

**International Economic Forum on Asia**

**Digitalisation and Development:  
Reflections from Asia**

**Key Observations**

5 March 2021

New Delhi



**RIS**

Research and Information System  
for Developing Countries

विकासशील देशों की अनुसंधान एवं सूचना प्रणाली



# **International Economic Forum on Asia**

## **Digitalisation and Development: Reflections from Asia**

### **Key Observations**

5 March 2021

New Delhi



**RIS**

Research and Information System  
for Developing Countries

विकासशील देशों की अनुसंधान एवं सूचना प्रणाली



Economic Research Institute for  
ASEAN and East Asia

© RIS, 2021

Views expressed in the report are personal.  
Usual disclaimers apply.



**RIS**

Research and Information System  
for Developing Countries

विकासशील देशों की अनुसंधान एवं सूचना प्रणाली

Zone IV B, 4th Floor, India Habitat Centre  
Lodhi Road, New Delhi 110 003, India  
Tel.: +91-11-24682177-80; Fax: +91-11-24682173-74  
E-mail: [dgoffice@ris.org.in](mailto:dgoffice@ris.org.in)  
Website: [www.ris.org.in](http://www.ris.org.in)

## Preface



### **Professor Sachin Chaturvedi**

Director General, RIS

Digitalisation is gradually being manifested as a transformative force of change in all different spheres of human activity- social, economic and industrial. For instance, total number of people using internet in the world has gone up from 23 per cent of population to 49 per cent of population in 2017. And, the number of smart phone users globally has already crossed three billion in 2021. The rapid pace of adoption of digital mediums for various uses across different sectors of economy during the Covid-19 pandemic clearly demonstrated the potential of this wave. While applications of information technology in the past three decades have become widespread, the latest vintage of disruptive technologies like Artificial Intelligence, Cloud Computing, Big Data, Block Chain, Machine Learning, Deep Learning, etc is enabling faster changes in the product and the process space.

Digital infrastructure especially financial technology (fintech) in the form of mobile banking, internet banking, online payment platforms, peer-to-peer lending, loan processing and credit disbursements, etc not only contribute to 'ease of doing business' but also to 'ease of living'. In 2020, India alone experienced 80 per cent rise in online transactions. The value of digital transactions globally is expected to reach \$12.4 trillion by 2025. While Industry 4.0 is being envisaged as the new industrial policy for the world in the coming years, 5G assumes topmost priority in the digital infrastructure agenda.

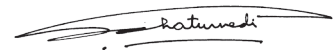
The benefits of digital technologies in the field of education, health, financial inclusion and governance are increasingly recognised. During the pandemic digital education offered through smart mobile

phones and online apps was the only medium for provision of education that have benefitted millions of school children worldwide. It has also awakened the gaps in digital infrastructure and skills to ensure quality education. Likewise, digital health solutions are found to be cost-effective and accessible. Telemedicine, for example, provides promising results including in remote and rural areas. Medium and Small Scale Industries (MSMEs) which could benefit from digital technologies lack resources to adopt digitalization in their production and distribution processes.

Although digital technologies are emerging as general purpose technologies worldwide, developing countries and LDCs still grapple with the issues of digital divide, digital illiteracy, cyber security and data localization. Countries in the Asian region are at varying level of economic development, hence differently placed in terms of resource allocation to digitalization. Moreover, the larger developmental gains from adopting digitalization need suitable investments, incentivizing private sector, and promote innovation and entrepreneurial spirit by the developing countries which, in turn, would bridge the digital divide and empower people especially women in raising their standard of living.

In view of the ensuing technological transformation enabled by digitalization, RIS in collaboration with OECD Development Centre, Paris and ERIA, Jakarta had organised the International Economic Forum on Asia virtually on the theme 'Digitalisation and Development: Reflections from Asia' on March 5, 2021. Dr. Rajiv Kumar, Vice Chairperson, NITI Aayog, India delivered the Special Address focusing on India's recent achievements in digitalization and the policy initiatives undertaken by the Government of India. Mr. Seshadri Chari, Member, Governing Council, RIS; Dr. Mario Pezzini, Director, OECD Development Centre, and Prof. Nagesh Kumar, among others made special remarks on various aspects of digitalisation. Eminent experts from India and other South Asian countries such as Bangladesh, Bhutan and Sri Lanka have shared their rich insights and experiences especially in using digital mediums while dealing with Covid-19 pandemic.

This publication captures the Key Findings and Observations emerged out of the deliberations in the webinar. I hope it would be highly useful for policy makers and other stakeholders in the Asian region.



Sachin Chaturvedi

# Digitalisation and Development: Reflections from Asia

## Inaugural Session



**Mr. Seshadri Chari**  
Member, Governing Council,  
RIS, New Delhi

### MR. SESHADRI CHARI

---

- Technology has made it possible for the human mind to realize the practical aspects of the theory of evolution and more importantly shape the future according to its imagination.
- Digital technology has made it possible to overcome the problems in every aspect and in every field - agriculture, health, hygiene, industry, manufacturing, supply chain mechanism, banking, and raising the standards of living of the people.
- Digital mediums were the only channel of communication during Covid-19 pandemic for not only keeping in touch with others but also for ensuring essential supplies during the pandemic.
- Digital economy is growing all over Asia and it has made it possible for the transformation that the world we are seeing today.



