2022 KDI Global Forum on Development Cooperation

Digital Policies and Global Cooperation for Sustainable Development

October 21, 2022 (Fri)
Seoul, Republic of Korea

KDI Korea Development Institute

CONTENTS

ABOUT FORUM

Background

Through rapid progress of fourth industrial revolution, digital transformation is accelerated that guide to digital economy on combining ICT technology with various industries. To reach innovative and comprehensive growth and SDGs for low- and middle-income countries where digital infrastructure and technology are relatively lacking, a broad set of stakeholders in the international community – governments, academia, civil society organizations, and the private sector – have critical roles in inclusive and sustainable development, with their sharing of knowledge ever more important.

The Center for International Development (CID) at Korea Development Institute (KDI) is hosting the KDI Global Forum on Development Cooperation which aims to foster dialogue among diverse actors to share knowledge and best practices of development cooperation. The Forum on "Digital Policies and Global Cooperation for Sustainable Development" will bring together best practices of digital policies for sustainable growth in global community.

With offline gatherings made difficult amid the COVID-19 pandemic, the event will be held in an online-offline hybrid format. The virtual dialogue and discussion will provide a platform for researchers, practitioners, and businesses of the global society, to discuss the role of digital policy as an important driver of sustainable development. At the same time, the changing context brings with opportunities to seek future-oriented and innovative approaches for sharing knowledge and strengthening partnerships going forward.

Organizer

This year's Forum is organized by the Center for International Development (CID) at Korea Development Institute (KDI). Since its establishment in 1971, KDI has significantly contributed to developing Korea's economic policies and development cooperation strategies. Korea's experience of social and economic development has been widely recognized as an invaluable asset relevant and applicable to developing countries and the broader international community. To share Korea's knowledge and insights, KDI initiated Korea's development cooperation effort by launching the International Development Exchange Program (IDEP) in 1982. The knowledge-sharing activities were later developed into and rebranded as the Knowledge Sharing Program (KSP) in 2004, with KDI playing a pivotal role.

Along the way, KDI established CID in 2010 to strengthen its expertise and enhance the effectiveness of its development cooperation operations. CID has conducted numerous knowledge sharing and capacity-building projects by offering customized analytical and advisory services to development agencies, partner governments, institutions, and the private sector. CID expands KDI's comprehensive research outcomes by aligning them with diverse socio-economic contexts of different partner countries and maximizes the development impact through global partnership.

Such efforts have been acknowledged internationally, as in the Global Go To Think Tank Index Report by the Think Tanks and Civil Societies Program (TTCSP) at the University of Pennsylvania. In 2020, KDI was awarded the 'Center of Excellence' title for being the top-ranked international development for three consecutive years.

PROGRAM

Time	Contents
Opening Ceremony	
09:30 ~ 10:00	**Opening Remarks** Youngsun Koh, Acting President, KDI
	Keynote Speech "Policy Direction for Sustainable Development and Strengthening Resilience" Tetsushi Sonobe, Dean and CEO, Asian Development Bank Institute (ADBI)
Special Session : Digital Economic Cooperation in the Asia-Pacific Region	
10:00 ~ 10:30	**Presentation 1: Regional Digital Trade Cooperation – Australia's Experience** Ben Cas, Acting Assistant Secretary, Digital Trade and New Technologies Branch of the Free Trade Agreements and Stakeholder Engagement Division, Department of Foreign Affairs and Trade, Australia
	Presentation 2: Korea-ASEAN Standards Cooperation Network Heejin Lee, Professor, Yonsei University
	Presentation 3: Digital Economy Cooperation in the Asia-Pacific Region Sivaram Superamanian, Head of Digital Economy Division, ASEAN Secretariat
10:30 ~ 10:40	Coffee Break
Speaker Presentation : Role of Government and Industry for Green and Digital Economy	
10:40 ~ 11:10	**Presentation 1: Legislation on Transformation for Green Digital Economy – focusing on Smart Green Industrial Complex** Eunhye Jang, Senior Research Fellow, Korea Legislation Research Institute
	Presentation 2: Recent Challenges and Opportunities in Global Value Chain (GVC) Kun Soo Park, Professor, Seoul National University
	Presentation 3: Strengthening Healthcare System through Smart Healthcare Tae Hyun Kim, Professor, Yonsei University
Roundtable Discussion : Effectiveness of Development Cooperation for Green and Digital Transformation **Moderator : Jungwook Kim, Executive Director, Center for International Development, Korea Development Institute**	
11:10 ~ 11:40	**Discussion 1: Green economy** Jiyoung Choi, Director, International Economic Cooperation Strategy Division, Ministry of Economy and Finance, Korea
	Discussion 2: Digital Healthcare Randi Munk, Health & Life Science Counsellor, Embassy of Denmark in the Republic of Korea
	Discussion 3: International Cooperation in Green and Digital Sector Sung Gyu Kim, President, Korea Association of International Development and Cooperation
11:40 ~ 12:00	Q&A (Special session and Speaker presentation) / Closing Remarks

SPEAKER BIOGRAPHIES

OPENING SESSION

Opening Remarks

Youngsun Koh

Acting President,
Korea Development Institute

Youngsun Koh is currently Acting President and Senior Vice President at Korea Development Institute. After joining KDI in 1993, he worked in various fields, including fiscal policy, social welfare and macroeconomics. At various points in time with KDI, he served as Executive Director of Center for International Development, Director of the Global Knowledge Exchange and Development Center, Director of Macroeconomic and Financial Policy, Director of Public Finance and Social Policy, and Chief Economist. In 2013, he served the Korean government as the Second Vice Minister for Office of Government Policy Coordination and Vice Minister for the Ministry of Employment and Labor. Koh holds a B.A. and M.A. in Economics from Seoul National University and a Ph. D. in Economics from Stanford University.

OPENING SESSION

Keynote Speech

Tetsushi Sonobe

Dean and CEO,
Asian Development Bank Institute (ADBI)

Tetsushi Sonobe is the Dean and CEO of the Asian Development Bank Institute (ADBI), the Tokyo-based think tank of the Asian Development Bank that promotes the realization of a prosperous, inclusive, resilient, and sustainable Asia and the Pacific through policy research and capacity building.

Born in 1960 in Tokyo, Dean Sonobe obtained his PhD in economics from Yale University and BA in economics from the University of Tokyo. His research interests are centered on the empirics of economic development, particularly the roles of industrial clusters, human capital, social capital, management practices, and market competition in industrial development in developing Asia and other regions.

Before joining ADBI in April 2020, Dean Sonobe served for six years as a vice president of the National Graduate Institute for Policy Studies (GRIPS) in Tokyo and taught economics for thirty years at Tokyo Metropolitan University and GRIPS. Dean Sonobe is a recipient of the Nikkei Book Publication Prize and the Masayoshi Ohira Memorial Prize, and a founding board member of the Japanese Association for Development Economics.

SPEAKER BIOGRAPHIES

SPECIAL SESSION

Presenter

Ben Cas

Acting Assistant Secretary,
Digital Trade and New Technologies Branch of the Free Trade Agreements and Stakeholder Engagement Division, Department of Foreign Affairs and Trade, Australia

Ben Cas is Acting Assistant Secretary of the Digital Trade and New Technologies Branch of the Free Trade Agreements and Stakeholder Engagement Division of the Department of Foreign Affairs and Trade. Since joining DFAT in 2007, Ben has worked on many of Australia's Free Trade Agreement negotiations, including as part of the Trans-Pacific Partnership, and with Hong Kong, Peru, Korea, Japan and China. He was also posted as First Secretary (Trade) to Washington and has worked on a number of WTO disputes. Prior to joining DFAT Ben worked as a commercial lawyer. He holds a Bachelor of Science and Bachelor of Laws (Hons).

SPECIAL SESSION

Presenter

Heejin Lee

Professor,
Graduate School of International Studies, Yonsei University

Heejin Lee is Professor at the Graduate School of International Studies, Yonsei University. Areas of interest and expertise include standards/standardization and ICT4D (information and communication technology for development). He has written extensively on China's rise in ICT international standardization. He is leading 'Center for Converging Industries and Standardization' at Yonsei University. He was awarded the Presidential Citation on the World Standards Day 2022 for his contribution to enhancing national competitiveness through standardization, in particular to promoting standardization in international development cooperation. He is currently working on a project for Korea-ASEAN standards cooperation with KATS (Korean Agency for Technology and Standards) and Korean Standards Association. He has a multidisciplinary background: BA in management and MA in sociology at Seoul National University, and PhD in information systems at London School of Economics. Before joining Yonsei, he worked for the University of Melbourne, Australia and Brunel University, UK. Recent publications include "The changing patterns of China's international standardization in ICT under techno-nationalism: A reflection through 5G standardization."

SPEAKER BIOGRAPHIES

SPECIAL SESSION

Presenter

Sivaram Superamanian

Head of Digital Economy Division,
ASEAN Secretariat

Sivaram is an Assistant Director at the ASEAN Secretariat and currently heading the Digital Economy Division. His key role is to influence digital policies and implement digital initiatives that would increase the trade and investment across the 10 ASEAN Member States (AMS). Bringing more than 20 years of experience in digital transformation, Sivaram has successfully implemented large scale digital initiatives for both the public and private sectors. Sivaram has also advised various Governments in the Asia Pacific, Middle East and Africa on the transformative strategy to improve the Economic Sectors and increase the country's GDP, job creation and investment.

SPEAKER PRESENTATION

Presenter

Eunhye Jang

Senior Research Fellow,
Korea Legislation Research Institute

Eunhye Jang is a Senior Research Fellow at Korea Legislation Research Institute (KLRI) in Korea. She received her B.A degree in law from Sookymyung Women's University, followed by a Master degree and Ph.D in law from Ajou University in Korea. Her doctoral dissertation, "A Study on the Possibility and Limitation of Private Takings in the View of Public Law," covered land taking and related laws. She discussed issues regarding violation of rights occurring during administrative investigation and remedies in her master thesis, "Remedy for Violation of Rights in Administrative Investigation."

As a senior research fellow, she has carried out research on climate change, environmental laws, port act and so on. Currently, she participates in numerous projects including legal commentary on comprehensive management of facilities and installations causing environmental contamination, revision of Korean Port Act, and etc. Her research crosses administrative laws and environmental laws covering land compensation and land expropriation and urban development. Now, she is the head of Climate Change & Legislation team as well as serves as acting member of numerous committees, including the Central Environmental Policy Committee of the Ministry of Environment, and the Policy Advisory Committee of the Ministry of Public Administration and Security.

SPEAKER BIOGRAPHIES

SPEAKER PRESENTATION

Presenter

Kun Soo Park

Professor,
Department of Industrial Engineering, Seoul National University

Kun Soo Park is a professor in the department of industrial engineering at Seoul National University, Korea since 2018. He holds a doctoral degree in operations research from Columbia University in the city of New York and a bachelor degree from Seoul National University. His research interests include global supply chain management, inventory management, and operations of smart manufacturing. He conducted several research projects on government regulations and policies for digital supply chain and smart logistics. Before joining Seoul National University, he was an associate professor in the college of business at Korea Advanced Institute of Science and Technology (KAIST). He also had worked as a quantitative researcher at financial institutions including Lehman Brothers and Bloomberg in New York, USA.

SPEAKER PRESENTATION

Presenter

Tae Hyun Kim

Professor,
Graduate School of Public Health, Yonsei University

Tae Hyun Kim is a Health Services Researcher, currently working for Graduate School of Public Health, Yonsei University as Professor and Director of Department of Healthcare Management. He brings to his work more than 20 years of experience in hospital management, health care finance, and health policy. Professor Kim's areas of expertise include cost analysis, operations management, and global health – acquired working with several countries spanning Middle East, Africa, and South East Asia. He holds a Ph.D. degree in Health Services Organization & Research at Virginia Commonwealth University, Richmond, Virginia. Prior to joining Yonsei University, he served as the Undergraduate Program Director of Department of Health Administration at Governors State University, University Park, Illinois.

