

Message from the Chairman

As Chairman of the Asian Council on Health and Education (ACHE), I am pleased to present the latest issue of the Newsletter of ACHE to all our colleagues not only in the health and education sectors, but in other relevant industries as well.



This issue highlights the trends, the latest news and interesting reports on health and education in the Asia-Pacific region. I hope that you will find the articles included in this Newsletter of great value, and look forward to your contribution to the Newsletter in the future.

As many of you may know, this Council has been a valuable platform for information exchange and networking for all representatives from the region’s health and education industries. Therefore, all CACCI members are encouraged to take advantage of the Council and the Newsletter as channels not only to share relevant information but also to voice their opinions and viewpoints.

Taking this opportunity, I wish you and your loved ones the best of the Holiday Season, and may you all remain prosperous, safe, and healthy in 2022 and in the years to come.

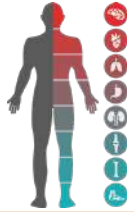
My best wishes,

Arash Anissian, MD
Chairman
Asian Council on Health and Education

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Part I Health



Hospitals and Health Care Face Increasing Cybersecurity Risks

By Darrell M. West and Emily Skahill



Hospital staff prepares to treat a patient with coronavirus in the intensive care unit at a hospital on May 1, 2020, in Maryland. Since the onset of COVID, the rate of ransomware attacks has soared across all industries — and health care has been the disproportionate target of such attacks. Photo: Win McNamee/Getty Images

The fuel shortages and rising gas prices generated by the Colonial Pipeline ransomware attack in May foreshadow the disastrous and far-reaching effects of cyberattacks on critical infrastructure. SolarWinds, JBS, Kaseya and a torrent of other high-profile cyber incidents have captured the attention of the American public and the highest levels of government, leading to a flurry of federal actions — including the nomination of the first-ever National Cyber Director, formal attribution of the SolarWinds attack to Russia, the release of an executive order imposing new security standards for software on federal procurement lists and a host of legislative proposals to improve the nation’s cybersecurity.

Though these prominent cyber incidents have triggered several cybersecurity initiatives, policymakers have paid relatively little attention to the considerable potential cyber risks in the health care sector. The WannaCry ransomware attack, which took down the United Kingdom’s National Health Service in 2017, served as a wake-up call to health care organizations around the world, illuminating the urgent need for proactive investments in cybersecurity. And yet, health care organizations in the U.S. remain a vulnerable target, lagging behind other industries on key measures of cyber-readiness.

As the resurgence of COVID-19 cases stretch hospital capacity to the limit, it provides a fresh reminder of just how critical it is for our health care infrastructure to be resilient in times of crises. With the sharp uptick in ransomware attacks on health care organizations during the pandemic — and the first death attributed to a ransomware attack in 2020 — it is clear that that malicious actors are capable of compromising mission-critical

health care infrastructure, from the automated refrigerators that store blood products for surgeries to the CT scans that are vital for triaging trauma patients.

Indeed, the recent surge in cyberattacks on health care organizations prompted the Cybersecurity and Infrastructure Security Agency, the FBI and the Department of Health and Human Services (HHS) to release a joint advisory warning of “an increased and imminent cybercrime threat to U.S. hospitals and health care providers.” At the same time, many hospitals are once again reaching surge capacity due to the Delta variant, making cybersecurity more important than ever before.

The Poor State Of Health Care Cybersecurity

In 2017, the Health Care Industry Cybersecurity (HCIC) Task Force, established by HHS, issued a report to Congress in which they claimed that health care cybersecurity is in “critical condition.” Four years later, the Task Force’s assessment still rings true. Since the onset of the COVID-19 pandemic, the rate of ransomware attacks has soared across all industries — and health care has been the disproportionate target of such attacks. The 2020 HIMSS Cybersecurity Survey revealed that 70% of hospitals surveyed had experienced a “significant security incident” within the past twelve months, including phishing and ransomware attacks that resulted in the disruption of IT operations (28%) and business functions (25%), as well as data breaches (21%) and financial losses (20%).

Health care organizations are an inviting target for financially motivated threat actors because their broad attack surfaces make it relatively easy for cybercriminals to find vulnerabilities and monetize their exploits. The passage of the HITECH Act in 2009 incentivized investments in health information technology to modernize the U.S. health care system, leading to unprecedented connectivity and an expansion in the usage of medical devices. Today, Electronic Health Record systems are the heart of the health care organization, connecting medical devices with other applications to provide a more holistic picture of patient well-being. Additionally, the U.S. boasts an average of 10 to 15 networked medical devices per hospital bed, meaning large health care organizations face the herculean task of securing tens of thousands of medical devices — many of which are quite easy to hack. The digitization of health care infrastructure catalyzed major advancements in patient care, but also created major opportunities for attack. A single vulnerable asset can provide a threat actor with a foothold into the organization and compromise the confidentiality, integrity and availability of patient data and

medical services.

At the same time, protected health information is far more lucrative than credit card information. Criminals can garner anywhere from \$10 to \$1,000 per stolen medical record, depending on their completeness. This combination of a broad attack surface and strong financial incentives make health care organizations an appealing target for threat actors.

To make matters worse, cybersecurity is underprioritized by many health care organizations due to competing priorities and finite resources. The 2020 HIMMS Cybersecurity Survey reveals that “cybersecurity professionals may not necessarily have access to the security solutions and other tools they need in order to fully secure the environment” due to tight and stagnant IT budgets. Moreover, researchers have found that the average health care organization spends about 5% of its IT budget on cybersecurity, while the rest is devoted to the adoption of new technologies. Alarming, this means that organizations are expanding their attack surface despite lacking the tools to adequately defend their digital estate.

Consequently, the health care industry has fallen behind many other sectors in its ability to detect, prevent and mitigate cyberattacks. For example, health care organizations take an average of 236 days to detect a data breach and 93 days to mitigate the damage, compared to an industry average of 207 days to identify and 73 days to contain an attack. Due to their failure to proactively invest in cybersecurity, health care organizations hit with cyberattacks have paid steep costs to mitigate the threat. The health care industry had the highest cost of a data breach for the eleventh year in a row, with an average cost of \$9.23 million in 2021. Studies have demonstrated that proactive investments in cybersecurity lead to long-term saving, but cybersecurity spending can be hard for health care administrators to justify when faced with other compelling priorities, like staff increases to meet the demands of a once-in-a-century pandemic.

The Path Forward

With an ever-increasing attack surface, compelling financial incentives for attackers and under-budgeted, substandard cybersecurity operations, the U.S. health care system is indeed in critical condition. Public-private partnerships and increased investments in health care cybersecurity will be key to shoring up the health care industry and safeguarding the nation’s critical infrastructure.

Just as hand washing is a foundational element of modern medicine, cyber hygiene must be regarded as a basic and essential component of a functioning medical system. At present, health care systems are highly vulnerable to cyberattacks, and opportunistic threat actors are increasingly taking advantage of the industry’s weak security posture to exfiltrate patient data and disrupt key medical systems. With the confidentiality, integrity and availability of patient data, medical devices, and entire health care systems at stake, health care organizations must undergo a paradigm shift, placing greater value on cybersecurity and proactively investing in security protections.

Policymakers can encourage proactivity by providing matching funds to organizations that seek to engage in risk-based planning and bring their practices up to par with state and federal regulations. Additionally, policymakers can simplify and strengthen the regulatory environment for health care security to

develop a more unified and comprehensive set of standards that health care organizations can easily navigate. Federal agencies must also continue to collaborate with health care industry partners to develop robust contingency plans to avert catastrophe in the event of a serious cyber incident.

In the end, however, the fate of health care security comes down to whether organizations are willing to make significant investments in cybersecurity. If the health care sector is to move the needle on cybersecurity, industry leaders must begin to treat digital assets as they would patients. Just as a responsible health care professional seeks to identify and treat patients’ underlying chronic conditions before they cause a serious medical emergency, so too must responsible health care organizations address vulnerabilities in their digital infrastructure to prevent cyberattacks. After all, even computers are not immune to viruses.

This piece was originally published in the Brookings Institution.

Brink

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Darrell M. West is the vice president and director of Governance Studies at Brookings Institution and holds the Douglas Dillon Chair. He is co-editor-in-chief of TechTank. His current research focuses on artificial intelligence, robotics and the future of work. Prior to coming to Brookings, he was the John Hazen White Professor of Political Science and Public Policy and Director of the Taubman Center for Public Policy at Brown University.



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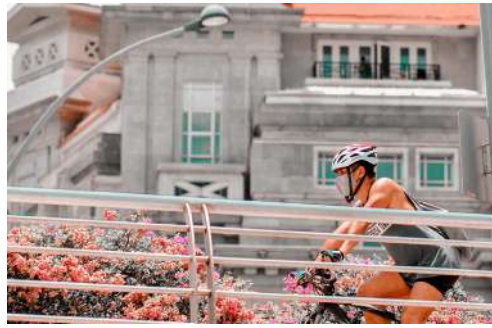
Does a Healthy Economy Equate with a Healthy and Happy Population?

By Irfan A. Qureshi, Donghyun Park, Husnain Fateh Ahmad

Wellness provides a more balanced and holistic view of a country’s development than its per capita gross domestic product. A new tool is helping policymakers measure wellness in society.

