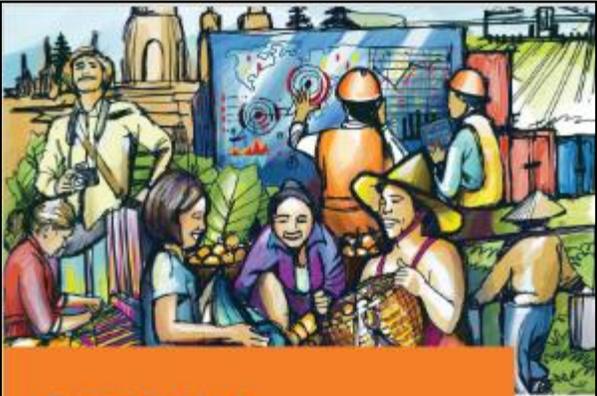


Harnessing the Potential of Big Data in Post-Pandemic Southeast Asia

17 August 2022

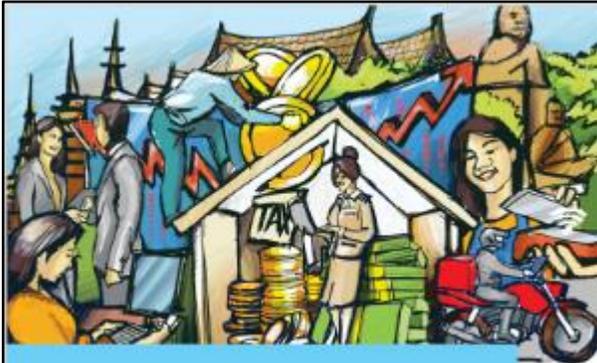
The final in a four-part series, the report illustrates why Southeast Asian countries need big data for pandemic recovery to radically transform the delivery of key services such as health care, social welfare and protection, and education



**SUPPORTING
POST-COVID-19
ECONOMIC RECOVERY
IN SOUTHEAST ASIA**

MAY 2022

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**STRENGTHENING
DOMESTIC RESOURCE
MOBILIZATION IN
SOUTHEAST ASIA**

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**IMPLEMENTING
A GREEN RECOVERY
IN SOUTHEAST ASIA**

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**HARNESSING THE
POTENTIAL OF BIG DATA
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Key Messages (1)

- The range of applications of big data holds immense promise for optimizing public health, social protection, and education services and expediting countries' post-pandemic recovery.
- The health care sector can leverage big data from social media and smartphone applications to support policies related to prevention, detection, and treatment of diseases and the rollout of vaccines.
- Alternative data sources such as satellite images and mobile phone provide granular estimates to better capture the prevalence of poverty; big data can be used to improve the effectiveness of social welfare and protection programs.



Key Messages (2)

- The accelerated adoption of online learning solutions has generated insights for education policies.
- Digitizing public sector data is growing; advancement in technologies could facilitate wider application. Governments need to lay the strategic and technical groundwork to maximize opportunities and mitigate risks including protection for data privacy, fraud, and cyber-security.
- Big data can generate over \$100 billion worth of annual benefits across Southeast Asian countries by 2030.

Challenges imposed by COVID-19 in Southeast Asia

Cost of health spending due to COVID-19 in Southeast Asia is estimated at ~**0.4%-0.5%** of GDP



Across Asia Pacific, the negative impact of COVID-19 is expected to push an additional **78 million** households below the poverty line, reversing over **50%** of the progress on poverty reduction over the last 5 years