SPEAKER BIOGRAPHIES

ROUNDTABLE DISCUSSION

Moderator

Jungwook Kim

Executive Director,
Center for International Development, Korea Development Institute

Jungwook Kim is currently Executive Director of Center for International Development at Korea Development Institute (KDI). The main task of the Center is Knowledge Sharing Program (KSP) as public consultation services provided to around 90 countries from 2004. He had served as Director at Center for Regulatory Studies in KDI, which is responsible for regulatory research, since 2014. Dr. Kim was appointed to be Fellow of PPP Division of PIMAC at KDI in 2007. Dr. Kim worked as Director of Policy and Research Division, where policy research is conducted independently of actual project implementation to give feedback to and assist the government in deciding its medium to long term policy orientation. Also he served as Director of Public Private Partnerships Division, which provides administrative and technical support in the process of PPP project preparation and implementation. The division develops guidelines for PPP procurement, conducts value-for-money tests and assists in RFP formulation, tendering and negotiation.

Since Dr. Kim has started his career at KDI, he has conducted researches on the throughout policy issues; helped the Ministry of Economy and Finance and other ministries formulate budget plans, social and economic development plans, and other policies. Current his research field is in Official Development Aids; Procurement Auction System; and Law and Economics. Also, as an adjunct professor, he teaches Regulatory Reform, Public Private Partnerships, Public Investment Management, and Cost-Benefit Analysis at KDI School of Public Policy and Management.

Born in Korea, Kim holds a B.A. and M.A. in Economics from Seoul National University and a Ph. D. in Economics from the University of Wisconsin-Madison.

ROUNDTABLE DISCUSSION

Discussant

Jiyoung Choi

Director,
International Economic Cooperation Division, Ministry of Economy and Finance, Korea

Jiyoung Choi is currently Director of International Economic Cooperation Division at Ministry of Economy and Finance, Korea. Starting her public career in 2004 as Deputy Director at Seoul Metropolitan Government, she served at the Office for Government Policy Coordination, Korean Embassy to Belgium and Luxembourg and Mission to the European Union, and Presidential Committee for the G20 Summit and various positions in the Ministry of Economy and Finance. In her previous post as Director of Green Climate Policy Division, she was primary advisor to the Korean Board Member of the Green Climate Fund and Board Member of the Adaptation Fund. Choi holds B.A. in Economics from Korea University and a Master in Public Policy from the Crawford School of Public Policy, Australia National University with focus on climate change and development.

SPEAKER BIOGRAPHIES

ROUNDTABLE DISCUSSION

Discussant

Randi Munk

Health & Life Science Counsellor,
Embassy of Denmark in the Republic of Korea

Randi Munk is the Health & Life Science counsellor at the Danish embassy to Korea, overseeing and supporting the Danish Korean healthcare collaboration. Randi is in charge of the embassy's health team, which primary focus for 2022–2023 is digitalization, HealthTech, and the ageing society. She brings more than 15 years of experience within healthcare, digitalization and health data legislation from both the private and government sectors. Her areas of expertise include health data law, digitalization, digital transformation and regulatory policy, acquired working in different positions in the Danish government, and the private pharmaceutical industry. Randi was the project manager on the HMA/EMA joint task force on Big Data, mapping the Big Data landscape in Europe. In addition, co-author on the task force recommendations and publications on big data and utilization. Randi holds a Master degree in Business Law and Business Administration from Aalborg University of Denmark.

ROUNDTABLE DISCUSSION

Discussant

Sung Gyu Kim

President,
Korea Association of International Development and Cooperation (KAIDEC)

Dr. Sung Gyu Kim received his MA from the Department of Sociology, Seoul National University, and his Ph.D. from Freie Universität Berlin (FU Berlin). He was also a researcher of Otto-Suhr-Institute of FU Berlin. In Korea, he has been an expert committeeman of the Economic and Social Development Commission of Korea, a senior research fellow of KOICA (Korea International Cooperation Agency), and a senior research fellow of the International Development Cooperation Research Center of Seoul National University Asia Center (SNUAC). He is now serving as the director of the Sustainable Development Center of the Asiatic Research Institute at Korea University. His main research areas include international development cooperation and the ODA policies of South Korea, with his main theses and books including "Searching for a new policy for international development cooperation" "A study on social opportunities and ways to expand safety nets in developing countries", "A study on ways to support job creation in developing countries," "A study on the formation of private enterprises in developing countries," "Saemaul Undong ODA and development cooperation," and "(Global CSR) of enterprises and development cooperation". Currently, he is serving as the president of Korea Association of International Development and Cooperation (KAIDEC).

2022 KDI Global Forum on Development Cooperation

Digital Policies and Global Cooperation for Sustainable Development

Keynote Speech

Policy Direction for Sustainable Development and Strengthening Resilience

Tetsushi Sonobe

Dean and CEO,
Asian Development Bank Institute (ADBI)

ADBInstitute

Policy Direction for Sustainable Development and Strengthening Resilience

Tetsushi Sonobe,
Dean, Asian Development Bank Institute

KDI Global Forum on Development Cooperation
October 2022

Measuring the size of the digital economy is fraught with difficulty (Capturing the Digital Economy: A Proposed Measurement Framework and Its Applications—A Special Supplement to Key Indicators for Asia and the Pacific 2021 | Asian Development Bank (adb.org))

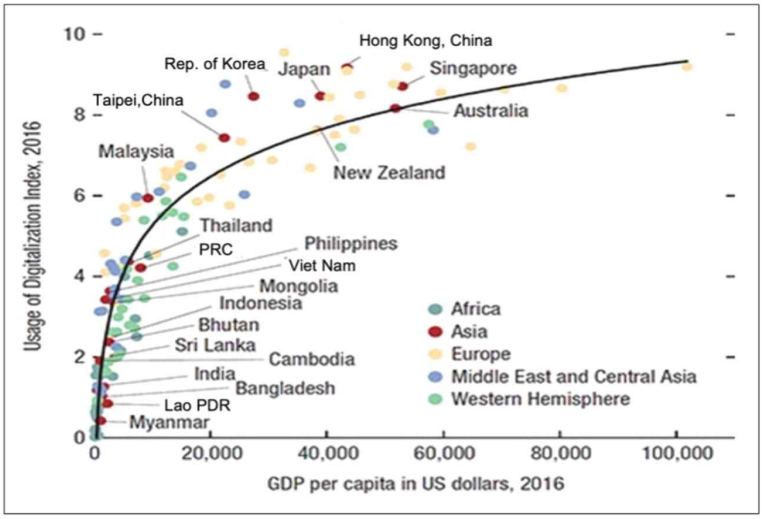
Recent work by the Asian Development Bank (ADB) estimates that the core digital economy represents somewhere in the range of 2% to 9% of GDP

The broader digitally dependent economy's share of GDP is estimated to range between 17% and 35%

2

ADBInstitute

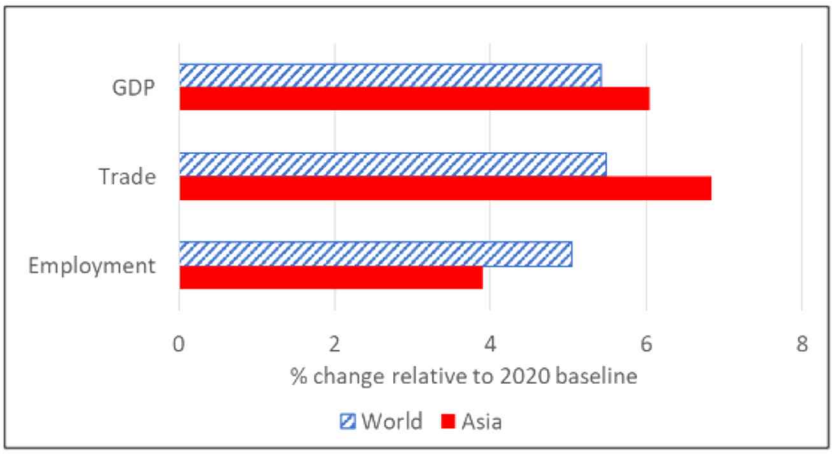
Digitalization and Economic Development



Note: The Usage of Digitalization Index ranks digitalization usage on a scale of 0–10, where 10 denotes the highest rate of digital adoption.
Source: Adapted from International Monetary Fund (2018)

ADBInstitute

Projected Economic Impact of Digitalization, 2021–2025 (annual average)



Note: Projections are based on an assumed 20% expansion of the digital sector by 2025 globally relative to the 2020 baseline, with total factor productivity increasing by 1% per year. Source: ADB (2021).

ADBInstitute

Projected impacts of a simulated 20% expansion of the digital sector by 2050 relative to the 2020 baseline

Impact on GDP in Asia: Around 6% per annum over 2021-2025, or 8.6 trillion in total over the period

About one-third of the estimated GDP gains is due to productivity enhancement and the remainder from a rise in the size of the digital sector

On trade in Asia: around 7% per annum over 2021-2025, or around $5 trillion in total

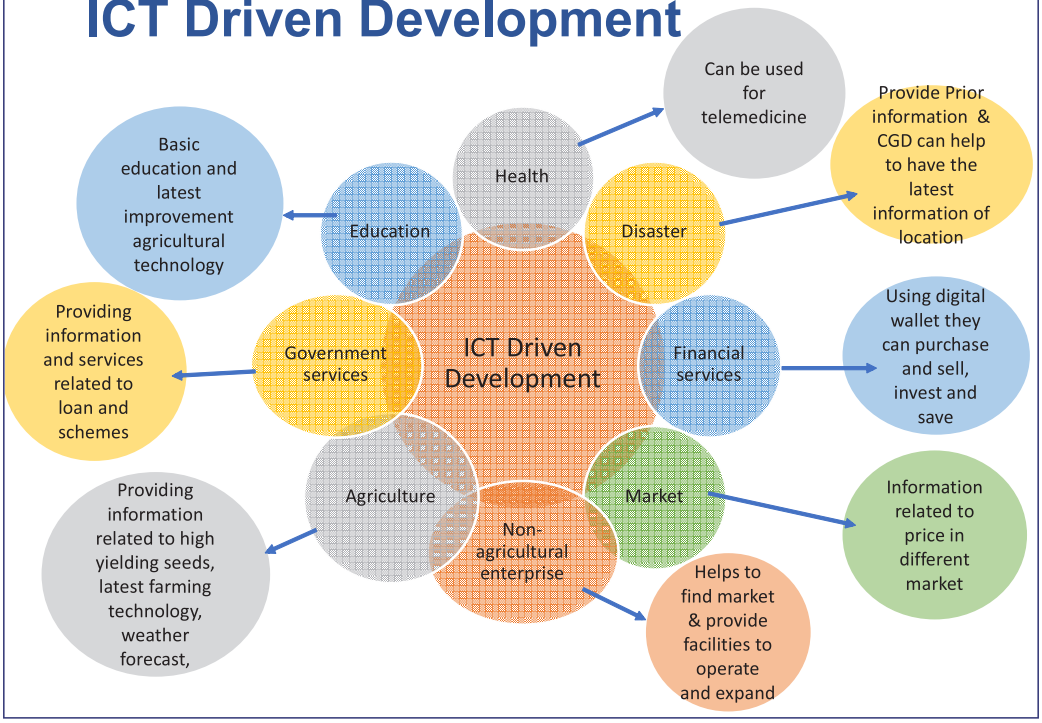
On employment in Asia: around 4% per annum over the projection periods, or around 328 million jobs overall

Conditional on these projections is an investment requirement for Asia of around $910 billion over the 5-year period from 2021 to 2025. This investment would be primarily aimed at infrastructure to improve broadband access and internet coverage in the region.

5

ADBInstitute

ICT Driven Development



Keynote Speech

Green digital finance

Benefits from Green Peer-to-peer (P2P) Lending:

- Increased access and decentralization of the financial system;
- Lower costs through improved efficiency, speed and automation;
- Increased competition.

Examples of policy support of green P2P:

- Australia's Government investment through P2P: AU$ 20 million of public funds were lent through P2P lending platform to fund environmentally friendly projects in Australia
- UK P2P allowed lenders to automatically invest in renewable energy projects eligible for government support - Feed-in Tariffs , at 7% annual interest rate as little as GBP20 for a period from 1 month to 5 years.