How does one measure how “well” a country’s citizens are doing? Traditionally, GDP per capita has been used as the de facto measure of a country’s success and wellbeing, but it is a measure of production and income, not wellness. Revealingly, even the architects of GDP warned against its use as a measure of a nation’s overall wellbeing.

In recent times, calls for policy makers to move beyond growth and GDP have been getting louder. Furthermore, as Asians' demand for wellness rises in tandem with their rising income, policy makers have already begun to pay more attention to wellness-related issues such as health, education and the environment. Therefore, it is high time to develop measures of wellness, as exemplified in the UN's Sustainable Development Goal #3: "To ensure healthy lives and promote well-being for all, at all ages".



Governments are starting to consider wellness as an important factor in development. Photo: Victor He

As part of the Asian Development Outlook: Update 2020 theme chapter on "Wellness in Worrying times", we developed the Wellness Index that allows us to create a ranking of wellness across 153 countries. Our index joins a growing list of indicators of wellbeing such as the Human Development Index. The index takes a bottom-up approach, starting with the Global Wellness Institute's definition based on four pillars of individual wellness, namely, physical, mental/intellectual, social and environmental wellness, and leverages multiple indicators to create a global ranking of wellness. Compared to the existing indices, the Wellness Index is more comprehensive in both scope and coverage.

Top ranking countries provide their populace with high levels of wellness across all dimensions. We found that nations with strong social welfare programs do well. The top five countries are European, with Finland, Luxembourg and Sweden taking the top 3 spots. New Zealand (7), Australia (13), and Canada (15) are the only non-European nations in the top 20. Top Asia-Pacific performers include Japan (21), Singapore (30), and Republic of Korea (39). The absence of some of the world's richest economies from the top 20 underscores the difference between purely material well-being and broader overall wellness.

There is clearly a relationship between income and wellness. For instance, the bottom three—Chad, the Central African Republic, and Afghanistan—are among the world's

poorest countries. However, the fact that Nigeria and Pakistan, two middle-income countries, round out the bottom 5 suggests that the correlation between income and wellness is far from perfect.

Does this imply that the wellness index is a better gauge of wellbeing than GDP per capita? The intuitive argument for using GDP is simple. Higher per capita GDP generally translates into more and better food, housing, education, health care, and other key determinants of quality of life. Plotting the wellness against the GDP per capita of economies bears out a positive

correlation. However, closer inspection reveals a significant variation in wellness at each GDP per capita level. That is, among equally rich countries, some achieve higher wellbeing than others. This suggests that policymakers would do well to look at wellness, not just GDP per capita. Disaggregating across the four pillars of the index allows policymakers to direct resources to wellness sectors that lag the most.

The wellness index presents policymakers with a new tool for assessing wellness, which provides a more balanced and holistic view of development than per capita GDP. It helps policymakers identify priority areas for policy measures that will improve the wellbeing of their citizens. For instance, in a country which visibly lags comparable countries in the environmental pillar but not in the other pillars, cleaning up the environment will contribute a lot to improving wellness. Finally, more and better data in the future will allow for further refinement and improvement of the index.

The complete wellness index is released as part of the September 2020 [Asian Development Outlook Update](#). The full construction of the methodology and data sources is available in our working paper "Ahmad, H. F., & Qureshi, I. A. (2020): [Quantifying and comparing wellness across nations: A cross country empirical analysis](#)."

Asian Development Blog

3 Priorities to Scale Up Mental Health Services Amid COVID-19

By Patricio V. Marquez

The theme for World Mental Health Day 2021, 'Mental health care for all: let's make it a reality', is apt for the COVID-19 times. The pandemic has not only disrupted and altered our lives, but has exposed social and economic inequalities that contributed in large measure to the spread of the virus. Such inequalities are also at the core of underlying health conditions which correlate with excess deaths across countries.

Aside from the risk of getting infected with the coronavirus, vulnerable

populations such as unemployed adults, youth, the elderly, and frontline healthcare workers have experienced an increased risk of mental health symptoms and disorders. To help tackle this problem, as part of the World Bank Group's support to over 100 developing countries to respond to COVID-19, health projects include funding for psychosocial interventions to help people deal with the impact from stressors such as lockdowns, self-isolation and quarantines, infection fears, inadequate information, job and financial losses, and

stigma and discrimination.

In addition to ongoing support for health systems, the adoption by governments of sustained policies and funding allocations to realize universal health coverage and high-quality primary care that can provide protection and prevent disease, is inescapable. The continuing unmet need in the care of people with mental and substance use disorders, together with the stigma and discrimination experienced by affected people and their families, deserve particular attention.



WHO - Mental health

Three priorities need to be considered to scaling up quality mental health services at all levels:

1. Achieving Mental Health Parity in Health Coverage

Although the global burden of disease attributable to mental disorders has increased steadily since the 1990s, they continue to be treated much differently than physical health conditions. In many countries, a common barrier to achieving parity for mental illnesses and addiction treatment are preexisting conditions clauses that deny or limit health insurance coverage. Similarly, lack of or limited coverage of available services is prevalent in countries with public health systems. The enactment of legal mandates and regulations can help overcome these hurdles as it has been done in Colombia, Chile, Ghana, and the United States.

Other related issues that merit careful consideration include: (i) determination of which conditions to prioritize (e.g., common mental illnesses such as depression and anxiety disorders, addictions, or severe conditions such as schizophrenia); (ii) selection of treatments at different levels of care; (iii) mechanisms to expand equitable access to medicines; (iv) how to fund and reimburse for services, reducing cost barriers and eliminating out-of-pocket payments; and (v) management of quality improvement of mental health services.

2. Integrating Service Delivery at the Community Level

Dedicated effort is needed for integrating treatments for mental and substance use disorders into service delivery platforms at the community level, away from hospital-centric models of care, to overcome the medical profession's artificial separation of mental and physical illness - research has clearly shown that "the brain is intimately connected to the body and the body to the brain". Improving service delivery requires strengthening referral pathways between formal and informal providers to foster communication, information sharing, education and training, and multidisciplinary teamwork.

Aside from developing benchmarks and evaluation of service performance, support is required for improving data collection and monitoring of mental health conditions and service access involving people living with mental illnesses.

Community-based mental health care in Norway is a good example of how local community mental health centers, collaborating with general practitioners and primary mental health care providers in the municipalities, and psychiatrists and psychologists working in private practices, have improved service delivery. Mobile teams meeting the child/adolescent and the family in their home, are part of the community-based child and adolescent mental health services, and addiction and substance abuse services are provided in outpatient clinics as a part of the mental health services in health trusts, and of primary health and social services run by the municipalities.

3. Leveraging New Technologies to Expand Access to Services

Digital care options through teletherapy and new apps have seen explosive growth during the pandemic. They offer alternative service delivery models that help overcome obstacles that hinder access to care, such as transportation barriers, stigma associated with visiting mental health clinics, personnel shortages, and high costs. These platforms, especially in mobile formats, can offer remote screening, diagnosis, monitoring, and treatment, facilitate remote training for non-specialist health care workers, and enhance online peer-to-peer support and self-care.

Other tech innovations include prescription video games, that challenge children ages 8 to 12 with Attention-Deficit/Hyperactivity Disorder to focus on multiple tasks simultaneously within the game environment. Or artificial intelligence (AI) chatbots that can help patients practice cognitive behavioral therapy (CBT) to become aware of inaccurate or negative thinking so that they can view challenging situations clearly and respond to them effectively.

Online symptom tracking apps are also used to prompt patients to share data daily which are analyzed with an AI algorithm to identify patterns and alert providers in real time of any warning signs. Results from a cross-sectional survey suggest that more physical activity and less screen time are associated with better mental health for children during the pandemic, making this a potentially important target for future intervention.

Several initiatives have been launched to deal with scarcity or lack of providers needed to reach people in need. The World Health Organization Academy aims to provide digital learning to health workers across the world on a range of topics, including mental health; EMPOWER, a Harvard Medical School initiative, provides digital training to support delivery of psychosocial interventions; and UNICEF's Caring for the Caregiver program targets community workers using online and in-person training.

A major rethinking is needed

COVID-19 is forcing a mayor rethinking in all facets of our lives. Ensuring that people with mental and substance use disorders receive needed care and support necessitates a rethinking of health care organization and financing along the lines outlined above. Leveraging new scientific knowledge and technologies will add impetus to this task. The inherent promise of building back better depends in large measure on achieving better physical and mental health outcomes for all.

World Bank Blogs

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Patricio V. Marquez is a former World Bank Group



Lead Public Health Specialist. He retired in August 2019 after 32 years of service. He worked in over 80 countries across the world. Since March 2020, he has returned to the WBG as Consultant to support the preparation and implementation of the US\$6 billion COVID-19 Global Emergency Response Program in the health sector and the implementation of the US\$12 billion Additional Financing for Vaccines and Vaccination across the world.

In 2020 he was appointed to serve as Senior Associate at the Johns Hopkins University Bloomberg School of Public Health, and serves as member of the External Advisory Board of the University of Washington Global Mental Health Program.

He is originally from Cuenca, Ecuador.

A Revolution in Health Service Delivery Measurement

By Kathryn Andrews and Jigyasa Sharma



General practitioner examines baby

During crises as well as in ordinary times, strong primary health care (PHC) systems promote and preserve health. The cost-effective provision of essential services also delivers economic benefits at both individual and population levels and prevents avoidable emergencies.