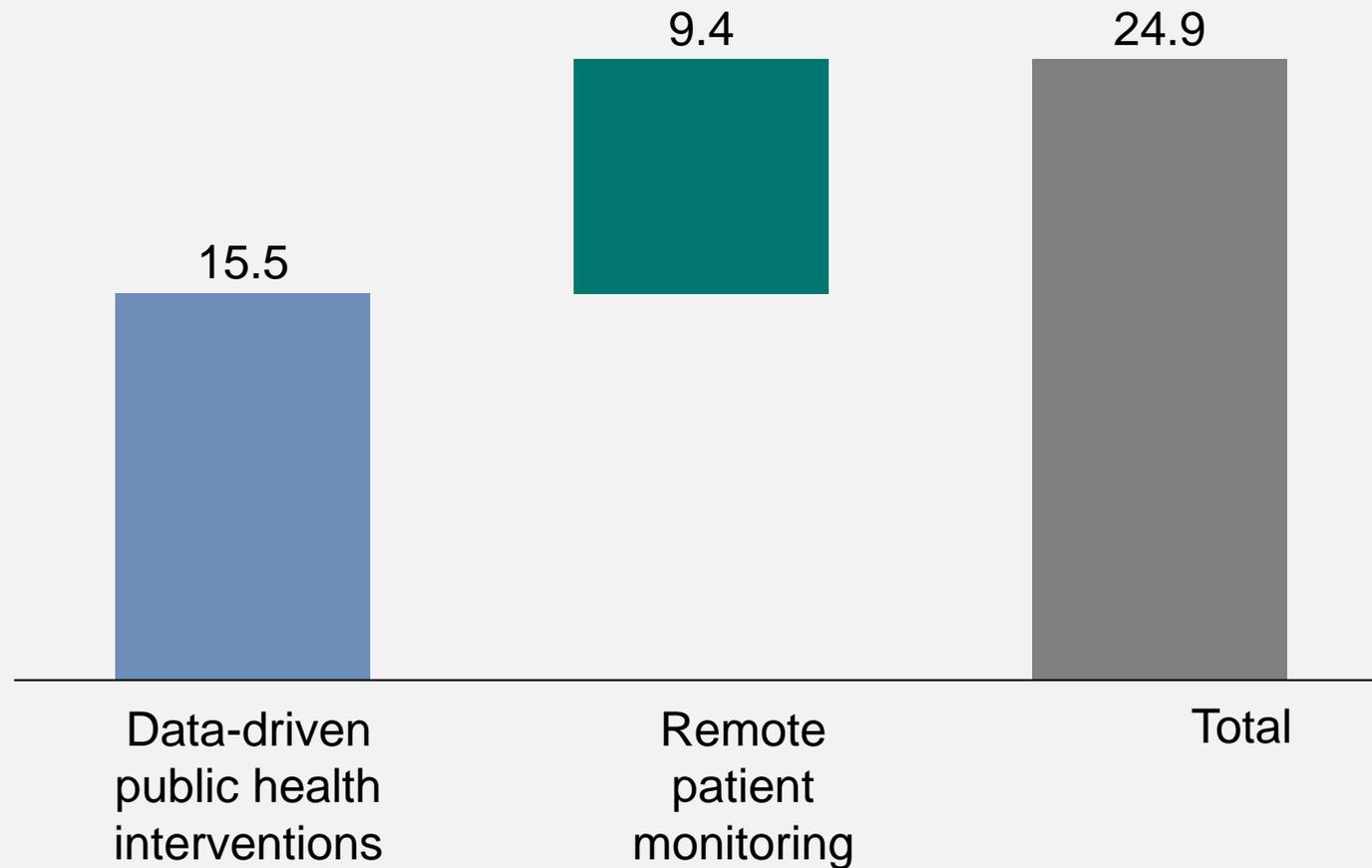


Youth unemployment rate in Southeast Asia could increase by **2x** from pre-COVID-19 levels, adding **4 million** unemployed