7

ADBInstitute

Digitalization and Education (1)

- Digital technology holds much promise to improve the quality of education
  - Improve teacher deployment, school management, professional development, directly increase teaching effectiveness, or interact with students directly
  - Reduce the costs of doing things
  - Some teaching and learning can still take place during school disruptions
- There is a significant market failure in edtech: the products are not designed based on the needs of those who may benefit the most from technology
  - For-profit companies cater to their clients: high quality (mostly private) schools, motivated teachers, students with high socioeconomic status
  - Need government / international organizations to intervene; provide private sector with incentives to create products for different parts of the population

8

ADBInstitute

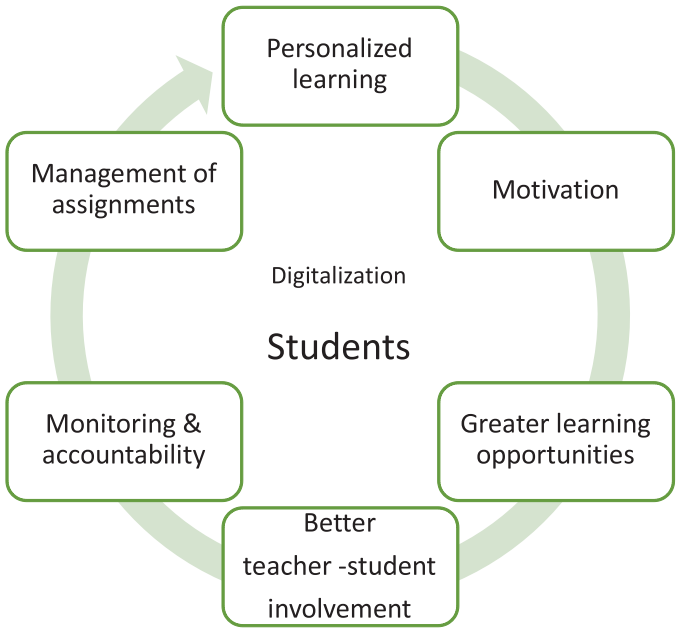
Digitalization and Education (2)

- Some also tend to see technology as the solution to every problem. In the extreme, EdTech is a solution looking for a problem
- Many problems in education systems do not need a technology solution. In these cases, using technology will result in small impact and waste resources
- Important for think tanks to work with governments to analyze whether technology is indeed the most suitable solution to particular problems they face
  - After that, they need to consider how to attain buy-in from teachers, principals, and parents so the technology can be used consistently. This is often the most difficult part of introducing technology
  - Design and rigorously evaluate the impact of any technology that is introduced