In the wake of COVID-19, countries have a unique chance to realize the Universal Health Care aspirations of the global movement that started with the Declaration of Alma-Ata in 1978 and was reaffirmed in the Declaration of Astana 2018. The declarations envision primary health care systems as “the cornerstone of a sustainable health system for universal health coverage (UHC) and health-related Sustainable Development Goals.” Central to this agenda is the recognition that effective and robust measurement of how well primary care systems perform is key for improvement and accountability.

But how can we reliably and comprehensively measure the performance of PHC systems in delivering services that respond to the evolving needs and expectations of the population?

Measuring Primary Health Care Service Delivery

Large-scale assessments of health service delivery include the World Bank’s Service Delivery Indicators (SDI) health surveys, USAID’s Service Provision Assessments and WHO’s Service Availability and Readiness Assessments. These three large-scale health service delivery surveys focus largely on maternal and child health and communicable diseases, and on basic inputs such as availability of infrastructure, equipment, and supplies.

Three global reports on health system quality published in 2018 highlighted significant gaps in the measurement of quality of care. The reports emphasized the importance of assessing care processes and outcomes rather than simply focusing on structural inputs. For example, are health facilities prepared to address future pandemics and climate-driven disasters? Are health care providers satisfied by their work or are they burned out? Do patients face long wait times before they receive the services they need and are they treated respectfully by facility staff?

New Tools to Inform Stronger Primary Health Care Systems

The new generation of the SDI health survey boldly responds to the call for innovation in measurement to yield insights needed to build stronger primary health care health systems. We built upon previous frameworks for high quality health systems and identified key information needed to comprehensively assess the quality of primary health care services delivered to users.

Figure 1 below shows that solid structural foundations enable high quality processes of care. Together, they boost users’ confidence in the health system and improve their financial outcomes. Better health is of course one of the primary goals

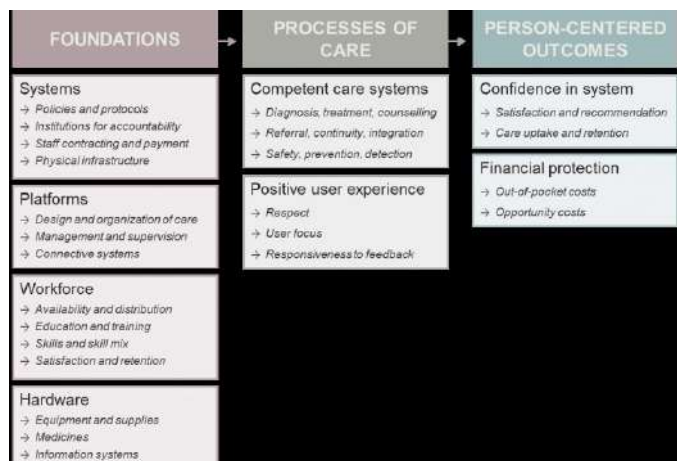


Figure 1: Framework for measurement of primary health care service delivery

of high-quality primary care, but health facility surveys like the SDI are unable to accurately measure the health impact of service delivery (which is why the assessment omits this outcome). To yield such insight, outcome data at population level, available through national information systems and household surveys, can complement detailed supply-side data from the SDI.

The new framework forms the backbone for the methodological refresh of the new generation SDI health survey, which builds on current literature and global guidance on ways to measure PHC systems and quality of care.

The content of the revamped survey reflects a comprehensive review of other validated survey tools, clinical guidelines, burden of disease, as well as innovations in user satisfaction measurement, among others. Through intensive consultations with stakeholders and global experts, we ensured that the resultant survey tools are better aligned with the agenda and priorities of national health system improvement and measurement. The updated SDI health survey also remains compatible with previous iterations of the assessment. Figure 2 displays the content of the refreshed SDI health survey.



Figure 2: Content of the new SDI health survey's facility questionnaire, health care provider questionnaire, and patient questionnaire

Measurement for Action and Accountability

Many countries are prioritizing strengthening primary care systems as the foundation of strong health systems. A revolution in the measurement of health service delivery will fuel momentum for primary health care reimagining. Specifically, scaling up this comprehensive measurement of primary health service delivery is urgently needed to ensure that policies and investments are guided by evidence, and also to assess their impact. At this critical moment, it is essential to institutionalize a culture of valuing and utilizing data and measurement. The new SDI health survey is a tool that empowers countries, development partners, researchers, policymakers and citizens to use data to hold systems accountable and ensure that they work for those they intend to serve. More information on the new generation of the SDI health survey, including on design and implementation, is available here.

World Bank Blogs

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Kathryn Andrews is a Health Economist at the World Bank in the South Asia Health, Nutrition, and Population (HNP) Global Practice. Prior to joining SAR HNP, she came to the World Bank in 2018 as a Young Professional in the Human Development Chief

Economist's Office, working primarily on the Service Delivery Indicators Survey program. Her areas of expertise include health care service delivery and measurement, nutrition, child development, and health financing, and she has coauthored dozens of reports and peer-reviewed journal articles. Kat has an ScD in Global Health and Population from Harvard University, where her research focused primarily on early child health and development. Prior to getting her doctorate, Kat was a Data Analyst for the WHO Global Malaria Programme in Geneva, and a Post-Bachelor Fellow at the Institute for Health Metrics and Evaluation, where she worked on the Global Burden of Disease Study. She earned her MPH in Global Health Metrics and Evaluation from the University of Washington and has an undergraduate degree from Dartmouth College.



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Jigyasa Sharma is a Young Professional at the World Bank in the Health, Nutrition and Population Global Practice. She joined the World Bank in September 2019 in the Human Development Chief Economist Office, working primarily on the Service Delivery Indicators Survey program. Her areas of expertise include health systems strengthening and measurement of health system quality and primary care performance. As a population health and health system researcher, she contributed to the Lancet Global Health Commission for High Quality Health Systems and has collaborated extensively with the Maternal Health Task Force and Ariadne Labs at the Harvard T. H. Chan School of Public Health and the Department of Reproductive Health and Research at the World Health Organization. She has coauthored dozens of journal articles and reports on health system quality and measurement of quality of care.

Jigyasa has an ScD in Global Health and Population from Harvard University and MSc. In Epidemiology and Biostatistics from McGill University.

Taiwan businesses invited to invest in Philippines' lucrative medical market

By Huang Tzu-ti



Dr. Rhea Reyes performs dental procedure at clinic in metropolitan Manila on July 6, 2020. (AP photo)

The Philippines is seeing uptick in demand for medications due to factors including aging.

The Philippines is soliciting Taiwanese investors interested in capitalizing on its fast-growing medical industry with what it is touting as its tremendous market potential.

Healthcare is one of the sectors expanding at a



A pharmacy in Manila. (CNA photo)

high pace in the Philippines, with a market scale ranked as third among ASEAN nations, after Indonesia and Thailand, said Annabelle Briones, director of the Southeast Asian country's Industrial Technology Development Institute. She made the remark at a bilateral industrial forum on Wednesday (Nov. 3), wrote

Central News Agency (CNA).

Aging and increasingly higher disease incidence rates are driving up the demand for pharmaceuticals, but nearly 98% of active ingredients used in drugs have to be imported, as do the

bulk of the country's medical equipment and supplies, the official reckoned.

Taiwan and the Philippines have inked 23 memorandums of understanding through the Taiwan-Philippines Industrial Collaboration Summit over the past four years. The collaborations have helped create 30,000 to 50,000 jobs for Filipinos with investments totaling US\$1 billion, according to Deputy Minister of Economic Affairs Chen Chern-chyi.

A report released in August by the Taipei Economic and Cultural Office in the Philippines suggested that electronic vehicles, water resources, and medical supplies are the three main areas in the Southeast Asian country with promising investment prospects for Taiwanese companies.

Taiwan News

Reports: Health Problems Tied to Global Warming on the Rise

By Seth Borenstein, Associated Press



FILE - In this Tuesday, Sept. 29, 2020 file photo, Valentina Esperanza, who is recovering from dengue, sits on her bed protected by mosquito netting as she watches a television program at her home in Pucallpa, in Peru's Ucayali region. (AP Photo/Rodrigo Abd)

Health problems tied to climate change are all getting worse, according to two reports published on October 23, 2021.

The annual reports commissioned by the medical journal Lancet tracked 44 global health indicators connected to climate change, including heat deaths, infectious diseases and hunger. All of them are getting grimmer, said Lancet Countdown project research director Marina Romanello, a biochemist.

"Rising temperatures are having consequences," said University of Washington environmental health professor Kristie Ebi, a report co-author.

This year's reports — one global, one just aimed at the United States — called "code red for a healthy future," highlight dangerous trends:



FILE - In this Wednesday, Sept. 9, 2020 file photo, a jogger runs along McCovey Cove outside Oracle Park in San Francisco, under darkened skies from wildfire smoke. (AP Photo/Tony Avelar)

— Vulnerable populations — older people and very young — were subject to more time with dangerous heat last year. For people over 65, the researchers calculated there were 3 billion more "person-day" exposures to extreme heat than the average from 1986 to 2005.

— More people were in places where climate-sensitive diseases can flourish. Coastline areas warm enough for the nasty Vibrio bacteria increased in the Baltics, the U.S. Northeast and the Pacific Northwest in the past decade. In some poorer nations, the season for malaria-spreading mosquitoes has expanded since the 1950s.