**Dr. Mario Pezzini**  
Director of OECD Development  
Centre, Paris

### DR. MARIO PEZZINI

---

- Asia forum has always been a platform to discuss actionable solutions to the most pressing issues for the region. The outlook 2021 focuses on the pressing issue of digital health and education and provides some ideas for policymakers to fine tune their policy responses to the crisis in this area.
- Growth in the region is still weak, and risk to the outlook is remarkably high. This is due to the uncertain health situation, combined with narrowing monetary and fiscal room for manoeuvre, and is also related to the fact that this is a global trend, and not just a local trend.

- Forecast for 2020 point to an average GDP contraction of 3.4 per cent in ASEAN, and an average decline in emerging Asia which include ASEAN-10, plus China, and India. This will depend on how governments deal with potential competing health and also how government will have to face the reaction of governments in other parts of the world.
- The key words for recovery are allocating resources for digitalisation. As for India, it has made significant progress in the field of digitalisation over the past few years. Obviously, technological development, and access to technology is still relatively low and even among different social professional categories and therefore, efforts to reduce the gap are necessary in India as well as in many other countries in the world.
- Asia, India in particular, plays a very important role in redefining international cooperation to face the current context. Three examples in which contributions from India and South Asia are done:
  - The first is this Asia forum itself. Highlighting the importance of events like this one, as they provide us with vital space where peers can discuss and devise strategies together to recover and build back better, as we will get out from the crisis, not individually, but we need obviously, cooperation across country.
  - The second example is a policy dialogue on transforming Asian economies towards shared gains. Similar dialogue which the OECD Development Centre jointly organizes with the European Commission. The first annual meeting of this policy dialogue will be held in June, engaging policymakers from Asia and Europe.
  - The Covid-19 crisis has amplified the need to rethink international cooperation and to adapt it to the new global context. OECD Development Centre's work on development in transition proposes to rethink international cooperation for development. Among others, concentrating on new tools and new actors, new metrics besides GDP, revisiting the multilateral

governance system, and better articulating national development strategies are various pillars of strengthening international cooperation.

- The upcoming G20 presidencies of Indonesia and India are crucial moments to continue discussion that we established also under the Italian presidencies. And it can allow bringing southern perspective into a multilateral process and promoting new partnership, such as South-South cooperation.
- The Delhi process is an excellent platform to inform this debate, and can provide effective recommendation on how to drive international cooperation towards greater sustainable development results.

## DR. RAJIV KUMAR

---



**Dr. Rajiv Kumar**  
Vice Chairman, NITI Aayog,  
India

- The pandemic has made sure that digitalisation and various aspects of digital economy are well known to all countries-developing, emerging and advanced. The pandemic has also given a huge impetus to the development and the growth of the digital economy.
- Delivery of public services has now become contingent on our ability to harness the new resources, the new technologies and the new potential of the digital technology.
- All different dimensions of digital technology, Internet of Things, Artificial Intelligence (AI), Machine Learning, etc. are now very much middle and centre of all policymakers anywhere in the world.
- Indian government has allocated sufficient resources to improve the spread of technology to harness the digital technology better. NITI Aayog has come out with a strategy for artificial intelligence in the country and responsible AI in the fields of education, health and agriculture.
- There is need to devote resources to address digital divide that are visible across countries and within the countries, and make sure that the benefits of digital technology reaches everybody. Prime Minister, Mr. Modi had announced that in the next 1000 days, every village in India would be

connected with optical fibre. About 150,000 gram panchayats are connected with optical fibre now; the next 100,000 would be connected in the next two years.

- In India, there are 350,000 common service centres and another 200,000 are going to be put in place very soon. And these 350 thousand service centres now deliver 50 Central schemes and more than 300 state schemes to the ordinary people of the country such as birth certificate, marriage certificate, driving license, etc. As a result, government is able to transfer more than 400 government grants and schemes as direct benefit transfers to the beneficiaries.
- The Prime Minister underscores that the downsides of digital technology should not be over-emphasized, as not just skilled but even highly skilled labour could become redundant and machines would replace humans. National Digital Health Mission, Digistack, Digilocker are some steps in this regard.
- Need to emphasize more on the emotional coefficient of our education and training system rather than the intelligence coefficient because these technologies require that we become sensitive to each other's needs and become a community that it will not leave anyone behind and it will not let the robots take over from ourselves.
- We will soon see the biotech revolution and the artificial intelligence revolution come together in a manner that has never been done before. This will create innumerable opportunities for a real jump, as it were, on our ability to balance livelihoods, to balance development and nature, and to balance and to improve equity across all our economies because of better delivery of services.



**Dr. Kensuke Tanaka**  
Head of Asia Desk, OECD  
Development Centre, Paris

## DR. KENSUKE TANAKA

---

- Growth in emerging Asia, ASEAN-10 Country, China and India was weak in 2020 and will remain so in 2021. Focus for 2020 indicates an average GDP growth of minus 3.4 per cent in ASEAN and a minus 1.7 per cent in emerging Asia. These are historically low numbers, and we anticipate emerging Asian economies will be down in 2021. But this is largely due to base year effects and uncertainty will make growth difficult.

