barriers (gender, geography, disability).
- **Mobilize sustainable financing**
Expand budgetary allocations, use private sector partnerships, introduce performance-based funding, and seek regional/ global support.
- **Foster ASEAN-level coordination & knowledge sharing**
Exchange best practices, pool resources for regional youth programs, and build shared labor market data infrastructure.
- **Monitor and adapt**
Build feedback loops, invest in data, carry out evaluations, and adjust policies over time.

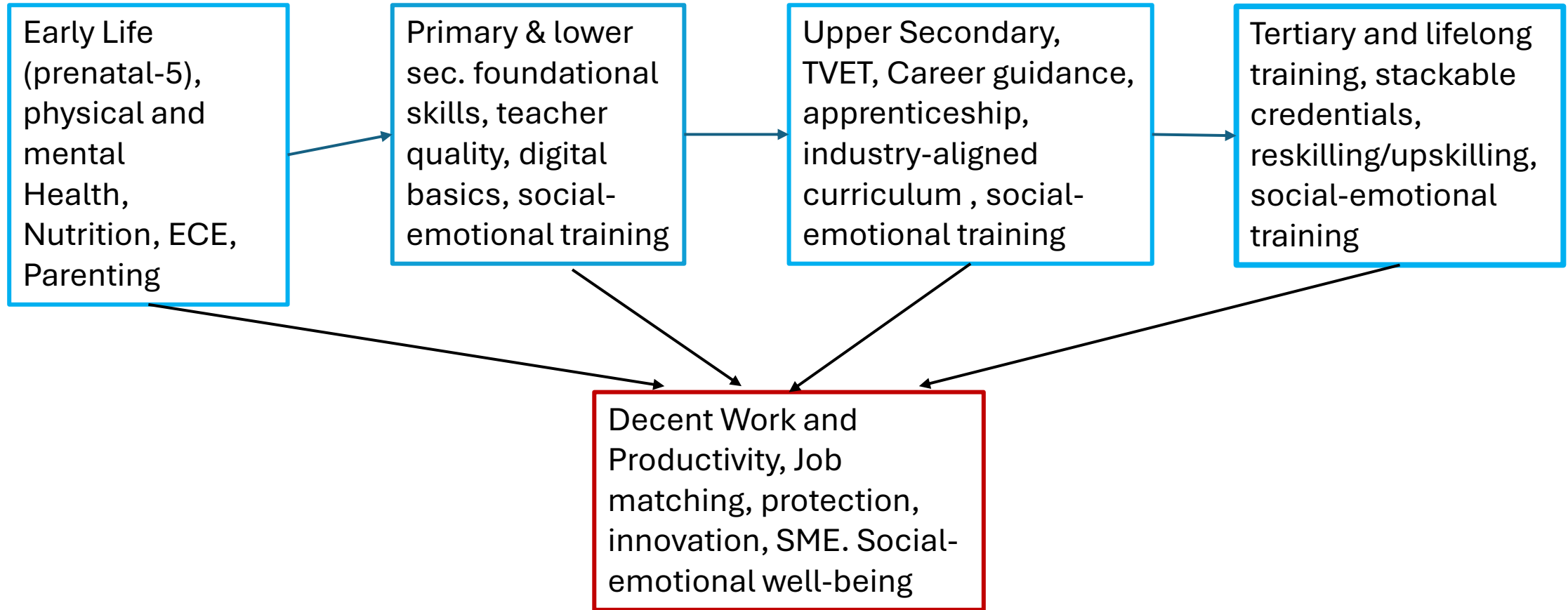
Key caveats & risks

- timing matters: Delayed reforms may be too late as the demographic window narrows.
- One-size-fits-all solutions will fail—ASEAN member states differ widely in income, institutional capacity, geography, and demographic timing.
- Political will must be sustained across electoral cycles.
- External shocks (climate, pandemics, trade disruptions) can derail progress; resilience and contingency planning are essential.
- Youth expectations are rising; failure to deliver inclusive, decent opportunities may fuel social disillusionment or migration.

5. Conclusion

- ASEAN stands at a generational crossroads. The demographic dividend offers a rare opportunity to accelerate growth, improve well-being, and elevate regional competitiveness—but only if investments are timely, integrated, and inclusive. By focusing on **early development, aligning education with work, empowering youths in policy and society, and strengthening institutional frameworks**, ASEAN can turn demographic potential into sustained prosperity.
- A **life-course holistic** investment strategy—focused on early childhood & adolescence, education-to-work transitions, and lifelong learning—is essential.

Life-course Investment Framework to Realize Demographic Dividend



Cross-cutting: inclusion (gender, rural/remote, disability), financing, governance, data

Emphasize early and continuous human capital formation, starting with maternal and child health, early childhood education, foundational learning, through vocational and tertiary education, to lifelong learning and productive employment. Cross-cutting priorities include equity, gender inclusion, digital access, and robust governance