"Code Red is not even a hot enough color for this report," said Stanford University tropical medicine professor Dr. Michele Barry, who wasn't part of the study team. Compared to the last Lancet

report, "this one is the sobering realization that we're going completely in the wrong direction."

In the U.S., heat, fire and drought caused the biggest problems. An unprecedented Pacific Northwest and Canadian heat wave hit this summer, which a previous study showed couldn't have happened without human-caused climate change.

Study co-author Dr. Jeremy Hess, a professor of environmental health and emergency medicine at the University of Washington, said he witnessed the impacts of climate change while working at Seattle emergency rooms during the heat.

"I saw paramedics who had burns on their knees from kneeling down to care for patients with heat stroke," he said. "And I saw far too many patients die" from the heat.

Another ER doctor in Boston said science is now showing what she has seen for years, citing asthma from worsening allergies as one example.

"Climate change is first and foremost a health crisis unfolding across the U.S.," said Dr. Renee Salas, also a co-author of the report.

George Washington University School of Public Health Dean Dr. Lynn Goldman, who was not part of the project, said health problems from climate change "are continuing to worsen far more rapidly than would have been projected only a few years ago."

The report said 65 of the 84 countries included subsidize the burning of fossil fuels, which cause climate change. Doing that “feels like caring for the desperately ill patient while somebody is handing them lit cigarettes and junk food,” said Dr. Richard Jackson, a UCLA public health professor who wasn’t part of the study.

Taiwan News

“Exemplary” Covid strategy Makes Taiwan a Top Travel Choice



Taiwan President Tsai Ing-wen says while the island faced the SARS epidemic alone, Taiwan is committed to world health for Covid-19.

Sponsored Content by Taipei Economic and Cultural Office

As New Zealand is close to reopening the country from lockdown, a similar pathway is also being shared by Taiwan, the tiny island off the coast of mainland China.

Originally leading the way internationally in its Covid-19 strategy in 2020, Taiwan gained global recognition as a reassuring and safe travel destination once strict border controls are relaxed.

Though an outbreak in May saw Taiwan’s cases increase to as many as 260 per day, immediate and severe lockdown measures meant daily reported cases had dropped to less than 20 by mid-July.

Through doubling down on longstanding strategies of masking, quarantine measures, and contact tracing, Taiwan has been able to achieve zero or single-digit case numbers over the last two months.

The battle against Covid

Within weeks of discovering Covid-19 in December 2019, Taiwanese health officials and agencies swung into action to implement border quarantine measures intercepting people travelling from China’s Wuhan province. A travel notice to Wuhan was raised, and experts set to obtain further information. Educational information was produced and within three days, a digital system was created to collect Wuhan-related travel history.

As the world watched on, Taiwan’s strategy was hailed as “exemplary” by Microsoft founder Bill Gates. New Zealand Prime Minister Jacinda Adern told the media, “we’re going to follow pretty closely to the Taiwanese model.”

Taiwan then turned its factories to the task of mass-producing masks to not only ensure the best protection from Covid-19 for its population but also to offer help to the rest of



Taiwan’s exemplary health measures are being hailed by leaders internationally. Photo credit: 123RF

the world. By the end of 2020, Taiwan had donated more than 51 million face masks to countries worldwide.

“In 2003, Taiwan faced SARS alone,” said Taiwan President Tsai Ing-wen.

“This time, Taiwan chooses to stand with the world in the face of the coronavirus pandemic. No one can isolate a friend who truly wants to help. As we seek to achieve health for all, Taiwan can help, and Taiwan is helping.”

An international example

The goodwill shown in the early days of the pandemic were gladly returned, as recipient countries have gifted Taiwan vaccines during their latest outbreak in return. Japan provided Taiwan with more than 3.4 million doses of AstraZeneca, while the United States delivered 4 million doses of Moderna. Countries including the Czech Republic, Lithuania, Slovakia, and Poland have also pledged tens of thousands of vaccines to Taiwan.

While vaccination rates have been low - with only 74.42 per cent for the first dose and 36.89 per cent second dose - social cohesion towards public health measures has been high, with a willingness to police individual rule-breakers from members of the public.

It has meant that Taiwan is slowly reopening from its intense lockdown, hailing back to the freedoms enjoyed by its population for the majority of 2020.

As testament to the country’s successful control of the pandemic and a symbol of freedom, an estimated 130,000 people attended one of the largest global LGBT celebrations - Pride of the World - in October 2020.

Just as the rest of the world is also now on a pathway to vaccinations and overcoming the pandemic, Taiwan is at the forefront as one of the most welcoming and safe places in the world during the coronavirus era.

Stuff.co.nz

Startups Eye Post-Pandemic ‘Tele-Health’ Revolution

By Katy LEE, Agence France-Presse (AFP)

From mental health apps to a helmet that can shock a patient’s brain remotely, startups at this year’s Web Summit are betting on a major shift towards “tele-medicine” as the world emerges from the pandemic.

Using technology to treat patients virtually was a major

theme at one of the world's largest tech conferences, which returned to Lisbon this week after COVID-19 forced it to move online in 2020.

"These days, most people use their phones for a lot of everyday needs -- why shouldn't healthcare be part of this?" said Johannes Schildt, whose company Kry lets patients book on-screen medical appointments.

"The pandemic has accelerated adoption of these new technologies," Schildt told AFP.

Sweden-based Kry, which operates in five European countries, is far from the only app designed to do away with the need to physically visit a doctor.

And not all of these startups focus on physical health. U.S.-based Calmerry is among a growing number of e-counseling companies that offer video sessions with mental health therapists.

Most public healthcare systems offer limited access to such services, or none at all. With subscriptions starting at \$42 per week, Calmerry's co-founder Oksana Tolmachova said a key goal was to make therapy more affordable.

Other apps are taking a different approach to tackle the explosion in depression and anxiety seen worldwide during the pandemic.

Mental health chatbot Woebot also invites users to discuss their problems, but the replies come from artificial intelligence rather than a human therapist.

While some may be unnerved by the idea of pouring one's heart out to a piece of software, studies suggest that confiding in a virtual human could encourage people to open up.

Woebot's founder Alison Darcy, a clinical research psychologist, said the chatbot avoided the "baggage and social constructs" that come with human interactions -- worrying that the other person will judge you, for instance.

And given the dearth of trained therapists compared with the number of people who need help with their mental health, Darcy argued that AI is a valid tool for approaching the problem.

"We need to be throwing everything at helping people get well," she said.

Darcy does not believe chatbots should replace human therapists outright, and AI has been shown to have its limits when it comes to healthcare.

The UK's MHRA health regulator expressed concern in March over the symptom-checking software used by tele-health company Babylon, after reports that it failed to recognize some cases of serious conditions.

Critics of the shift towards tele-medicine also worry that providers may be tempted to hand patients cheaper virtual appointments when they would prefer to see a doctor face-to-face.

Several health startups say the future lies in blending the two.

"Digital has a significant part to play, but the physical experience is also vital -- we have physical clinics too in Sweden, Norway and France," said Schildt.

He also rejected the criticism that not everyone has access to services such as Kry, which require a smartphone or computer



VR goggles were among the technological offerings getting an outing at the Web Summit in Lisbon. Photo: AFP

and a decent internet connection.

Kry has patients in their 90s who manage to find their way around its technology, Schildt said.

Overall, he insisted, "digital widens access" to healthcare.

One remaining challenge is that legislation in many countries has yet to catch up with the tele-medicine revolution, although that has started changing in recent years.

Virtual appointments have been available via France's public healthcare system since 2018, while Germany started allowing doctors to prescribe the use of apps, such as weight trackers, in 2020.

And in between appointments, patients can continue to monitor their health remotely thanks to yet more startups.

Ana Maiques, co-founder of Barcelona-based Neuroelectrics, showed a crowd at the Web Summit how a helmet developed by the company can monitor patients' brains from their homes.

The device uses sensors to show the activity in different parts of the brain and can even pulse electricity into targeted areas, helping to treat conditions such as epilepsy remotely.

Spanish football legend Iker Casillas, meanwhile, is among the investors in Idovent, a startup that uses AI to analyze data from home heart monitoring kits.

Its technology is designed to detect irregular heart rhythms that could prove dangerous -- an issue that Casillas cares about deeply, following a heart attack in 2019.

"We are the first company in the world capable of doing it," the company's CEO Manuel Marina Breyse told AFP.

Japan Today

New Food Database to Help Consumers Understand Nutritional Value of Food They Eat

By Jane McNaughton



FSANZ is developing a new database to help consumers understand the nutritional value of the food they eat. (Flickr)

Do you really know what is healthy and what is not when filling up your shopping trolley?

Food Standards Australia New Zealand (FSANZ) has begun developing a database to help consumers understand the



The Branded Food Database will work alongside the Health Star Rating system and was requested by the Department of Health. (Unsplash: Viki Mohamad)



Citrus producers are furious orange juice's five star health rating has been downgraded. (ABC Rural: Nikolai Beilharz)

nutritional value of the food they eat.

FSANZ General Manager of Science and Risk Assessment, Christel Leemhuis, said the new Branded Food Database will work alongside the Health Star Rating system (HSR) and was requested by the Department of Health.

“The database will provide evidence to support the Health Star Rating system,” Ms Leemhuis said.

“It will allow us to track changes in the nutrient profile of foods over time, the database is targeted at providing a reliable source of information for modelling any future HSR changes.”