- Economic impact will be very different among countries. China and Vietnam maintained relatively strong economies through 2020 while India and the Philippines suffered severe contractions.
- Recovery will ultimately depend on the country's resilience to large external shocks, and on how government is managed to deal with the health, monetary and fiscal policy challenges.
- Policy challenges in India include space for monetary and fiscal policy manoeuvring, structural issues such as financial system, manufacturing, infrastructure, etc.
- The pandemic has contributed to a rise in inequalities with low-income groups and informal workers affected disproportionately. Three key areas for near term policy responses, namely health, monetary and fiscal issues.
- Policymakers in emerging Asia must continue to strengthen their pandemic management strategy. Current good practice should be scaled up adding more emphasis on prevention. Resource allocation must ensure an adequate supply of protective equipment and training for health professionals.
- The distribution of vaccine requires a strategy that engages both practical aspect and a scientific constellation. And more recently, developing strategies to cope with uncertainty related to new mutations of virus has become critical.
- Commodity policies have helped to keep funding costs stable, but at the same time, they have made additional interest rate cut difficult. Traditional monetary tools such as yield curve control also have limitations; hence need for improving monetary policy transmission by employing inflation targeting and natural rate of interest.
- Over the near term, most governments will experience weakening fiscal position as both public and private debt level rise. This may be most severe in Singapore, China, Malaysia and Thailand.
- Fiscal response has differed among emerging Asian countries with larger responses in Singapore, more than 10 per cent of GDP, and Thailand. Smaller ones are in Cambodia, Laos and Myanmar. India is also categorized in a relatively smaller group.

- Balancing the need for continuous economic support while maintaining the fiscal strength is a key challenge for policymakers. And it is critical to focus targeted fiscal spending on the sector where it is most needed.
- The use of digital health tools has increased during the pandemic and interest in telemedicine has increased as number of Covid-19 cases grew. In Malaysia, for instance, interest in telemedicine was highest during November 2020 reflecting the rapid increase in the number of Covid-19 cases
- For telemedicine to become an alternative traditional health care even after the crisis, many issues need to be addressed.
  - Solid legal frameworks and rules for data protection must be established to develop consumer trust.
  - Reimbursement rules and insurance policy must be modified to reflect the equal value of telemedicine and in person care.
  - Telemedicine service must be easy for care providers and patients to access and use.
- Adapting to a digital environment has been challenging for both students and teachers. Difference in internet coverage and speed has exposed students to different levels of difficulty in studying after the closure of schools. Level of difficulty may have been lower in countries with fast and widely available internet such as China and Singapore. In contrast, it will be more challenging for students living in Cambodia, Laos and Myanmar.
- Digital infrastructure is still incomplete in some countries, and many teachers need to upgrade their digital skills. Quality of education needs to be maintained in remote settings. Technical and vocational education and training could play a key role in recovery.
- Finally, industry 4.0 has allowed firms to remain responsive to changing environment during the pandemic. However, progress is uneven among countries shaped by country specific challenges. Some of the most common bottlenecks are budgetary constraints, and the lack of awareness especially among smaller firms.

## Technical Session I: Digitalization and Sectoral Focus



**Prof. Nagesh Kumar**  
Director, UNESCAP, SSWA  
Office, New Delhi, India

### CHAIR: PROFESSOR NAGESH KUMAR

---

- Developing countries and emerging economies like India can harness the fruits of digital technology revolution to maximize the benefits and keep the disruptive consequences at the bay or mitigate them or minimize them.
- Digital technologies that bring automation has potential in substituting hordes of people who work in the factories and in services and the driverless car is one such application of these technologies. And if that comes into being successfully, then what happens to the people who are driving us around, the millions of people dependent upon the taxi services for instance, for livelihood.
- There are projections which suggest that there could be massive job losses in certain sectors. So, for a labour abundant economy like India, it could be highly disruptive.
- Focus should be on leveraging the advantages and efficiency-seeking kind of applications of digital technologies while guarding against the deleterious and disruptive consequences.

### DIGITAL TRANSFORMATION:

---

### PANELIST: PROFESSOR RAJAT KATHURIA

---



**Prof. Rajat Kathuria**  
Director and Chief Executive,  
ICRIER, New Delhi, India

- Digitalisation makes market more efficient, it makes demand and supply come together much more easily. And therefore, it creates more efficiency and therefore, it creates what we call the 'bang for the buck' like other general purpose technologies.
- Every 10 per cent increase in digitalisation, whether measured in terms of mobile phone penetration, internet penetration, internet traffic, or investment in digital infrastructure, a lot of which is invisible, it does have profound GDP impacts which could go up to 3.2 per cent.

- Emerging markets like India and other Asian countries could have much higher impact than other countries as digital infrastructure in those economies have leapfrogged to mobile technology and other forms of digital technologies.
- Rapid FinTech innovations happening in emerging markets are the best examples of this phenomena. FinTech-enabled financial transactions and mobile money did not happen in the United States at that pace as it is for the emerging markets.
- The behavioural change that has happened as a result of the pandemic is prompting embracing digitalisation more seriously than before. Spread of FinTech Solutions since 2016 in India is testimony to such a phenomenon.
- Like other economies the new normal for India will be at a higher level of digitalisation than previously and the new equilibrium is greater than the equilibrium that we started with. Digital transactions would have increased much more when we settle to a new equilibrium and that will be the new normal.