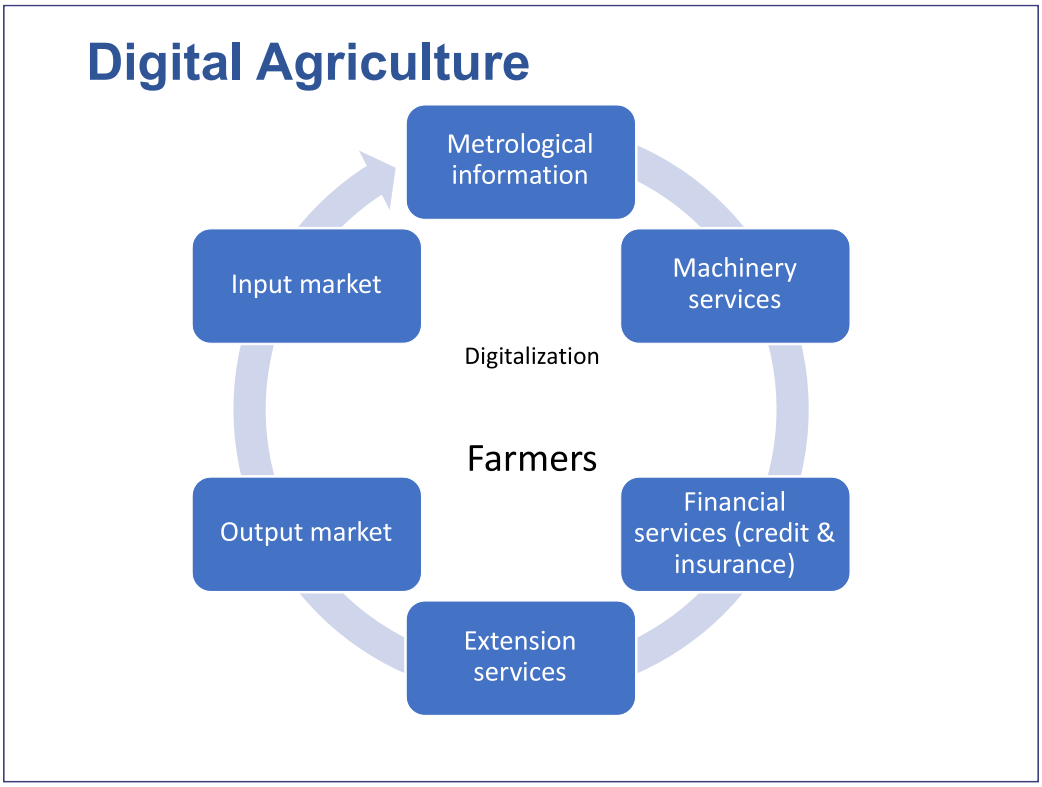
9

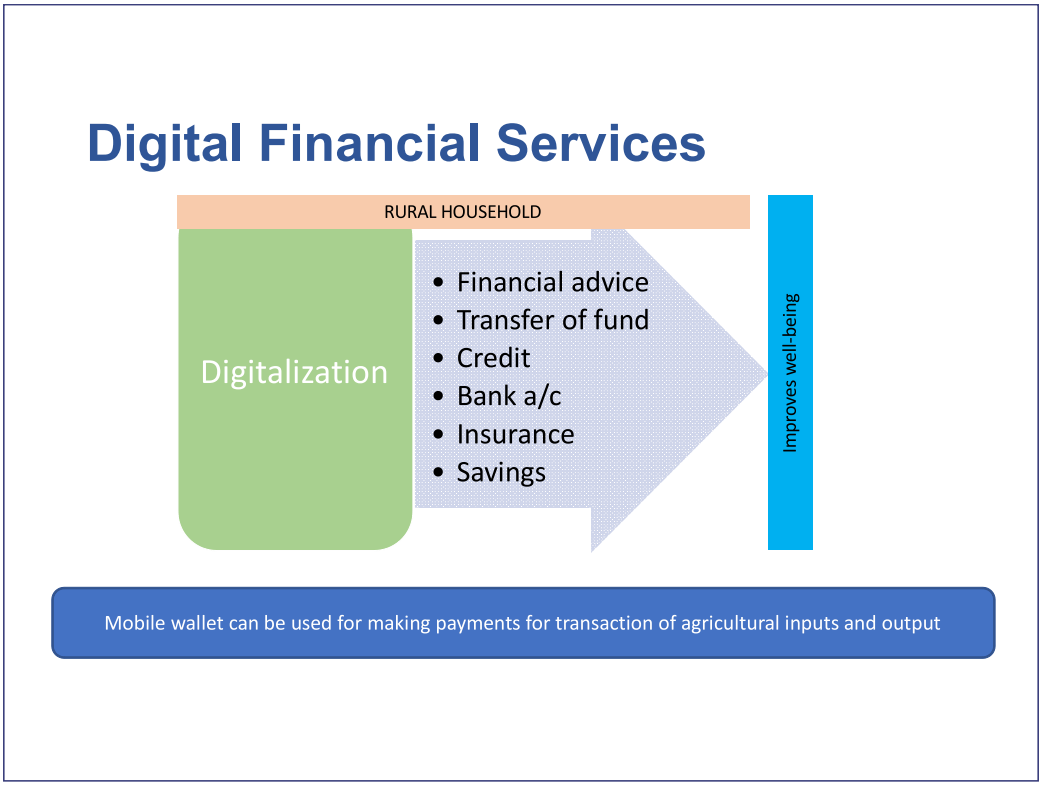
ADBInstitute

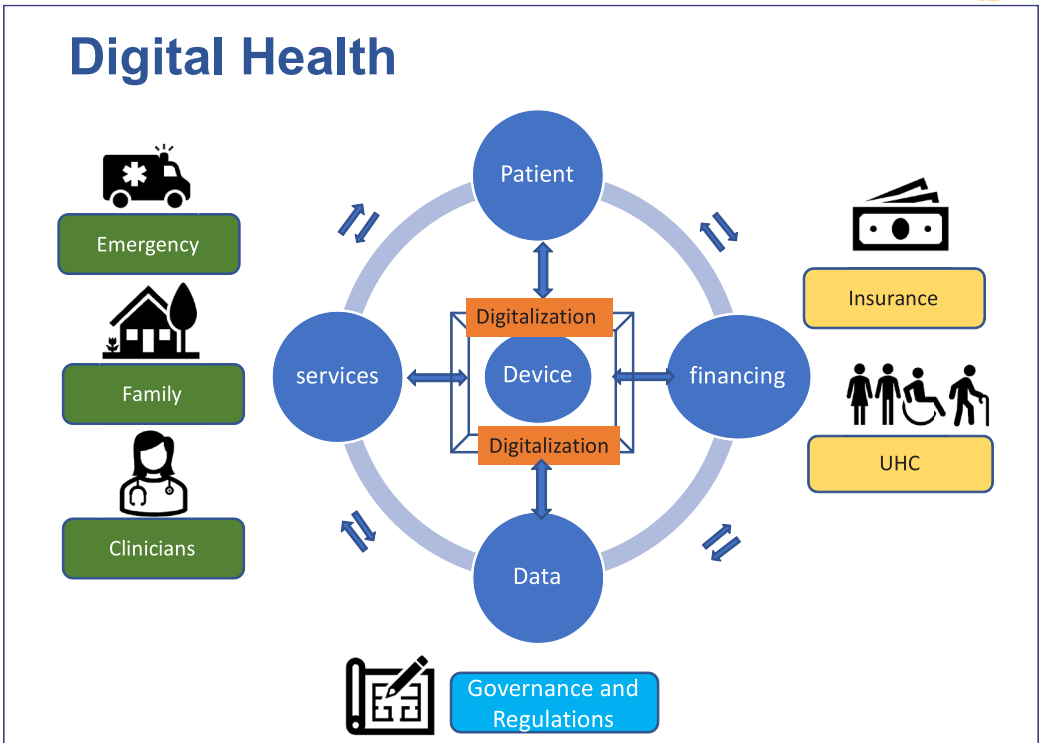
Digital education

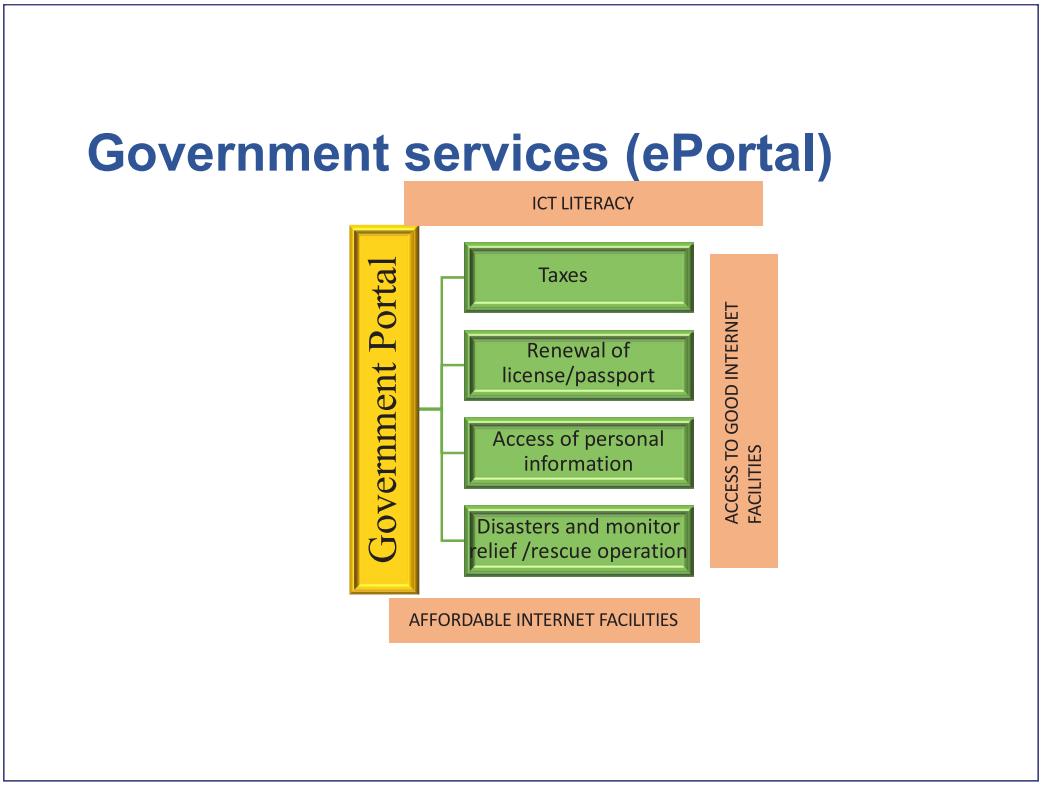


Keynote Speech



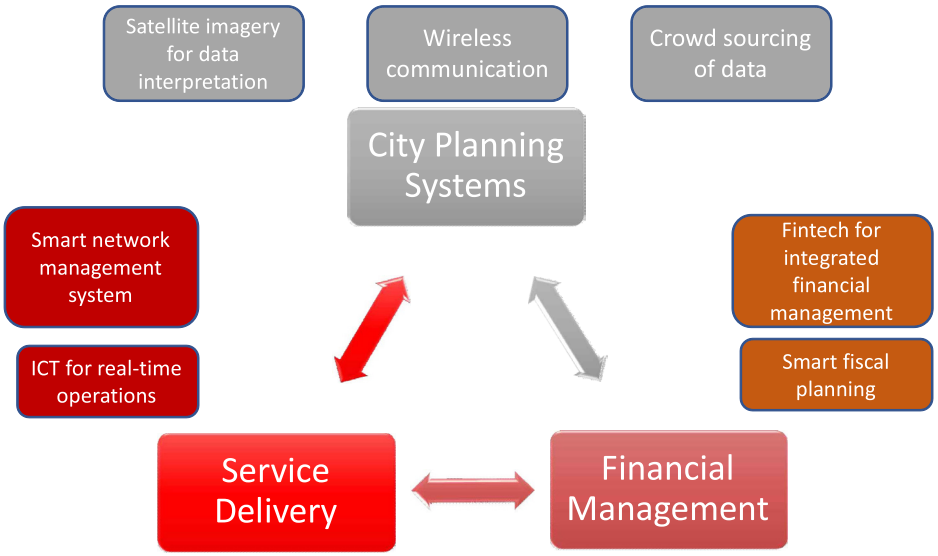



Digital Health
Emergency
Family
Clinicians
Patient
Digitalization
services
Device
financing
Digitalization
Data
Insurance
UHC
Governance and Regulations


Government services (ePortal)
ICT LITERACY
Government Portal
Taxes
Renewal of license/passport
Access of personal information
Disasters and monitor relief /rescue operation
ACCESS TO GOOD INTERNET FACILITIES
AFFORDABLE INTERNET FACILITIES

Keynote Speech

Digital Solutions for Smart-City Development



Circular Economy and Digitalization

- **Transitioning from a linear to circular economy** will help to significantly reduce GHG emissions and address many of the SDGs
- Digitalization can help businesses gain a better view of their supply chains to reduce environmental impacts, while improving profits and competitiveness
- Role of **governments** and **developed economies**:
  - Governments can drive circular transition by **providing incentives to spur new business models, technology transfer and design innovation**, and penalties to curb the worst practices in waste generation and environmental impact
  - **Leapfrogging** – It is critical for developed economies to share knowledge and advanced technologies to developing economies to leap over the resource intensive-path to development

Positive Impacts of digitalization 1

- Enhancing efficiency gains
  - reducing travel/commuting time
  - reducing the barriers to market entry for firms
  - regional and global economic integration
    - including via international capital flows and trade dynamics
  - enhancing innovations through cross-fertilization of ideas (cf. f2f)
- Contributing to inclusive economic development
  - Enhancing financial inclusion
  - Improving access to market information, technological information, expert skills, and finance
- Strengthening resilience
  - Enhancing disaster prevention
- Contributing to environmental sustainability
  - reducing GHG emission from the transport sector
  - facilitating circularity
- Ensuring a continued shift toward a more digital economy

Positive Impacts of digitalization 2

- Strengthening resilience
  - Enhancing disaster prevention
  - Facilitating infection prevention
  - Speeding up natural disaster/pandemic recovery
- Contributing to environmental sustainability
  - reducing GHG emission from the transport sector
  - facilitating circularity
- Ensuring a continued shift toward a more digital economy

Challenges arising from digitalization

- Cyber risks
- Data privacy
- Post truth, demagogue
- Digital divide
- Monopolization of market
  - Anticompetitive conducts
  - Monopoly or Democracy
- BEPS

International cooperation

- Addressing global digital divide
- Leveraging regional and global economic integration
- International tax cooperation
- Trade war
- WTO reform

Innovation Systems, Science Policies, Space Policies

- **Fundamental shift is needed from national to international systems**

Thank you for your attention!

2022 KDI Global Forum on Development Cooperation

Digital Policies and Global Cooperation for Sustainable Development

Special Session : Presentation 1

Regional Digital Trade Cooperation – Australia's Experience

Ben Cas

Acting Assistant Secretary,
Digital Trade and New Technologies Branch of the Free Trade Agreements and Stakeholder Engagement Division,
Department of Foreign Affairs and Trade, Australia

Australian Government
Department of Foreign Affairs and Trade

REGIONAL DIGITAL TRADE COOPERATION - AUSTRALIA'S EXPERIENCE

Ben Cas, Acting Assistant Secretary
Digital Trade and New Technologies Branch, Free Trade Agreements and Stakeholder Engagement Division

AUSTRALIA'S EXPERIENCE WITH REGIONAL DIGITAL ECONOMIC COOPERATION

Overview

- Why digital trade?
- Australia's Digital Trade Strategy
- ASEAN Digital Trade Standards Initiative

2

SPECIAL SESSION : PRESENTATION 1

WHAT IS 'DIGITAL TRADE'?

Imports and exports of:

- goods sold over the internet including through ecommerce platforms
- 'content': software, books, music, films, apps
- digitally-enabled services: online consultancy services, legal services, education

Electronic facilitation of trade in goods

Transmission of data across borders to support business activities and as a commodity

3

WHY DOES DIGITAL TRADE MATTER TO AUSTRALIA?

Increasingly important to Australia's economy

For business:

- access to customers / markets – including new opportunities for SMEs
- improved productivity and reduced cost

For consumers: choice, cost and convenience

4

SPECIAL SESSION : PRESENTATION 1

WHY ARE DIGITAL TRADE RULES IMPORTANT?

Modern business is increasingly becoming digital

Digital trade rules provide certainty, stability and build trust in the online environment, allowing innovation and growth

Counter rising digital protectionism and support an open, secure and free internet

Support Australia's interest in a global rules based order

5

DIGITAL TRADE STRATEGY

Framework for Australia to maximise economic growth by shaping an enabling environment for digital trade.

Guides Australia's practical actions as a leader in digital trade.

6

SPECIAL SESSION : PRESENTATION 1

DIGITAL TRADE STRATEGY

Types of rules:

- Trade facilitation
- Trust
- Data flows and localisation
- Cooperation

7

DIGITAL TRADE STRATEGY

Three key actions:

- Advocate
- Negotiate
- Support

8

SPECIAL SESSION : PRESENTATION 1

COOPERATION WITH ASEAN ON DIGITAL TRADE STANDARDS

Framework for Australia and ASEAN to cooperate on international standards that promote digital trade

Promote awareness of international standards and address key factors which enable and inhibit digital trade

9

COOPERATION WITH ASEAN ON DIGITAL TRADE STANDARDS

Aims to build regional regulatory consistency on digital trade

Complements existing ASEAN priorities on the digital economy

10

SPECIAL SESSION : PRESENTATION 1

2022 KDI Global Forum on Development Cooperation

Digital Policies and Global Cooperation for Sustainable Development

Special Session : Presentation 2

Korea-ASEAN Standards Cooperation Network

Heejin Lee

Professor,
Graduate School of International Studies,
Yonsei University

ASEAN-Korea Standards Cooperation

Heejin Lee
The Graduate School of International Studies at Yonsei University
and the Center for International Standardization
21 October, 2022
2022 KDI Global Forum on Development Cooperation

1

Outline

1. Why Standards Cooperation?
2. Standards Cooperation in ASEAN
3. A Way Forward

2

1. Why standards cooperation?

- 'Master Plan on ASEAN Connectivity (MPAC) 2025'
  - A vision "a seamlessly and comprehensively connected and integrated ASEAN"
  - Regional integration, single market
  - Standards: the foundation for realizing the vision
- Leverage for economic development
  - To participate in the global supply chain: A tool for innovation & learning
  - To innovate and catch-up (Wang et al., 2014)
- Increasing need for data and digital standardization across ASEAN
  - Digital transformation and Smartization (smart city, smart factory, etc.)

3

Why standards cooperation?

- Enhanced 'interoperability' and reduced 'trade barriers'
  - Contribute to growing trade and investment between ASEAN and Korea
- International cooperation
  - The issue of technical standards upgraded to strategic 'Geopolitics'
    - ← U.S.-China technology rivalry, with standards competition being a pillar (e.g. 5G and Open RAN)
  - Developing countries (Global South) would be 'digital deciders' in digital standards and digital trade (Chatham House, 2022).
  - Cooperation between ASEAN and Korea → High voice

➔ 'ASEAN-Korea Standardization Joint Research Center' in the Co-Chairs' Statement of the 2019 ASEAN-ROK Commemorative Summit

4

2. Standards cooperation in ASEAN

- ARISE Plus (EU)
  - 'ASEAN Regional Integration Support from the EU' (2017-2022).
  - Long-term projects (APRIS I & II 2003~2010; ARISE 2013-2017): Continuity in content and goals
  - ASEAN's economic integration through trade facilitation and removal of non-tariff barriers
  - European Commission (EuropeAid) from the European Development Fund: 22.5 million euros
- ASEAN-USAID IGNITE
  - 'ASEAN-USAID Inclusive Growth in ASEAN through Innovation, Trade and E-Commerce'
  - 'ASEAN Connectivity through Trade and Investment (ACTI)' until 2018
  - Joint project of USAID, U.S. Department of State & ASEAN (2018-2023) with $15 million
  - Aim to implement standards, rules, and procedures that are harmonized with international standards
  - Aim promote digital services that are aligned with international standards

5

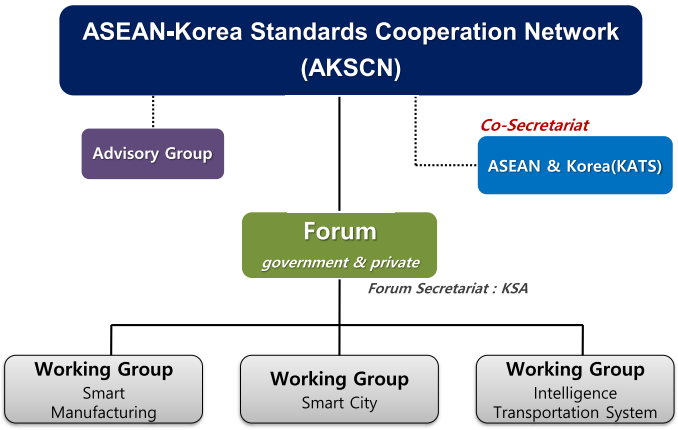
Standards Cooperation in ASEAN

- ASEAN-Australia Digital Trade Standards Initiative
  - Announced at the ASEAN-Australia Special Summit in 2018
  - Collaboration between the ACCSQ, ACCEC, Australian Government's Department of Foreign Affairs and Trade, Department of Industry, Innovation and Science and Standards Australia
  - To promote standards harmonization, technical alignment and regulatory cooperation
  - To reduce the costs of exporting and importing for domestic businesses
- ISCP (Korea)
  - 'International Standards Infrastructure Cooperation Program'
  - Technical assistance and capacity building program from 2011 by Korea Agency for Technology and Standards
  - To enhance standards capacities and strengthen cooperative relationships with standards organizations of partner countries (including ASEAN)
  - Bilateral projects with a partner country; about 1 billion Korean won per year (approximately $800,000/year) for about 10 projects yearly

6

3. A way forward

- Since the inclusion of 'ASEAN-Korea Standardization Joint Research Center' in the 2019 ASEAN-ROK Commemorative Summit
  - Feasibility study conducted
  - AKSCN proposed, discussed
- New initiatives in preparation
  - ASEAN-Korea standards community
  - Digital standards/trade AMP
  - Future generation



7

References

- Chatham House. (2022). Digital Trade and Digital Technical Standards: Opportunities for strengthening US, EU and UK cooperation on digital technology governance.
- Wang, P., J. Kwak and H. Lee (2014). "The latecomer strategy for global ICT standardization: Indigenous innovation and its dilemma." Telecommunications Policy. Vol. 38. No. 10, pp. 933-943.