A consumer would be able to access the database online by entering barcode numbers to see a product’s information. No scanning app would initially be available but FSANZ hoped to add additional consumer-friendly features to the database in time.

Despite FSANZ’s goal to include 85 per cent of food products available in Australia by 2023, it was up to food producers to opt-in, Ms Leemhuis said.

“But by providing information to the database manufacturers and retailers will contribute to industry transparency,” she said.

“It will support a single source of truth database with credible product information that is accurate comprehensive and

updated regularly.”

“We will compare that to our existing food composition databases, so that will allow us to identify if there are any products with a nutrient profile that doesn’t look quite right [if we suspect a company is supplying inaccurate information].”

Recent changes to the HSR system that prioritise sugar content as an assessment criteria have received harsh criticism from fruit growers, as juices are now ranked below diet soft drinks due to the high fructose content.

Agriculture Minister David Littleproud had also previously slammed the HSR labelling process as “madness” due to the emphasis on sugar content, but Ms Leemhuis said the new database would provide a more thorough breakdown of a food’s nutrients.

“It will showcase the full breadth of the nutrient composition of a range of food products - it will allow us to better track and monitor the HSR system,” she said.

“There are tremendous benefits for industry to submit data.”

“It’s a good opportunity for food brands to see where their products are benchmarked against other products in the market.”

ABC News

Adding Herbs and Spices to Meals May Help Lower Blood Pressure

By Katie Bohn

Seasoning your food generously with herbs and spices isn’t just a great way to make your meals tastier — new research found it may have benefits for your heart’s health, as well.

In a controlled-feeding study, the researchers found that seasoning foods with 6.5 grams, or about 1.3 teaspoons, of herbs and spices a day was linked with lower blood pressure after four weeks.

Penny Kris-Etherton, Evan Pugh University Professor of Nutritional Sciences, and Kristina Petersen, assistant professor of nutritional sciences at Texas Tech University and co-principal investigator of the study while at Penn State, said the findings offer people a simple way to help improve their heart



A blend of 24 herbs and spices was linked with lower blood pressure, according to the researchers. Credit: Photo by Ratul Ghosh on Unsplash.

health.

“Adding herbs and spices to your food is a great way to add flavor without adding extra sodium, sugar or saturated fat,” Kris-Etherton said. “And, if you go a step further and add these seasonings to foods that are really good for you, like fruits and vegetables, you can potentially get even more health benefits by consuming that extra produce.”

According to the researchers, cardiometabolic diseases like heart disease, strokes and type two diabetes

continue to be one of the leading causes of death in the United States. One of the ways health professionals aim to improve heart health is by monitoring and improving blood pressure.

One way people can improve their blood pressure is by limiting their sodium intake, usually by adding less salt to their meals. Petersen said that while people have long been encouraged to season their food with herbs and spices instead of salt to boost flavor without added sodium, less was known about whether herbs and spices have health benefits of their own.

“As nutritionists, we’re interested in new ways we can use diet to benefit health, and cardiovascular health in particular,” Petersen said. “We were curious about how herbs and spices could affect heart health, since they are versatile and can be added to many different types of food.”

For the study, the researchers recruited 71 people with risk factors for heart disease. Every participant consumed every spice diet — one low, one moderate, and one high in herbs and spices — in a random order for four weeks each, with a two-week break between each diet period. Blood samples were drawn from each participant at the beginning of the study as well as after each diet period.

All three diets were based on an average American diet — reflective of what a typical American consumes in a day — but with three different doses of herbs and spices added. The low-dose, medium-dose and high-dose diets included approximately 0.5 grams, 3.2 grams and 6.5 grams of herbs and spices, respectively, a day.

The doses included a blend of 24 different herbs and spices, ranging from basil and thyme to cinnamon and turmeric, designed to simulate the way people use different herbs and spices throughout the day while cooking.

The researchers found that after consuming the diet including a high dose of herbs and spices, participants had lower systolic blood pressure than after the diet with the medium dose. Participants also had lower diastolic blood pressure after the diet with a high dose of herbs and spices than after the diet with a low dose.

Kris-Etherton said the results — recently published in the *American Journal of Clinical Nutrition* — were especially exciting to her because the diets in the study were not designed to be specifically heart healthy, and only differed from an average diet by the amount of herbs and spices added.

“I think it’s really significant that participants consumed an average American diet throughout the study and we still found these results,” Kris-Etherton said. “We didn’t decrease sodium, we didn’t increase fruits and vegetables, we just added herbs and spices. It begs the next question that if we did alter the diet in these ways, how much better would the results be?”

The researchers said that in the future, additional studies designed to incorporate herbs and spices into a healthy dietary pattern lower in salt, added sugars and solid fats could help guide future dietary recommendations.

Kristin Davis, graduate student at Penn State; Connie Rogers, associate professor of nutritional sciences and physiology at Penn State; David Proctor, professor of kinesiology and physiology at Penn State; and Sheila West, professor of biobehavioral health at Penn State, also participated in this work.

The McCormick Science Institute and National Institutes of Health helped support this research.

Penn State University



Part II Education

Teacher Quality is the Key to Improving Education in Asia and the Pacific

By Brajesh Panth and Jukka Tulivuori

Teachers are a key element of addressing the ongoing education crisis in Asia and the Pacific. Fully supporting educators now will pay off generously over the long term.

The global learning crisis is actually a teaching crisis. The quality of teachers has the greatest impact on improving student learning outcomes. Most developing countries in Asia and the Pacific face major challenges in recruiting the best candidates for a long-term teaching career.

New models of teacher education are needed in developing countries to enhance their competencies. For instance, if the learning level is poor, greater control of how teaching practices are applied is important, while greater teacher autonomy is needed where the quality of learning is already improving.

Another related challenge in many teacher education programs is how to update and innovate practices to sustain higher level of learning to motivate teachers and students.

Transformational teacher education reform requires collaborative efforts, resources, and expertise of governments and universities. This is particularly important at a time when the focus is shifting from face to face mass education to personalized blended learning with the goal of developing self-directed lifelong learners.

The role of teachers is changing. They serve as facilitators for learners who are lagging behind as well as for highly motivated, well performing students. In this environment, teachers are not the only source of knowledge; rather, teachers should be able to say, 'I don't know' to certain questions, and work with the students to find answers.

To realize this goal, it is important for governments to prepare a pool of students who have a solid secondary education followed by good performance in college and an interest in teaching. Policy-makers also need to focus their attention on hiring and training teachers from under-represented groups, such as ethnic minorities.

Teacher education should be developed as a whole, and not based on short-term project needs. Teachers should be able to gain higher academic degrees through well-developed university programs. Policies and incentives supporting career paths and teacher professional development programs should be articulated in a framework which defines the regulations, structure, and



Teachers serve as facilitators for learners who are lagging behind as well as for the highly motivated. Photo: ADB

resources required to be a successful teacher.

It is crucial for developing countries to ensure rigorous university-based teacher development programs by drawing on best practices from successful countries. More emphasis should also be placed on screening, training and mentoring the most promising teachers to become teacher trainers, educators, and supervisors. They should have a very wide teaching experience, deep subject knowledge, and demonstrated mastery and understanding of effective pedagogical practices.

Governments need to ensure that the best teachers are not only recruited and trained, but also deployed to the areas where they are most needed. Adequate compensation, bonus pay, good housing, and support in the form of professional development and career opportunities should be used to encourage trained teachers to accept positions in rural or disadvantaged areas. Selection of teachers through a transparent and rigorous process combined with local recruitment with good incentive packages can also ensure that quality teachers reach children in remote areas.

Developing effective teachers during their careers is the key to driving learning outcomes. Teachers should be supported in a systematic way from all the levels of the education system, including school principals, supervisors, and managers at all levels of an education system.

In-service teacher education should be updated regularly. It should develop skills, including preparing lesson plans and conducting continuous formative assessment to track and support lagging students. Teachers should be able to grow professionally to become better educators.

New innovative approaches are needed. While blended learning approaches may help to scale up teacher development programs, the key will be to ensure that they incorporate knowledge about what works. It must allow teacher trainees to practice, receive feedback on their practice, and constantly engage into practice in order to gradually develop more effective pedagogy.

There is a risk that the learning crisis induced by the pandemic will worsen due to protracted learning losses. Since teachers are the key players to address this issue, they will require different types of support, especially in pre-service and in-service teacher education. Fully supporting teachers now will pay off generously over the long term.

Asian Development Blog

How Post-Pandemic Education Systems Can Welcome Back International Students

By Shanti Jagannathan



International students have largely disappeared from campuses around the world during the pandemic. Photo: Inbal Marilli

Closed borders and health concerns halted international student mobility in 2020, but students are expected to return. Education policy makers need to be ready for a new type of international student that wants both physical and digital learning opportunities.

International student mobility, an integral part of global higher education, has been severely impacted by the pandemic. In recent years, cross-border movement of students has been on a brisk trot, growing at annual average growth rates of over 10% in the last couple of decades. The number of students going abroad for tertiary education was 5.6 million in 2020, according to the OECD. This number is projected to rise to 8 million by 2025.

The transnational movement of students has many benefits: individuals improve their academic and professional caliber and earning capability; institutions that host international students enhance their academic standing and reputation; economies and societies gain human capital and become more innovative.

International student mobility may face upheavals in the near to medium term arising from a combination of factors, not only due to COVID 19 but also due to growing trends in digitalization of learning and changing geographic concentrations of international students.