## DIGITAL INFRASTRUCTURE:

---

### PANELIST: DR. MIGUEL EXPOSITO VERDEJO

---



**Dr. Miguel Exposito Verdejo**  
Deputy Head of Unit, Science, Technology, Innovation and Digitalisation & DG International Partnerships, European Commission

- EU has recognized the shift in priorities and the urgency of addressing the twin challenges of digital transformation and green transformation. And this important aspect was to start with because in the European Union as we are convinced that both go very closely hand in hand.
- EU has adopted a comprehensive set of policies including white paper on artificial intelligence, new industrial strategy (Industry 4.0), strategy for small and medium sized enterprises, sustainable digital Europe, and so on.
- In terms of digital infrastructure, 5G is the topmost priority like everywhere else. Early last year, the EC has adopted the EU toolbox or the EU 5G networks toolbox, which is a comprehensive set of indications on how to deal with it with a very strong focus on sustainability on rights and

transparency. And, it is the human centric and rights-based regulation part of digitalisation.

- The important part of digitalisation is opportunities. But there are also risks. And it is there where we have to intervene. And the regulation is part of EU's external policies too.

- In May 2017, the EU adopted a Digital for Development strategy, the D for D strategy, and some of the priorities are :

- One of them is bridging the digital divide. So, connectivity is an enabling factor when it comes to economies, and the digital divide is one of the first obstacles to be tackled in our opinion in order to make this work for the economy and for the societies.
- Second priority is fostering digital innovation, entrepreneurship and skills, and finally, promoting digital technologies, for example, EU Space technologies be it Copernicus, Galileo, Egnos or other satellite constellations that might provide connectivity for bridging the famous last mile connectivity, provide information on climate change, tackling disaster risk management, on precision agriculture, etc.
- While tackling digital divide, local and regional context needs to be factored especially in Asia. Around half of the internet users of the world are in Asia; around 60 per cent to 65 per cent of world data flows in the coming years will be from Asia.



**Prof. Keshab Das,**  
Professor,  
Gujarat Institute of  
Development Research,  
Ahmedabad, India

## DIGITAL EDUCATION:

---

### PANELIST: PROFESSOR KESHAB DAS

---

- While digital economy or digital society is growing across the sectors such as media, medicine, finance, education, automation has really picked up including in the SMEs.
- Focus is more on the kind of preparedness necessary in India and for most of the ASEAN and ASEAN plus nations.

- The factors those have affected technical education particularly the Computing and Information Sciences in India are shortage of qualified teachers, less number of publications and innovations, little scope for internship and industry linkages, etc.
- There is a definite crisis in terms of building soft skills, and employability and placement. There are several recent reports, which talk about problem in generating employment opportunities. And of course, there is this huge problem relating to revised curriculum and what kind of teaching that could be given which would be more responsive to the digital disruptions.
- Different kinds of collaboration especially international collaboration among ASEAN or the ASEAN plus nations need to be devised. Rethinking the strategy of digital education which includes school education and technical skills is equally important.
- Inter-university collaboration in curriculum design, teachers' training, and exchange of scholars and teachers emphasizing/conducting full courses in an exchange mode and collaborative research projects, and industry visits and learning applications of new digitalisation, both in modern and traditional sectors and between the countries should be promoted.
- For online education, capacity building of the educators like the K-12 Education Strategy can be considered.

## DIGITAL GOVERNANCE AND WOMEN:

---

### PANELIST: MS. ANITA GURUMURTHY

---



**Ms. Anita Gurumurthy**  
Executive Director, IT for  
Change, Bengaluru, India

- The question of how digital policies can lead to gender inclusive development, particularly in this era of digitalisation needs to be addressed.
- Based on data and data-led intelligence, the world is witnessing a paradigm that is controlled by and large by countries who have led firms in mainly two countries in the world, which is US and China.

- Industrial policy is shifting rapidly with product service hybrids and greater servicification in the economy. Bulk of value added in the intelligence economy is on either sides of the smile curve. Artificial intelligence and intelligence-led economic production in which there is at one end, a platformisation through real time data of automation and industrial production. There is a huge divide between the developed countries and developing countries in terms of where they are located in the smile curve.
- In Asia, by and large, 90 per cent of women are in informal economy. And many of them, of course, run their own micro enterprises. Even as agricultural workers who work on very small farmsteads, some of them are also entrepreneurs, because they do actually take on a large degree of risk and the definitions of entrepreneurs certainly applies to them.
- The gender gap in terms of mobile internet use is really very huge. For instance, it is very high in Latin America because of safety concerns. So safety and online security become a very important determinant of how women participate in the digital economy. And across the world, including in developing countries, in terms of the range of services that are being used, women certainly use fewer services than do men.
- As new labour platforms coming in women are more likely than men to perform professional services and tasks relating to business services, sales and marketing. Few women perform tasks related to data analytics. Gender-based occupational segregation and segmentation applies to the new emerging opportunities. And even in these professional services, women micro workers are very highly qualified.
- Role of social intermediaries is important to leverage the opportunities, but also to organize labour to provide them capacities, to backstop, to provide them the required site intelligence, wisdom in audit/data analytics services, etc. These will become very important and policies need to support the social intermediaries.
- Public policies are needed for public infrastructure like online marketplaces that are run as public goods. Extensive

research with cooperatives like SEWA, the largest women member bank in the world, provides a strong case for that transition.