8

2022 KDI Global Forum on Development Cooperation

Digital Policies and Global Cooperation for Sustainable Development

Special Session : Presentation 3

Digital Economy Cooperation in the Asia – Pacific Region

Sivaram Superamanian

Head of Digital Economy Division,
ASEAN Secretariat

Digital Economy Cooperation in the Asia – Pacific Region

ASEAN Digital Economy

Sivaram Superamanian
The ASEAN Secretariat
21 October 2022

TABLE OF CONTENT

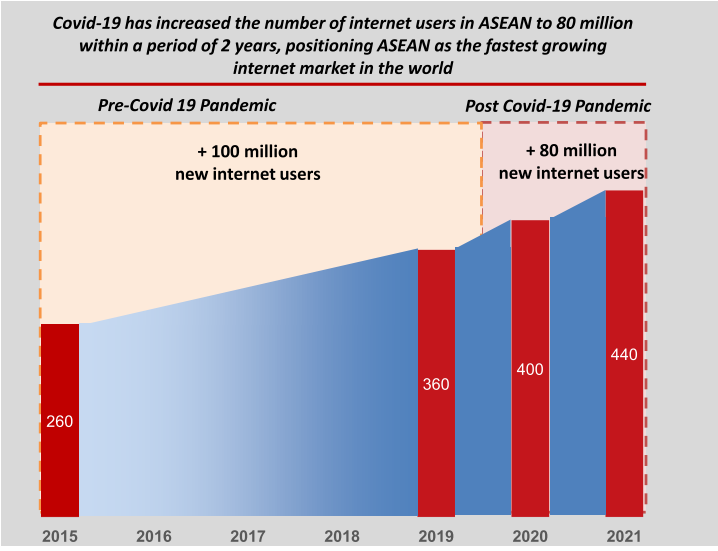
1. Key opportunities and challenges of ASEAN Digital Economy Integration

2. ASEAN's Digital Economy Focus Areas and Priorities

SPECIAL SESSION : PRESENTATION 3

TABLE OF CONTENT

The Covid-19 pandemic has accelerated the pace of digital transformation in ASEAN, with an exponential growth in new internet and digital users within a period of 2 years



Increase of

80 million

new ASEAN **internet users** within a period of **2 years**

Increase of

60 million

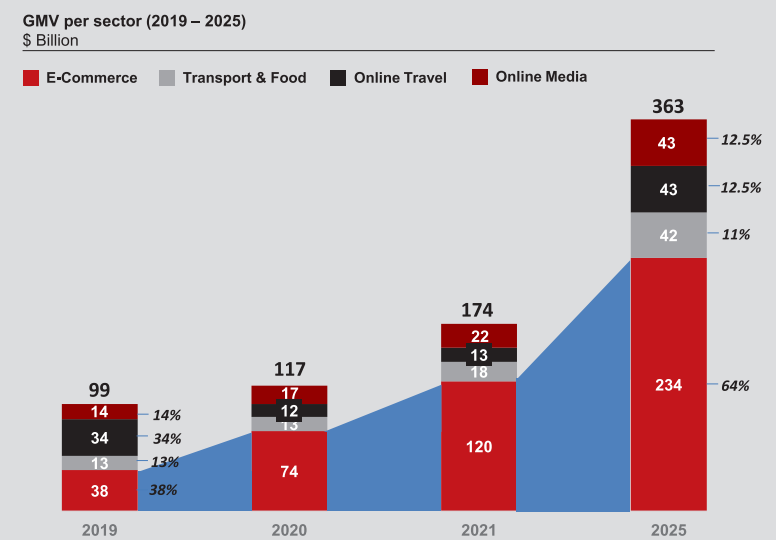
new ASEAN **digital consumers** within a period of **2 years**

4

Source: e-Conomy SEA, 2016 and e-Conomy Sea 2021
Note: e-Conomy Sea 2016 and 2021 covers 6 countries namely Vietnam, Thailand, Philippines, Malaysia, Singapore and Indonesia. The statistics on digital consumres for 2021 covers from Jan – June 2021

SPECIAL SESSION : PRESENTATION 3

Among the key sectors, e-commerce will lead the digital economy with its GMV almost doubling every year



The increase in digital consumers is expected to contribute

$363 billion

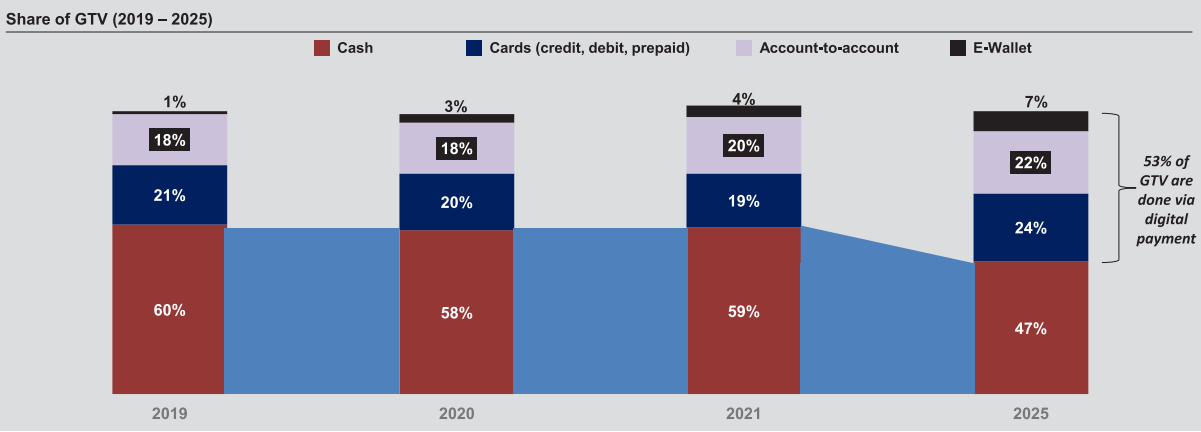
of Gross Merchandise Value (GMV) by 2025 and

64% of the GMV is contributed by **e-commerce activities**

Source: e-Conomy SEA, 2016 and e-Conomy Sea 2021
Note: e-Conomy Sea report covers 6 countries namely Vietnam, Thailand, Philippines, Malaysia, Singapore and Indonesia.

5

The exponential growth in the e-commerce will drive the development in digital financial services



Digital Payment is expected to increase to of Gross Transaction Value (GTV) **by 2025** **53%**

Source: e-Conomy SEA, 2016 and e-Conomy Sea 2021
Note: e-Conomy Sea report covers 6 countries namely Vietnam, Thailand, Philippines, Malaysia, Singapore and Indonesia.

6

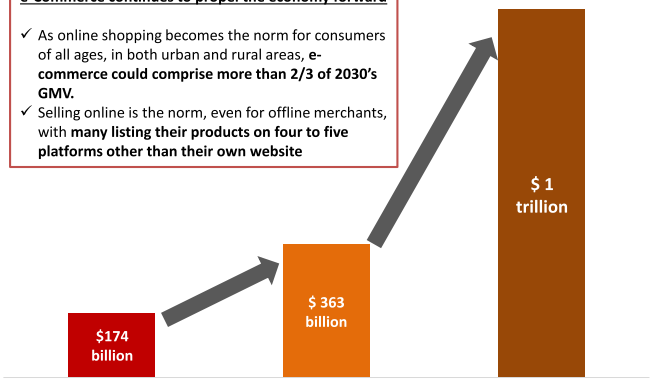
SPECIAL SESSION : PRESENTATION 3

The acceleration of digital transformation has created the new norm, which leads to the Digital Economy

The change in the new way of life has led ASEAN to enter the "Digital Decade" and has the potential for the digital economy to reach USD 1 trillion GMV by 2030…

e-Commerce continues to propel the economy forward

- ✓ As online shopping becomes the norm for consumers of all ages, in both urban and rural areas, **e-commerce could comprise more than 2/3 of 2030's GMV.**
- ✓ Selling online is the norm, even for offline merchants, with **many listing their products on four to five platforms other than their own website**



…and this has been an impetus for the ASEAN member states to develop their own digital economy strategy and masterplan

Singapore *Brunei* *Cambodia* *Viet Nam* *The Philippines*

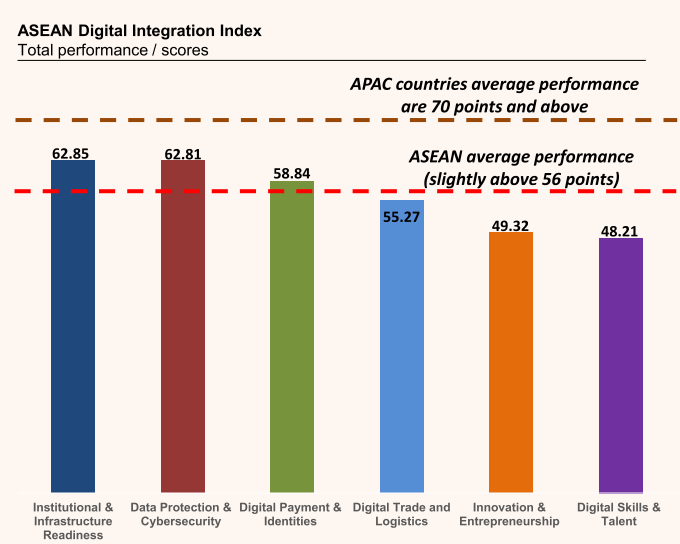
Malaysia *Myanmar* *Indonesia*

Lao PDR *Thailand*

Source: e-Conomy SEA, 2016 and e-Conomy Sea 2021; ASEAN Secretariat Analysis
Note: e-Conomy Sea report covers 6 countries namely Vietnam, Thailand, Philippines, Malaysia, Singapore and Indonesia.

7

While the digital economy opportunities are huge, the ASEAN Digital Integration Index (ADII) study indicates that the overall performance on digital integration is lower than other ASIA Pacific (APAC) countries



Digital Integration Index Findings

ADII Pillars	Current Performance
• Institutional & Infrastructural Readiness	***Competitive*** *with APAC countries*
• Data Protection & Cybersecurity	***Need improvements*** *in promoting trust and safety in the digital space*
• Digital payments and national digital identity	*Still at* ***nascent stage***
• Digital trade and logistics • Innovation and entrepreneurship • Digital skills and talent	*ASEAN* ***main challenges*** *and requires* ***significant improvements***

Source: ASEAN Digital Integration Index (ADII), August 2021
Note: The data sets that are used with data published from at east 2017 onwards; APAC countries includes Australia, China, Japan, New Zealand and South Korea

8

SPECIAL SESSION : PRESENTATION 3

TABLE OF CONTENT

To further accelerate the pace of digital transformation for economic growth, the ASEAN Leaders set a vision for an ASEAN Digital Economy and adopted the Bandar Seri Begawan Roadmap (BSBR)

20th ASEAN Economic Community Council on 18 October 2021

Endorsed The BSSR

Key objectives of BSSR

1. Articulate a strong commitment to **transform the ASEAN region into a leading digital economy**

2. Work with **single coherent document, The ASEAN Digital Economy** with key areas of actions, flagship initiatives, specific targets and accountability.
   - A single coherent document put to an **end the silo approach in ASEAN digital cooperation** and secured a more **coordinated approach across sectoral bodies**

3. Setting the foundation for **regional digital integration** and **paving the way for negotiations for an ASEAN Digital Economy Framework Agreement (DEFA) by 2025**.