Consider these three factors at play in coming years:

COVID 19 will curtail international student mobility in the short term. A report by World Education Services reveals that 72% of international education professionals in North America expect a decline in undergraduate international students. Another survey in the US states that 52% of institutions reported slight to substantial decreases in international students in 2020-21 compared to the previous year.

In fall 2020, 37% of institutions announced a compressed academic calendar. With travel bans and campus closures, 87% of international students opted for deferment to 2021 and beyond.

The latest snapshot survey of US institutions shows a rebound of physical classes in campus and return of international students in 2021. Despite this revival, economic hardships from COVID 19 will impact the ability of students and families to afford transnational education.

'Digital' mobility will gather pace. The full-scale shift to

online learning was a matter of expediency to deal with COVID-19. In fall 2020, 92% of US universities surveyed reported moving to a hybrid mode of instruction combining in-person and virtual. In spring 2021, only 8% of institutions reported all in-person classes.

However, online learning was picking up the pace even before COVID-19. There is a growing offering of fully online degree programs. According to Inside Higher Ed, a third of university students were taking at least one online course and about 15% enrolled in fully online programs in the US in 2017.

Regional student mobility in Asia will gain ground.

Countries that have been sending large numbers of outbound students for study abroad are likely to become destinations in their own right by attracting international students. Several countries in Asia have set targets to attract international students in the near term: the People's Republic of China: 500,000; Japan: 300,000; Malaysia: 250,000, South Korea and India, each 200,000.

International student mobility within Asia will gain prominence. Project Atlas has revealed that the market share of the US of international students declined from 28% in 2000 to 20% in 2020. UK's share fell from 14% to 10% and Germany's from 12% to 5%. This calls for universities in different geographies to compete and collaborate to attract the internationally mobile student.

These transformative trends underway call for suitable policies and strategies. What are the new policy directions for international student mobility?

Striking the 'phygital' balance. The exponential growth in on-line learning may reduce 'physical' mobility, enabling 'digital mobility'. However, fully online programs do not provide critical dimensions of international study, including intercultural exchanges in a physical setting, student services in campus, networks of professionals, and opportunities for internships and work experience.

Hence, institutions need to find the right balance to provide optimal learning benefits to international students. Employability will increasingly become a crucial competing element to attract international students. Less restrictions on students staying on for work experience will increase the pull factor of the universities and increase labor mobility and overall employment opportunities.

Business models also need to be re-calibrated for international students. As universities moved online during COVID-19, admission deferrals have been extensive with students unwilling to pay hefty fees that go with international education without the opportunity to experience the full campus life.

In a survey by OneClass, 93% of students in the US and 87% of students in Canada said that tuition fees should be lowered if classes are fully online. Countries that rely on large cohorts of international students paying higher tuition fees need new business models.

Greater regional mobility and equitable access to international education is needed. Greater mobility of students in the Asia and Pacific region will strengthen cross-cultural ties and regional integration.

The Collective Action for the Mobility Program of University Students (CAMPUS Asia) supports mutual exchange agreements between the People's Republic of China, Japan and South Korea for joint education programs. More of such efforts will take forward academic credit transfer agreements, dual degree and joint degree

offerings.

Scholarships, such as the ADB-Japan Scholarship Program, will play an important role in giving opportunity to students from developing countries to access high quality education and develop as future leaders. More than 91% of the scholars of ADB-JSP were from the 15

DMCs where most of the poor in Asia live.

As COVID-19 transforms the future of education in different ways and online learning gathers pace, it is vital to rethink ways to support student mobility that benefits individuals, economies and societies.

Asian Development Blog

Uzbekistan: Economic Transformation through Smart Investments in Higher Education

By Diego Ambasz, Nodira Meliboeva and Iwona Borowik



From theory to practice at the Regional Experimental Biology Laboratory (Credit: Gulistan State University)



Photo: Gulistan State University, Regional Experimental Biology Laboratory (Credit: Gulistan State University)



Photo: Gulistan State University, Regional Experimental Biology Laboratory (Credit: Gulistan State University)

Uzbekistan has embarked on economic reforms to diversify its commodity-dependent economy. The dynamic, high performing economy that is envisaged will require a cadre of highly skilled professionals capable of accelerating technological adoption and increasing productivity across Uzbek industries.

The Government has decided to prioritize higher education reforms in the country's economic and social development efforts. The goal is to increase higher education enrolment, grant financial autonomy and academic independence to public higher education institutions, provide scholarships to female students and those from socially disadvantaged families, boost international partnerships, increase private sector participation, establish start-up accelerators, and increase research productivity.

The World Bank's Modernizing Higher Education Project aims to improve quality of the higher education and its relevance to the labor market. One of its key initiatives was the establishment of the Academic Innovation Fund (AIF) to finance innovative projects led by higher education institutions (HEIs) selected through a competitive process. The AIF grant program design followed successful experience of other countries such as Montenegro and Vietnam in which competitive funds ignited the transformation of higher education promoting quality, inclusion, and relevance for the economy. The program design took into consideration the need for modern teaching and research equipment, inclusion and empowerment of female students, and citizen engagement, among others.

In 2019, first projects worth US\$4 million were selected and funded by the AIF to support HEIs' efforts in two strategic directions: (a) strengthening university-industry links, and (b)

improving teaching and learning practices within HEIs. Two years into implementation, HEIs report strong university-industry linkages between local and foreign establishments, which, in turn, lead to increased skills transfer opportunities, aligned curricula, and new research partnerships. Specifically, partnerships between universities and the private sector are cited the most. Some HEIs developed modern technological solutions that later have been applied to industry, while other HEIs established branches on the premises of private enterprises for students to gain practical knowledge.

The Gulistan State University leads a project that illustrates a new model for integration of science, education, and production processes in agroindustry which is of strategic importance to Uzbekistan. The project supported the establishment of the first subnational Experimental Biology Laboratory, which specializes in sophisticated analyses of soil, water, plants, and plant products. The project addresses the private sector need for quality certification that enables export of local products. A number of agreements have already been signed with farms from across the country for analysis and certification services. Moreover, several training centers have been established allowing university students and researchers to gain practical experiences.

The AIF grants have also encouraged development of new teaching curricula based on international partnerships and modern teaching technologies. For example, a project in renewable energy implemented by the Andijan State University has attracted local and international research and business partners from Germany, China, and Russia. The project is well aligned with Uzbekistan's Strategy for the Transition to a Green Economy. Through AIF



Andijan State University, Renewable Energy Laboratory (Credit: Andijan State University)

funding, the university set up a semiconductor photovoltaic R&D lab in renewable energy - first of its kind in Uzbekistan. These efforts were complemented by the design and launch of new master and doctoral programs in renewable energy. Uzbekistan, which generates 85 percent of its electricity in thermal power plants, has recently launched its first private photoelectric power plant with a capacity of 100 megawatts with an aim to develop up to 5 gigawatts of solar power by 2030.

These are only a few examples of how AIF projects contributed and supported the establishment of strategic partnerships and industry linkages with international and local partners which are of high importance for a transition economy like Uzbekistan. Supported by the government and the World Bank, the Academic Innovation Fund has enabled higher education institutions to foster innovation through enhanced research, dynamic collaboration, and enabling infrastructure.

For the recipients of AIF, it will be important to carefully monitor the results, ensure the projects' sustainability, align teaching practices and curricula, support faculty exchange, and share know-how with other higher education institutions towards enhanced quality and increased relevance. The fast-paced economic reforms will only increase the demand for skilled labor and will require smart investments to align education and training with the needs of the economy and the labor market.

Here are a few more takeaways to build on the World Bank's Users Guide, which examines the design and implementation arrangements of similar projects financed by the World Bank across several regions.

- **Relevance:** Ensure alignment with the national development strategy or sector plan and involve a wide range of stakeholders during design and implementation phase.
- **Institutional arrangements:** Designate a separate team as part of project management unit to manage and administer the AIF, including monitoring and evaluation, throughout the Project and sub-projects implementation. In the same fashion, a separate set of operational guidelines for monitoring and evaluation of the AIF as part of Project Operation Manual should be developed.
- **Flexibility:** Introduce timely revisions into AIF



Andijan State University, Renewable Energy Laboratory (Credit: Andijan State University)

operational guide to reflect changing environment or to address impacts of disruptions, such as COVID19 pandemic.

- **Implementation support:** Carry out a series of workshops with the AIF team, the Bank team, and the AIF recipients during implementation phase to acknowledge and assess implementation progress. During design phase, capacity-building activities should be embedded to institutionalize fiduciary aspects for increased ownership and long-term sustainability.

World Bank Blogs

Taiwan's Education Ministry aims to boost English-only instruction by 2024

By Chen Chih-chung and Frances Huang,
Central News Agency (CNA)



CNA file photo

The Ministry of Education (MOE) unveiled on September 8, 2021 English teaching guidelines for high schools and below in Taiwan with a goal of having 60 percent of schools use only English to teach English courses by 2024.

After presiding over a meeting discussing MOE affairs, Education Minister Pan Wen-chung told reporters that the ministry has intensified its efforts to train Taiwanese English teachers and recruit foreign English teachers to achieve Taiwan's goal of becoming a bilingual country.

On the back of a growing talent pool in English teachers, Pan said the 2021-2022 school year will become an important beginning for English teaching, and the MOE is aiming for teachers in 60 percent of elementary schools, and junior and senior high schools to use only English to teach English classes by 2024.