- We need to start looking at data as labour. Desired policies include personal data governance law, non-personal data governance, clear rules as a public asset so that it is possible for platforms to allow business users to claim their data back, which is happening in the EU through the Digital Markets Act, the draft Digital Markets Act, which allows business users to claim their data back, among others. Workers can come together and set up data cooperatives, dairy cooperatives, farming cooperatives, farm to food supply, etc.
- Platform economy governance is also very important in terms of e-commerce, competition, FDI taxation, socialization of care.

## DIGITALISATION AND SMES:

---

### PANELIST: PROFESSOR SAIKAT SINHA ROY

---



**Prof. Saikat Sinha Roy**  
Professor of Economics,  
Jadavpur University, Kolkata,  
India

- MSMEs in India need to be urgently digitised or digitalised, rapidly powered by big data analytics, Internet of Things and Artificial Intelligence – as the process lies at the core of industry 4.0. This is important more so after the pandemic.
- The benefits from digitalisation are multifaceted. A recent study says that if Indian MSMEs digitalise, then India's GDP is expected to grow from US dollar US\$158 billion to 216 billion by 2024.
- The extent of digitalisation of Indian MSMEs is at the very basic level. The process of this technological diffusion needs to be scaled up.
- MSMEs face constraints to digitalise. For the purpose, we use the 73rd round of unincorporated non-agricultural enterprises survey, which was done during 2015 and 2016, can be treated as the benchmark prior to the large-scale digitalisation that has happened in the economy since 2016.
- Most of the Indian MSMEs are spread across states, but 6 states account for more than 50 per cent of the MSMEs in

India. Among those MSMEs, the extent of computer and internet use is lower for manufacturing which is at 3 per cent and for services it is around 13 per cent. The extent of use of computers and internet increases with the size of the firm.

- In terms of various indicators of digitalisation, except communication via email and use of internet broadband, for most of the indicators, India uses the digital process at a very low level.
- Even though the association between digitalisation and literacy rate is found to be insignificant, the role of e-literacy in digitalisation of MSMEs cannot be demeaned, that has to be taken upfront.
- Registration plays a very important role. Most of the MSMEs in India are located as own account enterprises and if it is an own account enterprise, that does not allow the enterprise to digitalise. So that is one very important result of our study.
- The recent changes in the definition of MSMEs classified firms based on investment and turnover, instead, focusing solely on investment which was earlier done, the definitional changes in MSMEs, where a uniform criteria for classification of enterprises have been set up in order to streamline policies in the sector.
- Artificial intelligence and machine learning tools have been taken up for providing assistance and solutions to the MSMEs. Ministry has implemented AI and ML on its robust Single Window System called 'Champions'. This is apart from the BRAP (Business Reform Action Plans) that already exist for the MSMEs.
- There is need for an enabling framework, a supportive framework and a subsidy framework for digitisation. The recent policy changes are only a step towards that.
- Macro factors underlying digitalisation require policy formulation by national government and enterprise level deficiencies are required to be addressed through smooth delivery of various incentives for digitisation by the state level agencies.

- The MSME database in India is outdated. There is an immediate need to develop a dynamic MSME database and this can be done through more and more registration of firms.
- The problem of digitisation can be handled through proper identification, registration and segmentation with tailor-made strategies.
- Government incentives are warranted to incentivize the MSMEs through a properly designed incentive structure which still remains a major constraint. Key incentives in MSME sector must look into smooth registration, encouraging graduation from micro to small, from small to medium and large, skilling and training of employable labour forces.
- A unique dedicated agency preferably at the sub-national level or the state level is required for handholding the enterprises towards digitalisation.

## Technical Session-II: Digital Health



**Dr. Bhaskar Balakrishnan**  
Former Ambassador of India &  
Science Diplomacy Fellow, RIS

### CHAIR: DR. BHASKAR BALAKRISHNAN

- Digital health was already gaining importance even before the Covid-19 pandemic. There are huge opportunities and gains to be made through digitalisation in healthcare. Digitalisation can transform every aspect of healthcare and research and development can enable developing countries to leapfrog into the 21st century healthcare services with huge cost savings.
- Since 2005, in the WHO and in the UN General Assembly, member states have devoted increasing attention to digital health with numerous resolutions adopted. As mandated in the World Health Assembly Resolution 71.7 of 2018 on digital health, the WHO has issued a landmark report titled Global Strategy on Digital Health 2020-25. This report lays down a detailed blueprint for action at all levels- local, national, regional and global for achieving the gains from digital health.
- Advances in digital technology are continuing at a rapid pace. The use of AI and machine language learning in healthcare can lead to great gains and cost savings; for example, releasing human resources for more high-level decision. The blending of nanotechnology with ICT has led to new microsensors, microfluidic devices and health monitoring by remote means. We are at a very exciting period of healthcare revolution brought about by digital technology.
- In the Asian region, where populations are large and healthcare services are still developing the impact of digital healthcare could be tremendous. There is a great potential for cooperation within the region for mutual benefit.