10

Source: Bandar Seri Begawan Roadmap: An Asean Digital Transformation Agenda to Accelerate ASEAN's Economic Recovery and Digital Economy Integration

SPECIAL SESSION : PRESENTATION 3

A three (3) prog approach and several strategic documents have also been adopted as part of ASEAN's journey on digital economy

1 Digital transformation for ASEAN *(holistic approach)*

The Bandar Seri Begawan Roadmap

An ASEAN Digital Transformation Agenda to Accelerate ASEAN's Economic Recovery and Digital Economy Integration

ASEAN Digital Masterplan 2025

Provision of high quality and ubiquitous connectivity throughout ASEAN

ASEAN Cybersecurity Cooperation Strategy 2021-2025

Implementation of the Norms of Responsible State Behaviour in Cyberspace as recommended by the 2015 UNGGE report

2 Sectoral-level support

ASEAN Consolidated Strategy on 4IR

Policy guidance in building the ASEAN Digital Community across Technological Governance and Security, Digital Economy and Digital Transformation Society

3 Enterprise-level support

ASEAN SME Academy

Online learning platform

Multi lingual support – Indonesia, Thai and Vietnamese

21 Content providers

Meta · WIPO · Google · aws

> 10,000 *Registered users for Ver 1 & 2*

Go Digital ASEAN

Micro Enterprises: **> 180,000**

Job Seekers: **> 40,000**

Participated in digital skills trainings, mostly underserved communities in rural areas

77% Moved their business online

58% Employed within 2 months or less

ASEAN Access

Online portal for information on trade and market access

ASEAN Access Info	*Access to trade and market info*
ASEAN Access Match	*Virtual matchmaking events, webinars and online networking*
ASEAN Access Policy	*Strengthening of policies via public-private dialogues*

Source: ASEAN Analysis

11

Key focus areas of ASEAN's Digital Economy

Digital Economy Focus Areas (non-exhaustive)

Digital trade and standards

- The digital trade in ASEAN needs to be enhanced with the use of **digital technologies across the trade and custom processes by using the ASEAN Single Window** as a center.
- Develop globally accepted standards to ensure interoperability in different technical platforms.

Digital payment and Identification

- Digital payment have become increasingly prevalent. It is important to **develop an ASEAN interoperable cross-border real-time retail payment systems link and the Unique Business Identification Number (UBIN)** which are interoperable across public and private sector transactions across ASEAN.

Cybersecurity and Data Protection

- The digital integration requires **consumer and business data to flow safely, securely, and responsibly across the ASEAN countries.** A periodic review of ASEAN Framework on Digital Data Governance is important to ensure it remain suitable for the digital economy.

Digital skills and talent

- **Strengthening ASEAN human resources** to equip individuals with the skills and knowledge to participate confidently in digital transformation and reduce capacity gaps among countries in the region.

12

SPECIAL SESSION : PRESENTATION 3

THANK YOU

13

2022 KDI Global Forum on Development Cooperation

Digital Policies and Global Cooperation
for Sustainable Development

Speaker Presentation 1

Legislation on Transformation for Green Digital Economy – focusing on Smart Green Industrial Complex –

Eunhye Jang
Senior Research Fellow,
Korea Legislation Research Institute

Legislation on Transformation for Green Digital Economy

- focusing on Smart Green Industrial Complex -

2022. 10. 21.

Eunhye Jang(Korea Legislation Research Institute)

Contents

SPEAKER PRESENTATION 1

1. The Government's Role in Transition to Green-Digital Economy

1. The Government's Role in Transition to Green-Digital Economy

"Green - Digital"

Two Pillars of the Korean Version of the New Deal

"Environment-Friendly" + "Convergence of Cutting Edge Technologies"

Transition to Green-Digital Economy

Simultaneous Consideration of
"Deregulation" and "Heavier Regulation"

The Government's Leadership Required

4

1. The Government's Role in Transition to Green-Digital Economy

Deregulation ⟷ Simultaneous Consideration ⟷ **Heavier Regulation**

<Transition to the Digital Economy >

Revitalization of high-tech industry

necessary to respond to issues and situations that the existing administrative management system has not expected

Trying to easy various regulations through the introduction of regulation-exemption

<Transition to the Green Economy>

Transition to an eco-friendly economic structure

Strengthen management and supervision of existing pollutant emission facilities and introduce a new management system, etc.

- in order to transition to a green-digital economy, the government should be able to rationally review "regulatory measures" and operate them appropriately.

5

2. The Roles of Industries in The Transition and Model Example: The Smart Green Industrial Complex

SPEAKER PRESENTATION 1

2. Example of Transition to the Green-Digital Economy: Smart Green Industrial Complex

<Smart Green Industrial Complex>

<Smart Industrial Complex>

<Existing Industrial Complex>

- Innovation in manufacturing
  - Promoting capability of business entities

- build a digital infrastructure
- Create a new industry/support for start-ups

- The digital new deal: build logistics/integrated control center
- Green new deal: high energy efficiency, environment-friendly industrial complex

<<Expansion of the concept of industrial complex innovation project: refer to "Smart Green Industrial Complex", the website of Korea Industrial Complex Corporation>

"Smart Green Industrial Complex

Beyond the smartization of individual companies, which is the basic stage of manufacturing innovation, and the smartization of industrial complexes, which is the development stage, an innovative industrial complex that combines digital and green, which is an advanced stage.

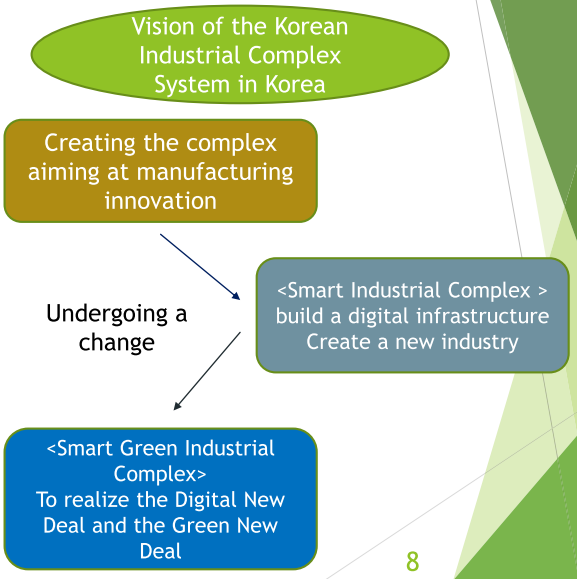
7

2. Example of Transition to the Green-Digital Economy: Smart Green Industrial Complex

- The Korean Smart Green Industrial Complex Project is still in **"planning and initial implementation stages"**

- It is too early to introduce the transition to green-digital economy as a completed project

- Significances of the project is that
- One of the areas clearly showing the vision of the industry's role for transition to the green-digital economy



8

3. Status and Prospect of Legislation for Green-Digital Economy Transformation in Korea

3. Status and Prospect of Legislation for Green-Digital Economy Transformation in Korea

Law

- Sign and a mean to present clear standards of deregulation and heavier regulation

Laws and acts relevant to the green-digital economy in Korea

- Framework Act on Carbon Neutrality and Green Growth For Coping with Climate Crisis
- Industrial Sites and Development Act
- Framework Act on Administrative Regulations
- Industrial Convergence Promotion Act
- And others

10

SPEAKER PRESENTATION 1

3. Status and Prospect of Legislation for Green-Digital Economy Transformation in Korea

Framework Act on Carbon Neutrality

- "Policy Measures For Green Growth"
  - ➢ Development of Cluster and Complex of Green Technology and Green Industries

Industrial Sites and Development Act

- Definition of "Smart Green Industrial Complex"
- Designation of Smart Green Industrial Complex

- Reasonable rearrangement of regulation means are prerequisite for successful settlement and spread of the smart green industrial complex
- Vitalization of a new growth engine through deregulation,
- At the same time, heavier regulations should be placed to meet environmental requirements

11

3. Status and Prospect of Legislation for Green-Digital Economy Transformation in Korea

➢ Additional institutional support

➢ Use of Reasonable Regulatory Measures

Existing industrial complexes created based on Industrial Sites And Development Act

- Clustered with energy intensive plants and facilities with high greenhouse gas emission and

transition

- Transforming the completed industrial complex currently in operation

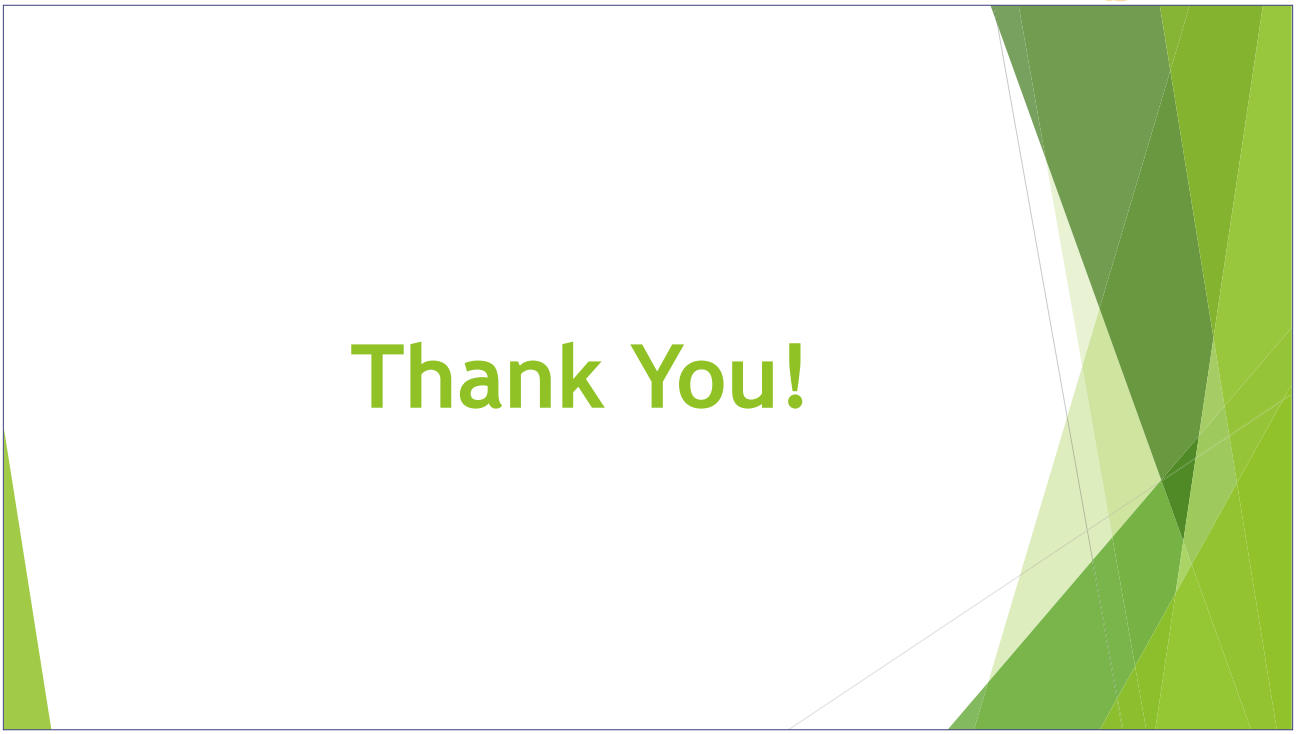
- Overcome environmental weakness & transition to the green and digital economy

+

Create a brand new Smart Green Industrial Complex

12

SPEAKER PRESENTATION 1



2022 KDI Global Forum on Development Cooperation

Digital Policies and Global Cooperation for Sustainable Development

Speaker Presentation 2

Recent Challenges and Opportunities in Global Value Chain (GVC)

Kun Soo Park

Professor,
Department of Industrial Engineering,
Seoul National University

Recent Challenges and Opportunities in GVC

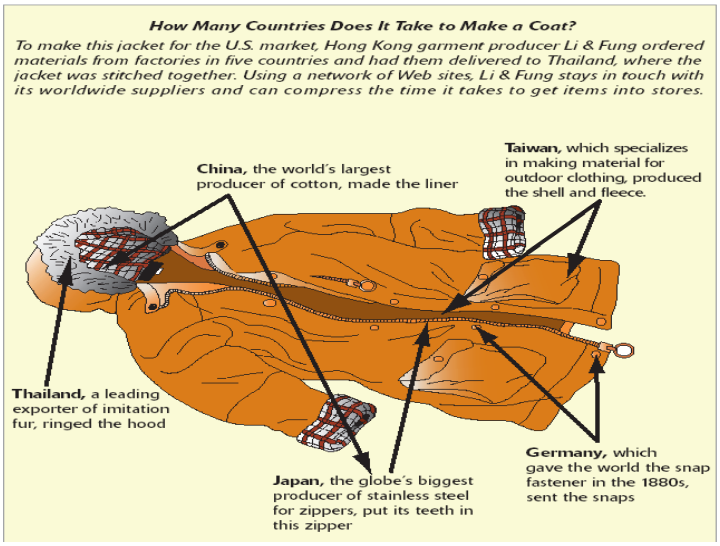
October 2022
KDI Global Forum

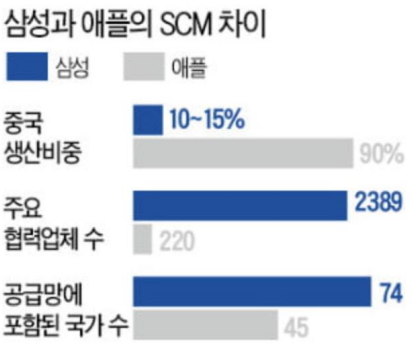
Kun Soo Park
Department of Industrial Engineering
Seoul National University

ENGINEERING
서울대학교 공과대학 산업공학과

Challenges in GVC

Globalization in Production (GVC) has been successful!