In addition, Pan said the use of English in teaching other courses in high schools and under will be required in a bid to improve students' English proficiency.

By 2024, the MOE will ask teachers in one-seventh of Taiwan's high schools and below to teach part of their courses besides English classes bilingually, said Pan.

Afterwards, Pan said, teachers in all high schools and under around Taiwan will be asked to use only English to teach English classes by 2030.

Pan added that teachers in one-third of high schools and under around the country will be asked to teach part of their courses besides English classes in a bilingual manner also by 2030.

Meanwhile, Pan said high schools serve as a critical link to higher education so the MOE is planning to have 50 high schools in the country offer bilingual classes on a trial basis starting from the 2021-2022 school year.

Pan urged these schools to make good use of the budget that will be provided by the MOE to run their bilingual classes in 2021, adding such bilingual classes will be expanded to other

schools in the future.

Also, starting from the 2021-2022 school year, Pan said, the MOE will launch a massive campaign to recruit foreign teachers.

As part of the recruitment efforts, the ministry will have National Taiwan Normal University (NTNU) and National Chung Cheng University set up counseling centers to provide necessary assistance to foreign teachers.

To help persuade foreign teachers to stay in Taiwan, Pan said, the MOE will provide subsidies for their living expenses including lodging and transportation.

Earlier in 2021, the MOE announced it would list National Taiwan University, NTNU, National Cheng Kung University and National Sun Yat-sen University as the priority schools for bilingual teaching.

Making Taiwan bilingual by 2030 is a policy initiated by Vice President Lai Ching-te in 2018 when he served as premier. In June that year, Lai specified the "2030 Bilingual Country" plan as a major national policy.

On Sept. 2, the Executive Yuan approved a draft bill to establish a national development center to advance the government's plan to develop Taiwan into a bilingual Chinese and English-speaking nation by 2030.

Focus Taiwan

Seoul sets up education centres to close digital divide

The government is increasing the number of education centres so anyone can learn how to use digital devices, such as smartphones and kiosks, in their daily lives.

The Seoul Metropolitan Government (SMG) is boosting the number of Digital Literacy Education Centres in the South Korean capital in a bid to narrow the digital divide.

Until mid-June 2021, SMG will increase the number of education centres by eight to 14 so anyone can learn how to use digital devices, such as smartphones and kiosks, in their daily lives.

Residential areas

The centres will open near residential areas for citizens to have easier access to them and education programmes will be provided by level – beginner, elementary, and intermediate.

In addition to the education centres, SMG reports it has selected a total of 36 literacy education programmes which began operating in 2021 with a view to prevent low-educated and illiterate people from being left out in the digital world where people use digital communication methods, such as the use of text messages.

Attendees of the literacy education programmes can learn how to read Hangeul, the Korean alphabet, use digital devices, use public transportation, and others that are needed for daily living.



Attendees of the education programmes will learn how to use digital devices

Multicultural family members and disabled people will also be provided with customised literacy programmes: multicultural families can learn through traditional fairy tales and proverbs, and the disabled can learn digital life literacy and customised classes to enter society.

"We will continue to support the operation of literacy education programmes to improve the living ability of the underprivileged and expand the opportunity for them to participate in social activities," said Lee Dae-hyeon, director-general for lifelong learning at

Seoul Metropolitan Government.

"We will promote literacy education so that there are no people who are excluded in the digitalised world, especially due to the Covid-19 pandemic."

Individuals who take the level 1 (beginner) class will learn how to use a smartphone – from how to save contact information in an address book to how to make a phone call and send a text.

At level 2 (elementary) attendees will learn how to install KakaoTalk, the most popular mobile messaging app in South Korea, on their smartphones and how to have a chat with their contacts.

Meanwhile, at level 3 (intermediate), one can learn how to use a kiosk to place an order at a café or fast-food chain restaurant or purchase bus or train tickets at a transit station.

SmartCitiesWorld

Turkish universities brace for hybrid education amid pandemic



View of an empty amphitheater of a university closed due to pandemic restrictions, in the capital Ankara, Turkey, Feb. 21, 2020. (Shutterstock Photo)

Monday is the official opening day of the new term for universities across Turkey, although many are scheduled to start classes later in September and October. Higher learning institutions are returning to full working hours after more than a year of disruption due to the COVID-19 pandemic. Although grade schools were opened exclusively for in-person education earlier

this month, universities will follow a hybrid education model supported by online classes. Throughout the last school term, students were confined to online education under measures against the pandemic.

As the pandemic prevails and sees a new surge, authorities have implemented a new series of measures for a return to school for university students. All will be integrated with the Health Ministry's digital monitoring systems, enabling the tracking of COVID-19 positive students and staff and those who came into contact with the infected.

The Health Ministry issued a set of guidelines for the prevention of infections at campuses that include mandatory mask-wearing and social distancing rules along with proper ventilation of enclosed spaces and the reduction of class hours and the number of students allocated for each classroom. Universities are also advised to divide their education programs between

online and in-person education, with at least 40% of classes held remotely. Authorities also urged students and academics to get their two doses of coronavirus vaccines.

Each university can choose which education model they will implement, though most announced that the majority of classes would be held in-person while a small fraction of courses feasible for online education will be held remotely. Some universities announced that the only option available for unvaccinated students and academics will be online classes if they do not regularly present negative polymerase chain reaction (PCR) test results.

Turkey lifted almost all restrictions related to the pandemic in July, including curfews after a strict COVID-19 lockdown. It gradually allowed the reopening of most venues, while speeding up its vaccination program. Vaccination is viewed as instrumental for a return to pre-pandemic conditions in the country.

Daily Sabah

Unicef rates The Philippines 5-star in 'readiness for remote learning' index

By Joyce Ann L. Rocamora

The United Nations Children's Fund (Unicef), in a recently published report, said the Philippines is one of the countries with the "highest readiness for remote learning."

The study, titled *Ensuring Equal Access to Education in Future Crises*, analyzed a total of 67 low- and middle-income countries with available data and ranked them based on their readiness to deliver remote learning in response to events that lead to school closures or disruption of in-person learning.

"Argentina, Barbados, Jamaica, and the Philippines all received five stars, the highest score in the RLRI (Remote Learning Readiness Index)," the report read.

Unicef said these four nations have a "strong policy response for remote learning for all or almost all education levels" supported by "high emergency preparedness, as well as the existence of household factors that support remote learning."

In a November 4 statement, the Department of Education (DepEd) welcomed the international recognition and acknowledged the teachers, parents, partners, learners, and other stakeholders for the realization of the Basic Education-Learning Continuity Plan.

The agency said more than 27 million students were able



File photo

to continue education while prioritizing their health and safety during the pandemic.

The RLRI aggregates the three key domains of remote learning – household factors, policy responses, and emergency preparedness, with the five-star rating indicating a country has the highest resilience to crises that lead to disruption of in-person instruction.

'Only the first step'

Meanwhile, Unicef noted that scoring five stars in the index is "only the first step" and that countries must make sure children are continuously acquiring knowledge from their remote learning program.

It said data available from the Philippines suggest that even if a remote learning policy is in place and a household has necessary assets, "children are learning less under distance learning modalities."

"Efforts should be put toward developing effective curricula, ensuring the program is actually used, improving the quality of remote teaching, and advancing ways to assess student performance through remote means," it added.

The DepEd said it has taken note of the recommendation, assuring that the government is working with various stakeholders

to address these concerns.

“The department, together with our various partners, is continuously developing strategies to solve these familiar issues also encountered by other countries,” it said.

“With these developments and the upcoming pilot implementation of face-to-face classes, we call on our stakeholders to work with us in maintaining these positive insights from Unicef and furthering our policies and response to school disruptions.”

‘Support for poor households’

Unicef clarified that the RLRI only provides a national-level view of the presence of conditions necessary for children to learn at home and that other factors, such as actual learning or within-country inequalities, are beyond the latest assessment.

It pointed out that even in states with high overall RLRI scores, “within-country inequalities in access to the household assets needed for remote learning pose severe barriers to equitable learning.”

Unicef said special focus is needed for children from rural areas and poorer households who are the most deprived in terms of access to many remote learning tools at home.

“These discrepancies in household asset possession are likely to exacerbate existing inequalities in learning and other labor market outcomes. Therefore, it is imperative that the most vulnerable children receive the support necessary to continue learning,” it said.

To create a “resilient and flexible system,” Unicef said there should be targeted investments to expand digital coverage paired with efforts to facilitate synergy across household factors, policy responses, and emergency preparedness.

Philippine News Agency



in digital transformation processes for the education sector. The two ministries are compiling assessment criteria and information safety standards for the online learning platforms. Over the past few months, the government has installed Internet connections to facilitate online learning at 1,000 locations, and installations at the remaining targeted regions will be completed by January 2022. As around eight million households currently have yet to gain access to fibre-optic cable Internet services, MIC has urged providers to ensure fibre-optic Internet connection for all households in Vietnam before 2025.

A programme launched by the Prime Minister has handed over more than 100,000 computers to help students learn online. It will also accelerate the installation of Internet connection in remaining locations with a budget of some VND 3 trillion (US\$131.54 million), together with reducing online learning tuition fees totalling VND 500 billion (US\$22 million) for some student groups until the end of 2021. Hung said that Vietnam has developed six online learning platforms, which are being used by about 10 million students.