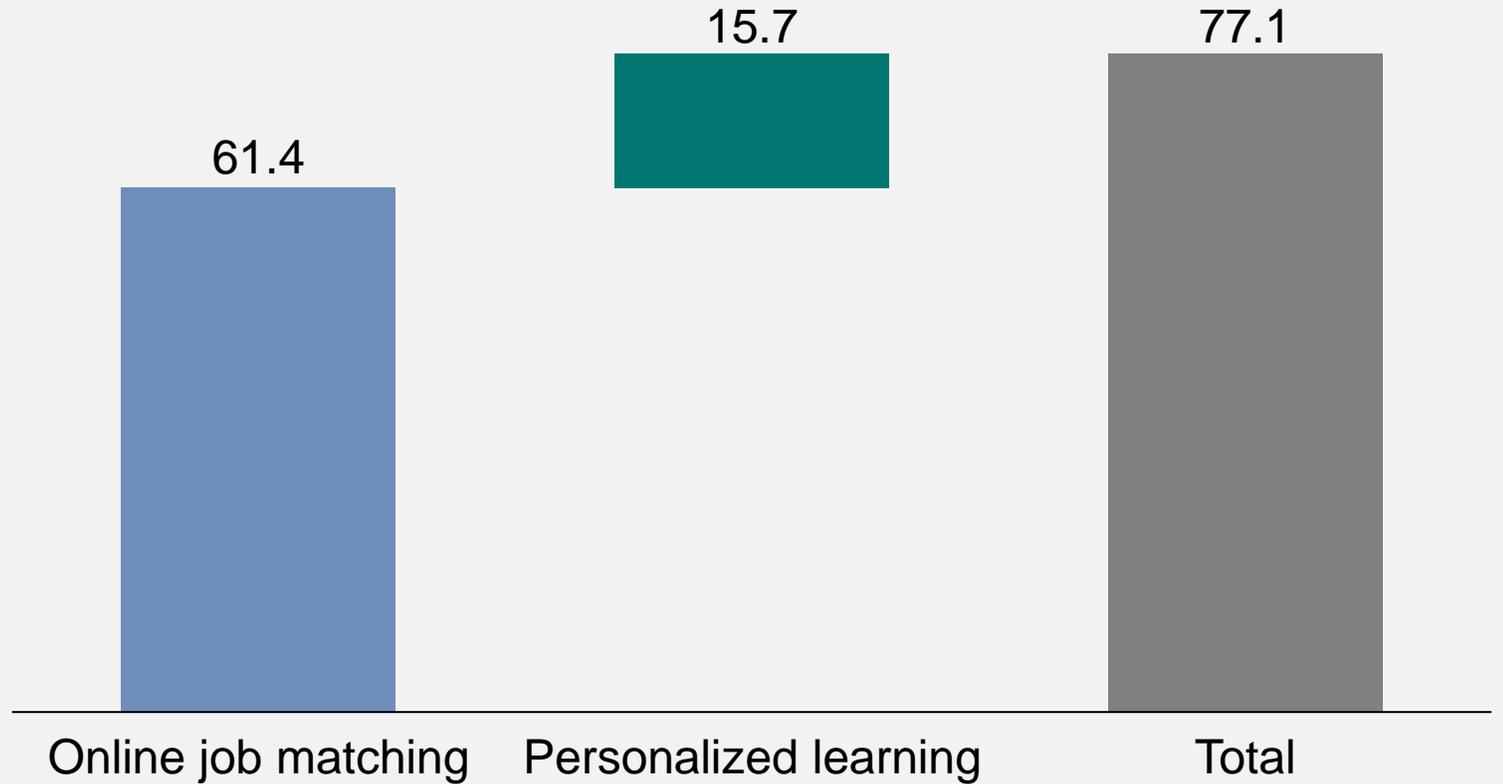
Estimated annual benefits from data-driven technologies in healthcare in Southeast Asia by 2030

\$ billions



Estimated contribution to GDP from data-driven applications in education in Southeast Asia by 2030

\$ billions



Key opportunities for using big data for public service delivery

HEALTHCARE



Improve the monitoring of infectious disease outbreak

Enhance the prevention and detection of non-communicable diseases

Improve treatment capacity through remote patient monitoring

SOCIAL WELFARE AND PROTECTION



Better targeting of program beneficiaries

Improve program delivery and detect fraud

Assess program effectiveness

EDUCATION



Identify skills gap

Increase graduation rates and prevent dropouts

Provided personalized learning experience



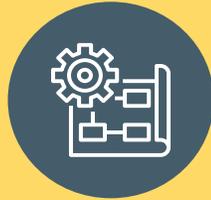
Seven areas of policy reform could help capture these opportunities