ENGINEERING
서울대학교 공과대학 산업공학과 1

SPEAKER PRESENTATION 2

Challenges in GVC

Recent Challenges in GVC: Natural Disasters

The global supply chain: So very fragile (Dec 21, 2011) FORTUNE

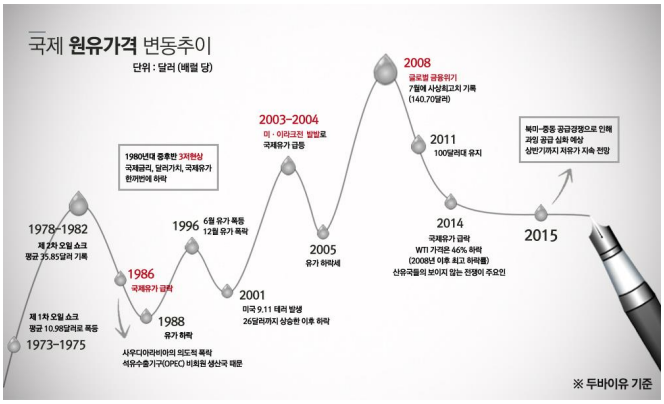
- "Manufacturers have spent years building low-cost global supply chains. Natural disasters are showing them how delicate those networks really are.."
- "Big manufacturers developed a multinational network of specialists to supply them with parts and to make sure those components arrived at assembly plants at the moment they were needed. When things go as planned, the system benefits everyone in the chain" ⇒ If not?

ENGINEERING 서울대학교 공과대학 산업공학과

Challenges in GVC

Recent Challenges in GVC: Fluctuations in commodity prices

Crude oil prices in Korea

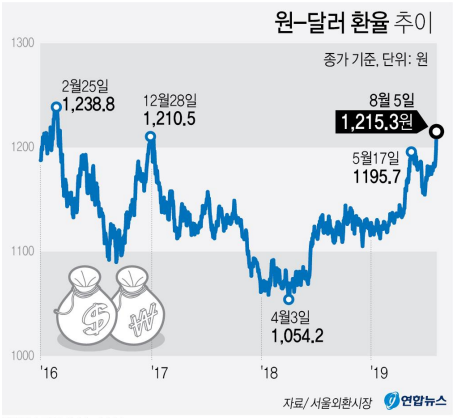


ENGINEERING 서울대학교 공과대학 산업공학과 3

Challenges in GVC

Recent Challenges in GVC: Fluctuations in Exchange Rate

Won/Dollar FX rate (1989-2007, 2016~2020)



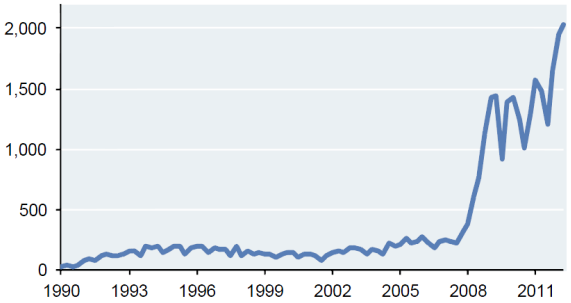
박영석 기자 / 20190805
트위터 @yonhap_graphics, 페이스북 tuney.kr/LeYN1

Challenges in GVC

Recent Challenges in GVC: Global Financial Crisis

2008.Sep.15 Lehman Brothers bankruptcy

National bankruptcies in Spain
Number of companies filing each quarter



Source: INE.

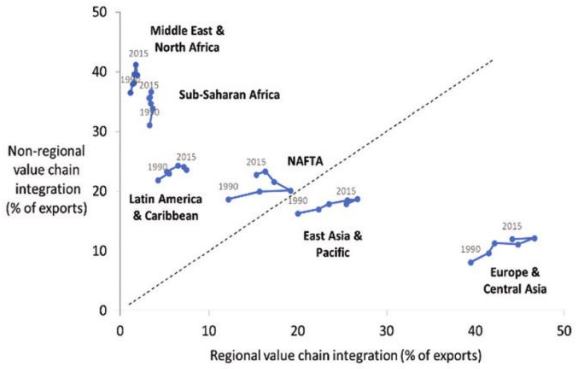
SPEAKER PRESENTATION 2

Challenges in GVC

Recent Challenges in GVC: Social and Political Forces toward RVC

GVCs are rapidly reorganized by regional blocks (RVC).

- EU, NAFTA, East Asia, etc.
- But this would come at a high efficiency cost
- Fewer options to substitute between suppliers or buyers in case of a disruption for RVC.



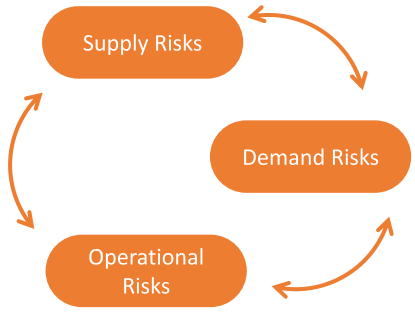
| Decomposition of Global Value Chain (GVC) participation by major geographic regions (a) and by type (b). Source: Authors calculations using GVC database from Borin and Mancini (2015, 2019). Breakdown of regional and non-regional value chain participation provided by Borin and Mancini using a novel extension of dataset available on request. Note: Points above the 45° indicate an increase in GVC participation.

ENGINEERING 서울대학교 공과대학 산업공학과 6

Challenges in GVC

Paradigm Shift in GVC Management

Increased variability in GVC call for systematic risk management



External Risks	**Political Risks**	Political Instability, Trade restrictions, Terrorism, Piracy, Lawsuits, etc.
	Economic Risks	Interest rate fluctuation, Exchange rate fluctuation, Economic recession, etc.
	Social Risks	Labor shortages, Ethics, Strikes, etc.
	Environmental Risks	Natural Disasters, Pandemics, etc.
Internal Risks	**Operational Risks**	Forecast errors, Quality problems, Shortages, Capacity constraints, etc.
	Strategic Risks	Business process errors, etc.
	Technological Risks	IT disruptions, Cyber security attack, etc.

ENGINEERING 서울대학교 공과대학 산업공학과 7

Challenges in GVC

Paradigm Shift in GVC Management

Investment in GVC risk management

- Companies are willing to invest more on supply chain resilience after COVID-19 pandemic.

Exhibit 2:
Supply-chain leaders expect to focus on resilience and digitization.

93%	Plan to **increase resilience** across the supply chain	53% Dual sourcing of raw materials 47% Increasing inventory of critical products 40% Near-shoring and increasing supplier base 38% Regionalizing supply chains
54%	Expect changes to **supply-chain planning** after COVID-19	58% Centralizing supply-chain planning 50% Retaining faster S&OP[1] cycle 60% Implementing advanced analytics
90%	Plan to increase digital **supply-chain talent** in-house	70% Reskilling today's labor force 55% Acquiring new talent from the labor market
11%	Face budget constraints in transforming supply chains	

[Source] McKinsey Survey: Resetting Supply Chains For The "Next Normal" (2020.10.20)
https://www.supplychain247.com/paper/mckinsey_survey_resetting_supply_chains_for_the_next_normal/risk_management

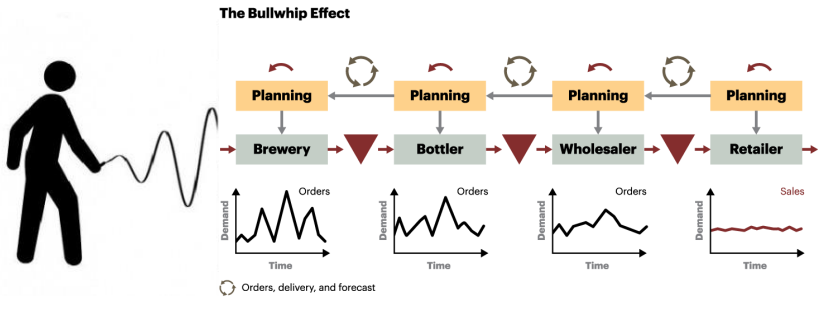
ENGINEERING 서울대학교 공과대학 산업공학과 8

Challenges in GVC

Bullwhip vs Ripple Effect

Bullwhip Effect

- The demand order variabilities in GVC are amplified as they move up the chain.



ENGINEERING 서울대학교 공과대학 산업공학과 9

SPEAKER PRESENTATION 2

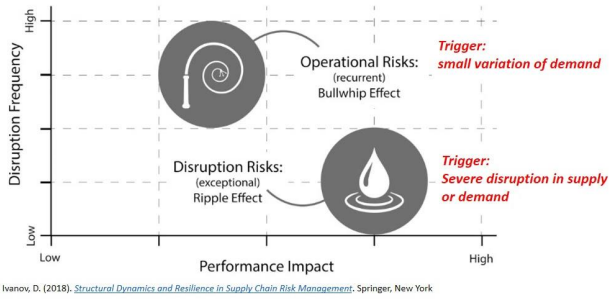
Challenges in GVC

Bullwhip vs Ripple Effect

Ripple Effect

- The impact of supplier's disruption escalates when they move down the chain.