**Dr. Antonio Villanueva**  
Senior Advisor for Healthcare  
Policy, ERIA, Jakarta

## **PANELIST: DR. ANTONIO VILLANUEVA**

---

- Regarding the growth of telemedicine, in clinical practice it involves the use of E-health information and communication technology to reach out to patients who cannot or prefer not to travel to on-site appointments, and includes online access to specialists, especially for areas that are lacking these specialists.
- According to market forecast in February 2020, the telemedicine industry in the Asia Pacific region would grow from US\$8.51 billion in 2020 to US\$ 22.45 billion in 2025.
- Policies may include implementation of international guidelines and assessment of infrastructure with emphasis on confidentiality and software security.
- Medical education during the pandemic has also transformed. Prior to the pandemic, many universities were already offering full degree courses online, but not for medicine. But during the pandemic because of quarantine requirements, medicine and other allied health courses had to adjust and started to produce recorded or live lectures online.
- Emphasis should be on training in using online learning apps, mental health awareness, because many students have succumbed to signs of depression and the continuation of health economic safety protocols on site, even after vaccines.
- Aside from the different protocol designs such as the adaptive design that is used during epidemics, the pandemic research has relied heavily on innovative software platforms that provide functions of remote monitoring, and data sharing across borders, something that needs to catch up with the industry usage or the international laws that have to adapt as well.
- Activities even prior to the pandemic have seen the ongoing third revision of the ICH GCP E6 R3, which is taking into consideration the evolution of ICT and data management in clinical trials for further ASEAN Regulatory Authority harmonization across all member states, and also the implementation of national data security laws.

- AHWIN initiative of ERIA on digital health aims to conduct the necessary studies and projects focused on clinical trials in order to provide valuable resources for crafting evidence-based policies that serve to promote the research and development of medicines and medical devices in Asia.
- CTHD through international collaboration will assess the E-data management capabilities of ASEAN developing member states' national public clinical research facilities and will promote capacity building, sharing of expertise, especially from the developed member states and general awareness in this vital health economics field.



**Mr. Pranjal Sharma**  
Economic Analyst & Writer, New  
Delhi, India

### **PANELIST: MR. PRANJAL SHARMA**

---

- The rapid rise and use of technology across not just the private sector, but also in government is a tremendous case study which in time and over the years will be seen as a benchmark in terms of the scale of something happening in an open market, free market democracy, like India.
- The Co-Win app developed by the Government of India is an example of innovative digital health initiative that efficiently connects patients, vaccine providers and service providers from the government as well as private sector has enabled vaccination of Covid-19 vaccine across India.
- National Digital Health Mission is another pragmatic step by India for maintaining proper medical records, enhancing access and ensuring necessary standards and protocols. So India's new project is really aimed to change all this in the way that medical data is created, stored and shared for every citizen across the country and across a huge variety and diversity of healthcare service providers from primary health care centres at district level to a very large corporate hospital chain, and, the government hospitals.
- NDHM approach is to bring a common standard which will have two-way advantages that all healthcare organizations, policymakers and researchers will have access to data in a comparable format.
- There is a very important element of dynamism that we see in entrepreneurship in health tech start-ups. There are

hundreds of small companies which have come up, people with great experience have started small companies, young college students have come up, and they are using technology in very smart ways. For example, something like a clinical diagnosis system on a portal. Anybody can go and log in, private companies can go and log in and ask for advice.

### **PANELIST: PROFESSOR VAJIRA H. W. DISSANAYAKE**



**Prof. Vajira H. W.  
Dissanayake**  
President, Health Informatics  
Society of Sri Lanka (HISL),  
Sri Lanka

- Low cost frugal innovations including digital health that can provide scalable solutions.
- During the Covid-19 pandemic, knowing that surveillance is going to play a key role, we in Sri Lanka focussed on customizing open-source platform called DHIS2. The DHIS2 surveillance platform that was customized in Sri Lanka has become a truly global innovation with deployment in 52 countries.
- The second example is again in Sri Lanka, as well as the Commonwealth was a specific solution for quarantine management and self-isolation management. And then of course the individuals looking after their own health, especially own respiratory health.
- COVID shield which was a proprietary frugal innovation could not be deployed smoothly in quarantine centres during the pandemic. System approach is required to integrate innovations with the health system for achieving effective solutions.
- During the pandemic it was observed that innovation that is supported, but lots of other innovations have had difficulty in getting traction, because their entry point in the health system was not clear.
- Anyone who is innovating in the health space, unless you are going to have a solution which is going to be deployed in a private kind of healthcare setting, or private sector setting as a standalone solution, if you are looking for an entry point to the health system, then you have got to identify that and try to work towards it, because otherwise, you will find it difficult to gain traction.