ADB



**Strategic
governance**



**Data availability
and quality**



Risk mechanisms



Human capital



**Access to relevant
technologies**



**Data-driven
culture**



ICT infrastructure

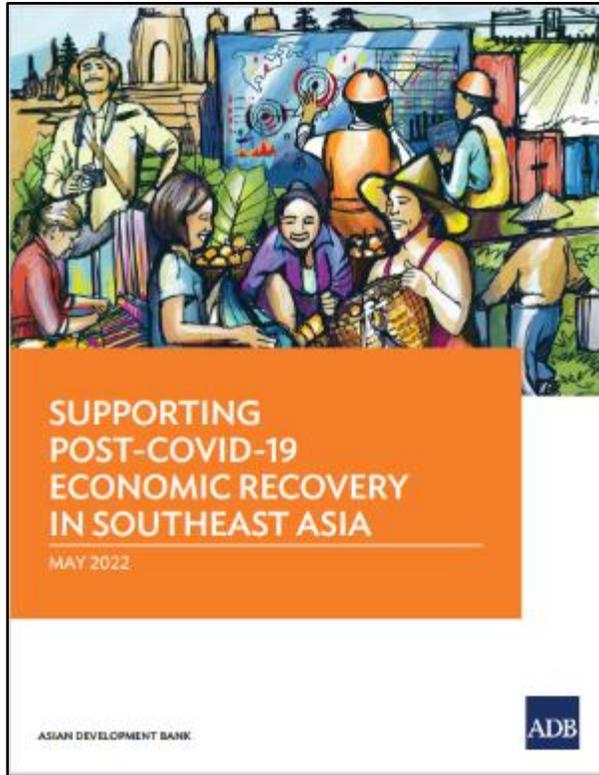


On digital readiness and digital divide

- Countries have varying levels of digital readiness highlighting the need for collectively improving knowledge sharing and capacity building in the region.
- The challenges of enhancing digital inclusion to minimize digital divide range from inadequate infrastructure to boosting skills and promoting usage of technology.
- To make digital technology more accessible and affordable, promote policies and regulations that will encourage healthy competition and lower barriers to entry in the digital market.
- Building a database in collaboration with private entities as a shared resource platform for the marginalized to access employment opportunities in the region.



ASEAN Policy Network (https://seadsstaging.adb.org/asean-policy-network?auHash=Go216QTjvc4pfqSM_IIfdW6pG8DPTAiaU3GOCWkmPjc)



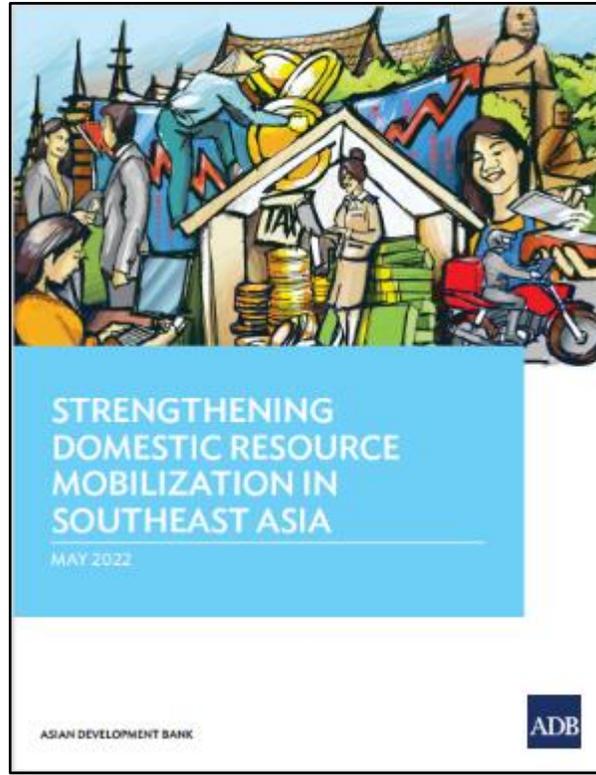
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<https://www.adb.org/publications/post-covid19-economic-recovery-southeast-asia>