Earlier this week, OpenGov Asia reported that the Ministry of Information and Technology is collecting suggestions for the draft Code of Conduct to protect children on the Internet, considering that virtual spaces possess both useful information and harmful content for the young. Vietnam now has around 15 million under-16 children, who are the most vulnerable to cybercrimes like bullying, attacks, and scamming.

Reports from research firms reveal that in Vietnam, the most popular websites for children under 16 are audio-visual sites, social networks, and computer games (accounting for 44.7%, 32.5%, and 8.6%, respectively). Given the high frequency of Internet use among the young, the Code of Conduct to protect children will be released to regulate behaviour on the Internet and shield children from potential risks.

The Code introduces methods to report suspected activities that could be abusing children and to raise the public’s awareness of possible dangers. The Code of Conduct has clear regulations for businesses, organisations that provide Internet services, online platforms, and digital content creators to prioritise the protection of children in cyberspaces. It also includes policies and ethical standards to promote safer cyberspaces. Digital platforms have made important contributions to the national digital transformation and the digital economy and society. However, information and data leakages on digital platforms still occur on an increasingly large scale.

OpenGov Asia

Vietnam Digital Transformation Programme Prioritises Education

By Samaya Dharmaraj

The Minister of Information and Communications (MIC), Nguyen Manh Hung, during the 15th National Assembly’s second sitting, claimed that the national digital transformation programme prioritises work in education and training. The programme, which was launched last year, aims to develop a digital government, economy, and society and form Vietnamese digital technology enterprises capable of going global.

Under the strategy, the government aims to use technology to help deliver better quality services, support efficient decision-making, formulate better policies, optimise resources, and aid socio-economic development. Other tasks include operating specialised network infrastructure securely, connecting four administrative levels from the central to the commune level, and building a government cloud computing platform.

As per a news report, the Minister noted that MIC and the Ministry of Education and Training (MoET) are collaborating

Bangladeshi students selected for higher studies in Russian universities to fly soon



A farewell meeting was held recently at the Russian House in Dhaka for the students

Director of the Russian House in Dhaka Maxim Dobrokhotov appreciated the decision of Bangladeshi youth for choosing Russia as destination of higher education

Bangladeshi students who got selected during 2020-2021 for higher studies in different Russian universities under scholarships provided by the Government of the Russian Federation will soon fly for Russia.

They got stuck due to Covid-19 situation.

A farewell meeting was held recently at the Russian House in Dhaka for all of them.

Director of the Russian House in Dhaka Maxim Dobrokhotov appreciated the decision of Bangladeshi youth for choosing Russia as destination of higher education.

He spoke with farewell words for their very happy stay underlining that after a long wait they will be finally able to reach Russia and extended his best luck to all of them.

He recalled that more than five thousand Bangladeshi graduates of Soviet-Russian universities received prestigious and well paid jobs both in the country and abroad who now are working in government, private and various international with high reputation organizations.

The meeting was also attended by Minister-Counsellor of the Embassy of the Russian Federation in Bangladesh Ekaterina A Semenova and Second Secretary Mikhail V Katsuro who expressed their congratulations and warm wishes on that occasion.

Several students who are already studying in Russia also talked about the real experience of their stay in Russia and some aspects regarding educational process.

Dhaka Tribune

Dusit International Partners Leading Culinary Institutes In The Food School, Thailand's Multi Brand Culinary School

Press Release: ACN Newswire

Dusit International, one of Thailand's leading hotel and property development companies, is set to expand its hospitality education business in the kingdom with 'The Food School', a unique joint venture offering experiential training in Italian, Japanese and Thai cuisines, plus exclusive business incubation services for food and beverage startups, in a state-of-the-art facility in central Bangkok.

Set to open in Q1 2022, The Food School will bring together three globally recognised institutions, including Dusit's own Dusit Thani College, Japan's renowned Tsuji Culinary Institute, and La Scuola Internazionale di Cucina Italiana (ALMA), the world's leading education and training centre for Italian cuisine. Each will offer long-course modules in Thai cuisine, Japanese cuisine, and Italian cuisine and bakery, respectively.

Designed to provide an innovative, progressive and experiential learning environment, The Food School is targeted at young professionals, keen amateurs, career-switchers and entrepreneurs seeking to get the best possible start for their food and beverage businesses. The project will occupy 3,200 sq.m of thoughtfully designed space set over three floors at the new



The Food School - A Winning Partnership: Equity partners in the THB 336 million development include Dusit International, Glowfish Co-Working Space, Allied Metals (Thailand) Co Ltd, La Scuola Internazionale di Cucina Italiana (ALMA). (Photos: Dusit Thani)

Creative & Startup Village in the city's Sam Yan district.

Students will have access to The Food School's unique entrepreneurial incubator platform, The Test Kitchen, which will offer facilities for product testing and experimentation; business planning services; professional coaching and mentorship from renowned local chefs; and exclusive opportunities to get financial support from investors during specially arranged pitching sessions.

Equity partners in the THB 336 million development include Dusit International, Glowfish Co-Working Space (under privately owned real estate investment company Heritage Estates Co., Ltd.), Allied Metals (Thailand) Co., Ltd. (one of Asia's leading suppliers of professional kitchens and kitchen infrastructure), and La Scuola Internazionale di Cucina Italiana (ALMA).

"The Food School aims to create a vibrant, dynamic and collaborative ecosystem that brings together Thailand's food community to drive positive social, environmental, and economic developments in the food and beverage industry at large," said Ms Suphaje Suthumpun, Group CEO, Dusit International.

"Three clear highlights set The Food School apart as a

unique proposition in Bangkok. First, it is the first mover in the market to offer multi-cuisine training and business incubation all under one roof. Second, its Test Kitchen facilities will provide an unrivalled opportunity for experienced or fledgling chefs and savvy entrepreneurs to trial new concepts, receive advice on these concepts from seasoned industry experts, and tap into Thailand's dynamic food and beverage market. Third, The Food School will play an active role in the food and beverage community by hosting regular events that bring together key industry players to discuss latest trends, evaluate concepts, and brainstorm the way ahead for established and upcoming food and beverage businesses alike."

Ms Suthumpun said that no other facility offers such comprehensive services for culinary startups and young professionals in Bangkok. "By responding to the professional needs of the market in the new normal, fully leveraging Dusit's rich experience in providing hospitality education for more than 20 years, and offering access to mentorship from celebrated chefs and well-known restaurateurs in Thailand, and later globally, we look forward to helping The Food School's students, entrepreneurial associates, and community supporters to fulfill their potential with services, facilities and hands-on learning specially created to equip them for success in the post COVID-19 days ahead."

Ms Prim Jitcharoongphorn, Chairperson of the Executive Board at Allied Metals, said, "The highlight of The Food School facility is the design of kitchen classrooms that fosters teamwork and collaboration among peers. Our facility is equipped with eco-friendly equipment which is energy-efficient, user-friendly, and versatile. Kitchens at The Food School are truly state of the art. We are delighted that our innovative solutions will contribute to the sustainable development of culinary talents in Thailand by facilitating maximum productivity with minimal environmental impact."

Mr Gavin Vongkusolkit, Managing Director of Heritage Estates Co. Ltd and Founder of Glowfish Co-Working Space, said, "Glowfish is all about people, community, and genuine collaboration, and any partnership or project we undertake will always be built on these solid foundations. Bringing our expertise in value-driven collaboration to The Food School, we look forward to building a thriving ecosystem of creativity and innovation, not only for Thailand's food industry but also for the wider benefit of tourism, agriculture, wellness, sustainability, entrepreneurship, education and many connecting parts of our society and economy."

Scoop NZ

About CACCI

The Confederation of Asia-Pacific Chambers of Commerce and Industry (CACCI) is a regional grouping of apex national chambers of commerce and industry, business associations and business enterprises in Asia and the Western Pacific.

It is a non-governmental organization serving as a forum for promoting the vital role of businessmen in the region, increasing regional business interaction, and enhancing regional economic growth. Since its establishment in 1966, CACCI has grown into a network of national chamber of commerce with a total now of 27 primary Members from 25 Asian countries and independent economies. It cuts across national boundaries to link businessmen and promote economic growth throughout the Asia-Pacific region. CACCI is a non-governmental organization (NGO) granted consultative status, Roster category, under the United Nations.

It is a member of the Conference on NGOs (CoNGO), an association of NGOs with UN consultative status.

Among the benefits of membership in CACCI are the following:

1. Policy Advocacy - CACCI aims to play a strong policy advocacy role in order to establish a business environment

conducive to creating better opportunities for CACCI members.

2. Wide scope for networking - Participation in the various projects of CACCI will provide members the opportunity to expand their reach in Asia-Pacific by establishing contacts with the business communities of the region.

3. Participation in CACCI Annual Conferences and Training Programs - Members are invited to participate in the annual Conferences and various training programs which CACCI regularly conducts either on its own or in cooperation with other international organizations and member chambers.

4. Interaction in Products and Service Councils - Membership in CACCI allows participation in the activities of the various Product and Service Councils (PSCs) of the organization. PSCs are business groupings organized along product or service lines with a primary objective of promoting business cooperation, personal contacts, and technology transfer.

5. Access to CACCI publications - CACCI publishes the CACCI Profile, its monthly newsletter, and the CACCI Journal of Commerce and Industry, a bi-annual publication which features papers, speeches, and other articles pertaining to issues affecting the regional economy.

For more information, please visit www.cacci.biz

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