- There is a need for advocacy in the area of health and innovation. Although it is fashionable to talk about artificial intelligence and all kinds of other possibilities but then at the end of the day, it is necessary for you to convince the policymakers, the governments, the politicians, the administrators, who really are struggling to make that investment decision on what to invest when it comes to technology.

- Digital literacy, as you would appreciate, is also not up to the mark. So advocacy is the key. And so we in the Commonwealth worked with the Commonwealth Advisory Committee on Health, the Commonwealth health ministers and brought our messages to the Commonwealth health ministers meeting in Geneva, which happened virtually last year, and advocated for adoption of digital technologies.

### **PANELIST: MR. MONGAL SINGH GURUNG**



**Mr. Mongal Singh Gurung**  
Sr. Research Officer, Ministry of  
Health, Govt. of Bhutan

- Bhutan is thoroughly convinced of the benefits of digital health. The country is gearing towards an ICT enabled health system. A lot of groundwork is being done. All documents are being prepared like National health Strategy, e-health standard, e-health blueprints and all other aspects.

- Data privacy and data security which were not covered elsewhere in the statutes are to be covered in the upcoming National Health bill.

- Electronic patient information system is going to be rolled out in the entire country and advanced stages of negotiations with the vendors are ongoing.

- Digital health also played a significant role in management of the COVID-19 pandemic in Bhutan. By following the whole of government and whole of society approach Bhutan pursued the primary prevention approach for COVID-19 for which at least seven IT systems were employed.

- Health information system was used for tracing corona positive individuals, their primary contacts and people who are coming to the country. Quarantine monitoring system was also used for containing the spread of the virus.

- For tracing inter-district movements of people infected with virus checkpoint management system and gate management system were used.
- Concerns about digital divide is growing in the country with various measures are being undertaken. Digital systems in health are enabling us to effectively manage the Covid outbreak.



**Mr. Muhammad Abdul Hannan Khan**  
Team Leader, Health  
Information Systems Program  
(HISP), Bangladesh

### PANELIST: MR. MUHAMMAD ABDUL HANNAN KHAN

- Bangladesh relied on digital technology to control the Covid-19 pandemic. We conducted training over our online platforms, zoom and WebEx with 891 facilities. VHS was deployed across the country up to the sub district level.
- For efficient collection of samples both public and private service providers were encouraged to make new innovations and connect their app to our national system set-up for applications and follow the necessary standards.
- Emphasis was on the standards and interoperability use so that all categories deposited in one place. So all the national dashboard, the international data feed, everything comes from the same one single sources. We tried to facilitate this and triggered the telemedicine.
- For digital health context, we actually tried to bring those new innovations to the area of preventive care. So many preventive care steps are now taken off. One of these is to cervical and breast cancer. So we also make our surveillance system for the primary screening so that we know how many patients are there, how many possible cases and screening with a very low cost.

## Summary of Key Findings



**Dr. Priyadarshi Dash**  
Associate Professor, RIS, India

### DR. PRIYADARSHI DASH

---

- Digitalisation has a great potential to transform the way economy and societies currently evolving.
- It provides opportunities and challenges which need to be properly addressed by the policymakers. The opportunities need investments; guidance, guided path towards technology development, and making those technologies affordable to developing countries and low-income countries.
- Country experiences from Bhutan, Bangladesh, Sri Lanka and India highlighted how during COVID-19 digitalisation was adopted and emerged as a well known medium now.
- Post-Covid-19, it is important to see what type of threats e.g. cyber security, in terms of preparedness, in terms of firewalls, and all sorts of things are necessary as extent of digitalisation increases.
- Adequate digital infrastructure in terms of internet penetration, good number of digitally literate people could ensure the essential public services reach the ordinary masses of the society so that we can see the transformation happening in a scale.
- The scale aspect and the advocacy aspect must also ensure that people are not excluded from this process, they are very much integral into the development process.
- Women can be efficiently integrated into the process. They have a very specific skill set, which can be magnified and nurtured through digital technology so as to enhance their contribution to economy and society.
- Given capital and technological constraints, SMEs often face the problem of scale. Digital technology can really give them a boost in terms of realizing the potential that is available in the rest of the world.



**Dr. Mario Pezzini**  
Director of OECD Development  
Centre, Paris

## DR. MARIO PEZZINI

---

- Transforming Asian economy towards shared gains, which is a cooperation we have with European Commission to go further and getting closer to comparing experiences across the different regions, which is always helpful.
- On development in transition, the priorities of G20 presidencies-Italy, Indonesia and India can further work on south-south cooperation and the great contribution that south-south cooperation can bring to a system of cooperation.
- On digitalisation and education there is a strong need to address the gap by means of alphabetisation in digitalisation.
- Mechanisation enabled by digitalisation of small and medium sized firms would increase in the coming years.
- Digitalisation is not matter only of the digital firm; it is matter of the capacity to spread a new technology in all economic activity and sector, including public services. And if we don't have these public services, fed by this digitalisation, we will lose a train because large scale mechanisation can be an advantage by digitalisation.