PACER series



**STRENGTHENING
DOMESTIC RESOURCE
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SOUTHEAST ASIA**

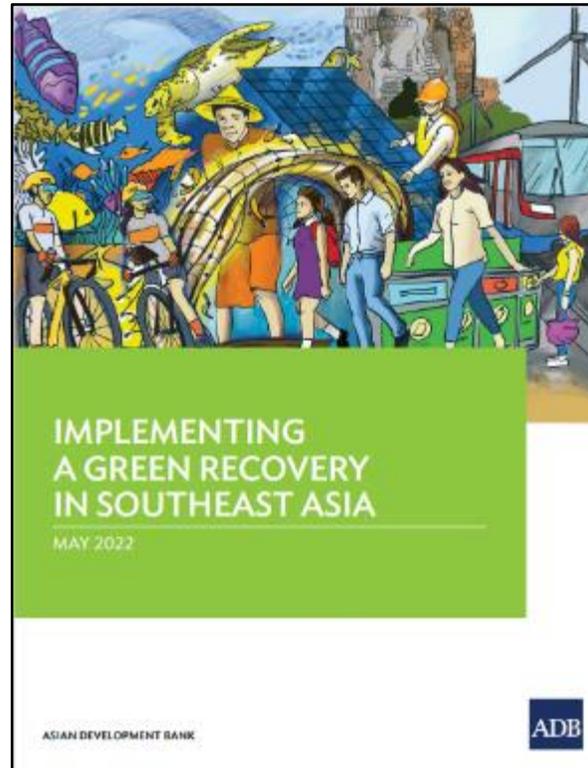
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<https://www.adb.org/publications/strengthening-domestic-resource-mobilization-southeast-asia>

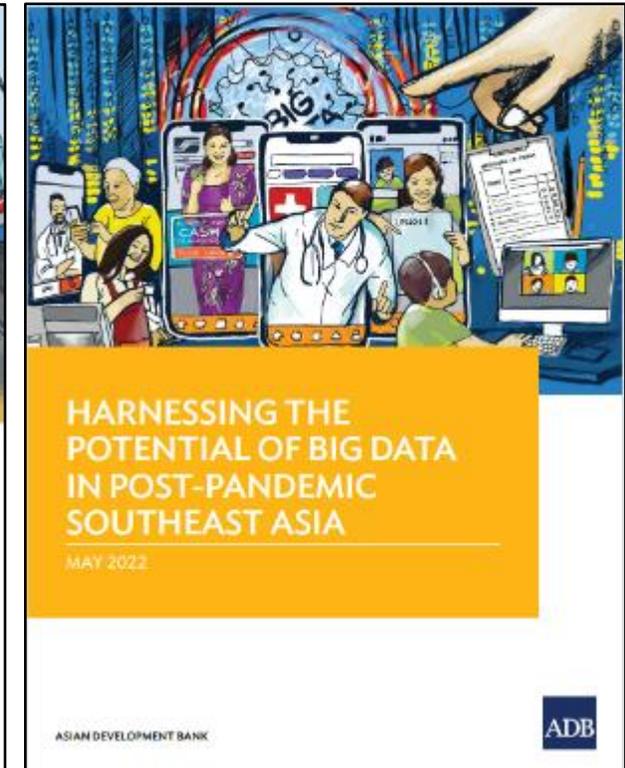
<https://www.adb.org/publications/implementing-green-recovery-southeast-asia>

<https://www.adb.org/publications/potential-big-data-post-pandemic-southeast-asia>



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