**RIS**  
Research and Information System  
for Developing Countries  
विकासशील देशों की अनुसंधान एवं सूचना प्रणाली



Economic Research Institute for  
ASEAN and East Asia

# International Economic Forum on Asia Digitalisation and Development: Reflections from Asia

Friday, 5 March 2021  
Time : 2.30 pm (IST) / 10.00 am (CET)



## AGENDA

14.30-15.15 hrs	<p><b><u>Inaugural Session</u></b></p> <ul style="list-style-type: none"> <li>• <i>Welcome Remarks:</i> <b>Mr. Seshadri Chari</b>, Member, Governing Council, RIS, New Delhi and Affiliated with Manipal Academy of Higher Education, Manipal, Karnataka</li> <li>• <i>Remarks:</i> <b>Dr. Mario Pezzini</b>, Director of OECD Development Centre, Paris</li> <li>• <i>Special Remarks:</i> <b>Dr. Rajiv Kumar</b>, Vice Chairman, NITI Aayog, India</li> <li>• <i>India Launch of OECD Economic Outlook for Southeast Asia, China and</i></li> <li>• <i>India 2021: Reallocating Resources for Digitalization:</i> Presentation of</li> <li>• Key Findings- <b>Dr. Kensuke Tanaka</b>, Head of Asia Desk, OECD</li> <li>• Development Centre, Paris</li> </ul>
15.15-15.30 hrs	<b>Break</b>

15.30-16.30 hrs	<p><b>Technical Session-I: Digitalization and Sectoral Focus</b></p> <p><b>Chair:</b> <b>Prof. Nagesh Kumar</b>, Director, UNESCAP, SSWA Office, New Delhi, India</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• <i>Digital Transformation:</i> <b>Prof. Rajat Kathuria</b>, Director and Chief Executive, Indian Council for Research on International Economic Relations (ICRIER), New Delhi, India</li> <li>• <i>Digital Infrastructure:</i> <b>Dr. Miguel Exposito Verdejo</b>, Deputy Head of Unit, Science, Technology, Innovation and Digitalisation &amp; DG International Partnerships, European Commission</li> <li>• <i>Digital Education:</i> <b>Prof. Keshab Das</b>, Professor, Gujarat Institute of Development Research, Ahmedabad, India</li> <li>• <i>Digital Governance and Women:</i> <b>Ms. Anita Gurumurthy</b>, Executive Director, IT for Change, Bengaluru, India</li> <li>• <i>Digitalisation and SMEs:</i> <b>Prof. Saikat Sinha Roy</b>, Professor of Economics, Jadavpur University, Kolkata, India</li> </ul>
16.30-17.30 hrs	<p><b>Technical Session-II: Digital Health</b></p> <p><b>Chair:</b> <b>Dr. Bhaskar Balakrishnan</b>, Former Ambassador of India &amp; Science Diplomacy Fellow, RIS</p> <p><b>Panelists:</b></p> <ul style="list-style-type: none"> <li>• <b>Dr. Antonio Villanueva</b>, Senior Advisor for Healthcare Policy, ERIA, Jakarta</li> <li>• <b>Mr. Pranjal Sharma</b>, Economic Analyst &amp; Writer, New Delhi, India</li> <li>• <b>Prof. Vajira H. W. Dissanayake</b>, President, Health Informatics Society of Sri Lanka (HISSL), Sri Lanka</li> <li>• <b>Mr. Mongal Singh Gurung</b>, Sr. Research Officer, Ministry of Health, Govt. of Bhutan</li> <li>• <b>Mr. Muhammad Abdul Hannan Khan</b>, Team Leader, Health Information Systems Program (HISP), Bangladesh</li> </ul>
17.30-17.40 hrs	<p><b>Summary &amp; Vote of Thanks:</b></p> <p><b>Dr. Priyadarshi Dash</b>, Associate Professor, RIS, India</p> <p><b>Dr. Mario Pezzini</b>, Director of OECD Development Centre, Paris</p>



# **RIS** A Think-Tank of Developing Countries

Research and Information System for Developing Countries (RIS) is a New Delhi-based autonomous policy research institute that specialises in issues related to international economic development, trade, investment and technology. RIS is envisioned as a forum for fostering effective policy dialogue and capacity-building among developing countries on global and regional economic issues.

The focus of the work programme of RIS is to promote South-South Cooperation and collaborate with developing countries in multilateral negotiations in various forums. RIS is engaged across inter-governmental processes of several regional economic cooperation initiatives. Through its intensive network of think tanks, RIS seeks to strengthen policy coherence on international economic issues and the development partnership canvas. For more information about RIS and its work programme, please visit its website: [www.ris.org.in](http://www.ris.org.in)

*Research shaping the development agenda*



## **RIS**

Research and Information System  
for Developing Countries

विकासशील देशों की अनुसंधान एवं सूचना प्रणाली

Core IV-B, Fourth Floor, India Habitat Centre  
Lodhi Road, New Delhi-110 003 India., Ph. 91-11-24682177-80  
Fax: 91-11-24682173-74, Email: [dgoffice@ris.org.in](mailto:dgoffice@ris.org.in)  
Website: [www.ris.org.in](http://www.ris.org.in)

*Follow us on:*



[www.facebook.com/risindia](https://www.facebook.com/risindia)



[@RIS\\_NewDelhi](https://twitter.com/RIS_NewDelhi)



[www.youtube.com/RISNewDelhi](https://www.youtube.com/RISNewDelhi)