6



[15] Ivanov, D. (2018). *Structural Dynamics and Resilience in Supply Chain Risk Management*. Springer, New York

[source] Ivanov (2019) Handbook of ripple effects in the supply chain

Challenges in GVC

Policy Implications

Governments can work jointly with firms on improving risk preparedness

(1) Applying proper risk mitigation strategies carefully

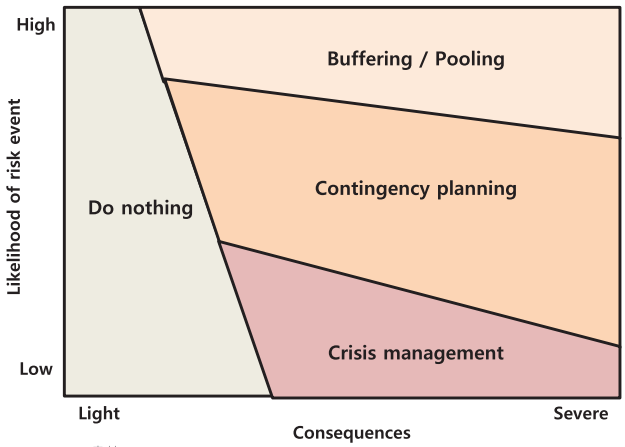
(2) Mapping the local and international players involved in essential logistic chains

(3) Developing stress tests for essential supply chains

Challenges in GVC

(1) Risk Mitigation Strategies

Risk mitigation strategy according to probability and consequences of risk events



[출처] Van Mieghem (2010) Handbook of integrated risk management in global supply chains

Challenges in GVC

(1) Risk Mitigation Strategies

Risk mitigation strategies for types of supply chain risk

- **Buffering/pooling**: require the firm to keep the physical resources ready for use when a risk event occurs when risk event is highly likely and consequences are not light
- **Contingent planning**: when the likelihood of risk events is moderate, secure the access to resource in times of need
- **Crisis management**: when risk events are rare but the consequence is severe, the above strategies still are insufficient for recovery
- **Do Nothing**

SPEAKER PRESENTATION 2

Challenges in GVC

(1) Risk Mitigation Strategies

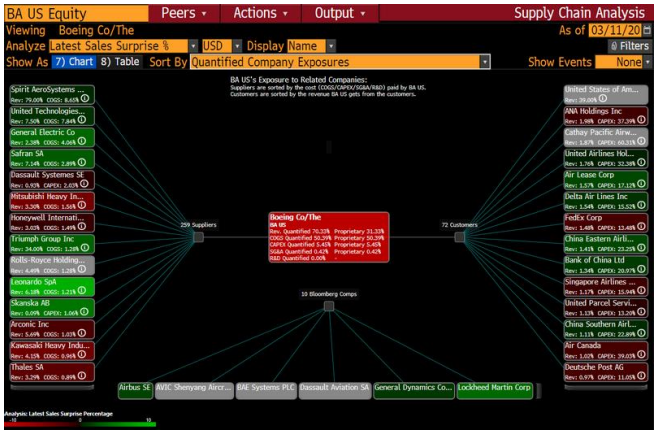
- Need to calibrate the optimal amount of stockpiles of essential goods
  - Too much stockpile is not only costly but also can magnify cyclicality.
  - Need to strike the optimal balance between benefits and costs

Challenges in GVC

(2) Mapping GVC Network and Players Therein

Ex. Bloomberg SPLC

- 23,000 firms worldwide
- More than 220,000 transactions



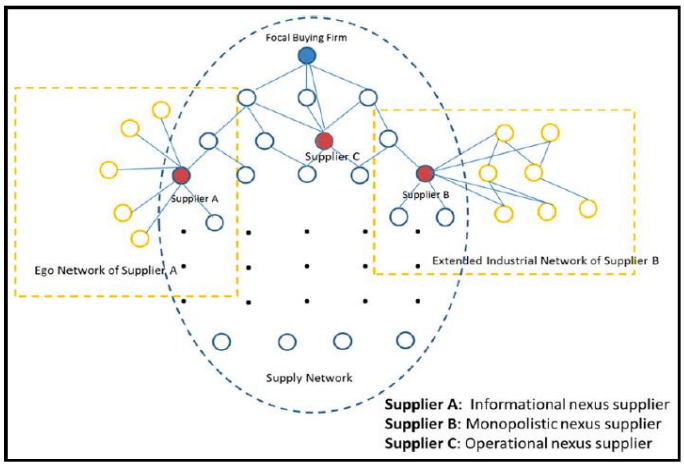
https://www.bloomberg.com/professional/blog/researching-supply-chain-exposures-how-to-analyse-coronavirus-related-risks/

Challenges in GVC

(2) Mapping GVC Network and Players Therein

Nexus Supplier (Shao et al, 2018)

- Big impact on supplier's disruption
- Can identify this systematically via network analysis



Challenges in GVC

(3) GVC Stress Test

Stress Test (Simchi-Levi and Simchi-Levi, 2020)

- Test the weak point in GVC
- Time-To-Recover(TTR) vs Time-To-Survive(TTS)
  - TTR: Time to recover GVC for full-functionality from disruption
  - TTS: Time to survive GVC for full-functionality after disruption

SPEAKER PRESENTATION 2

Challenges in GVC

3) GVC Stress Test

- **Spending vs profit loss**

  - Need to identify firms where Ford spends low but potential loss is high

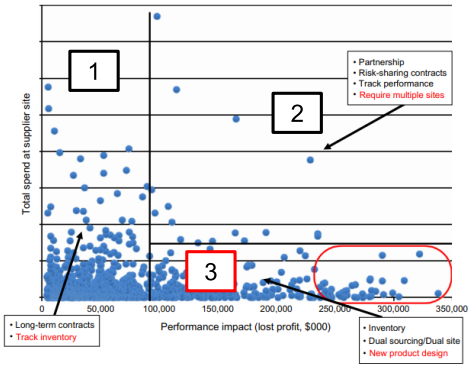
AUTOS

Ford's supply chain problems include blue oval badges for F-Series pickups

PUBLISHED FRI, SEP 23 2022-12:00 PM EDT | UPDATED FRI, SEP 23 2022-3:12 PM EDT

Michael Wayland
@MIKEWAYLAND

SHARE



Challenges in GVC

Take Aways: Political Challenges & Opportunities

Challenges

- Policies in general concerns only in national contexts while GVCs cross borders

Opportunities

- Facilitate substitution between alternative suppliers within GVC by reducing unnecessary heterogeneity of technical standards
- Foster advanced technologies (e.g., AI/ML & Big data) to improve visibility of GVC
- Develop GVC risk management system including early warning system

Challenges in GVC

Thank you for your attention!

Q&A

2022 KDI Global Forum on Development Cooperation

Digital Policies and Global Cooperation for Sustainable Development

Speaker Presentation 3

Strengthening Healthcare System through Smart Healthcare

Tae Hyun Kim

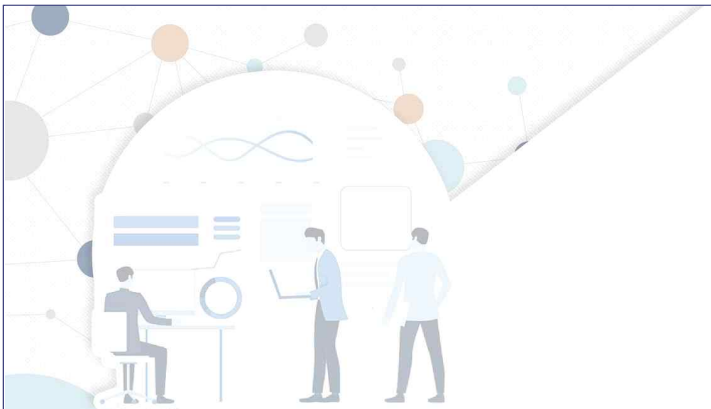
Professor,
Graduate School of Public Health,
Yonsei University

Smart Healthcare

Tae Hyun Kim, Ph.D.
Professor and Director of Dept. of Healthcare Management
Graduate School of Public Health
Yonsei University

2022.10.

1



01.

Introduction

2

SPEAKER PRESENTATION 3

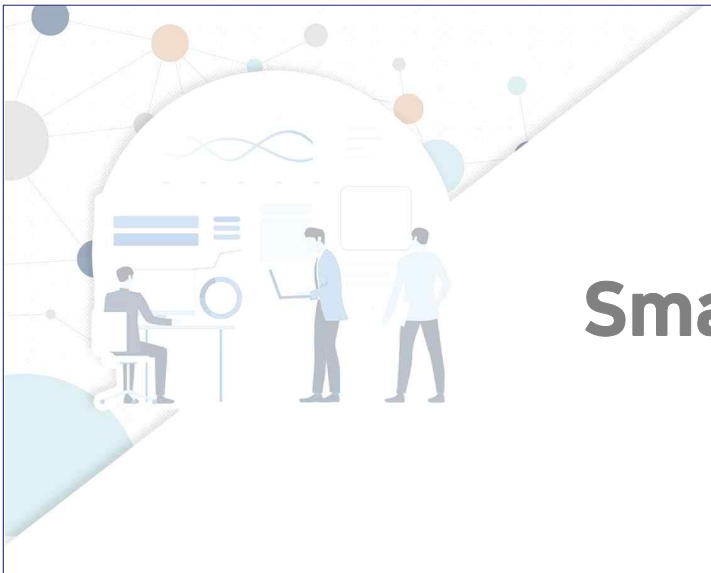
Background and Study Purpose

- Developing countries with lower health status and resources may benefit from smart healthcare to improve their health care systems.
- The purpose of this presentation is to examine the current status and infrastructure of smart healthcare of the countries, and to establish detailed measures to share knowledge and experiences of smart healthcare of Korea and other economically developed countries.

The presentation consists of the following contents:

i) definition and scope of smart healthcare;
ii) identification and diagnosis of development constraint factors in developing countries, and key examples;
iii) a few exemplary projects in low and middle income countries;
iv) suggestions and implications for knowledge sharing/development cooperation based on development experience in Korea.

3



02.

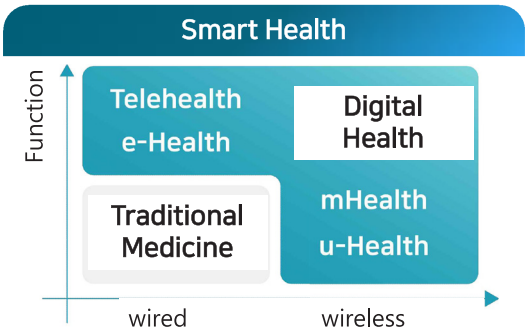
Smart Healthcare

4

Definition of Smart Healthcare

- A broad concept that converges information and communication technology (ICT) and healthcare
  ▲Personalization of healthcare services ▲Reduction of inefficiency
  ▲Improving patient access ▲Reducing costs ▲Pursuing quality improvement

- Includes both clinically validated and unvalidated services

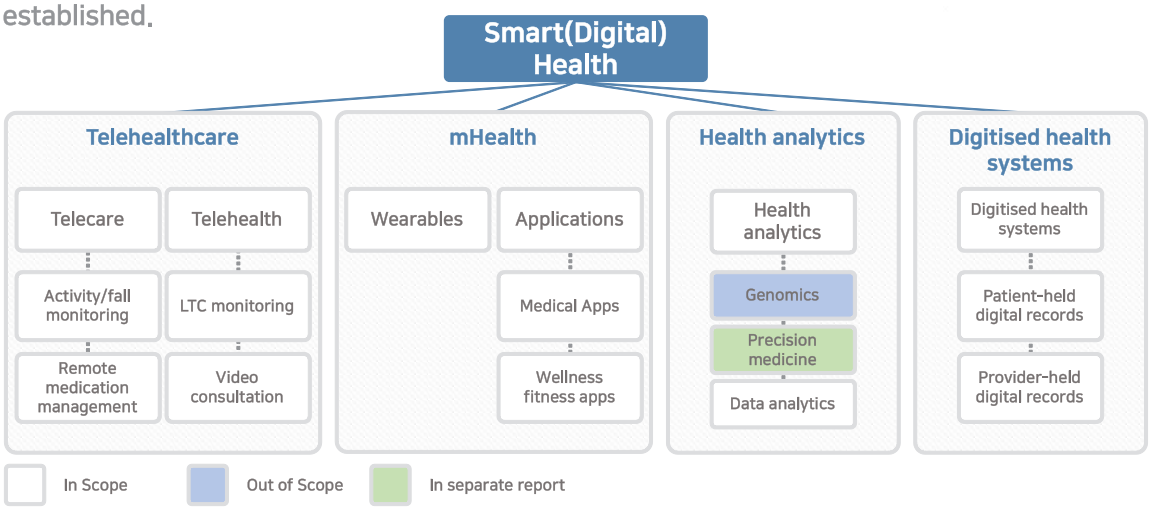


Source: Korea Creative Economy Research Network (KCERN)

5

Scope of Smart Healthcare

- Smart health is in the stage of forming a consensus among experts in related fields on terms and categories as the definition and detailed types are not clearly established.



** Source : Standing M, Hampson E. Digital health in the UK: an industry study for the office of life sciences. Monitor Deloitte. 2015. Figure 2.*

6

SPEAKER PRESENTATION 3

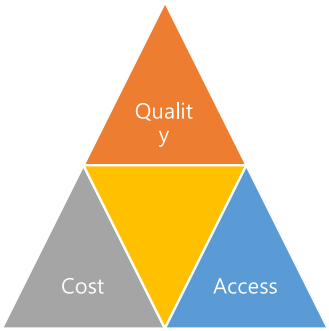
03.

Major Issues of Healthcare in Developing Countries

7

Key Issues of Healthcare in Developing Countries

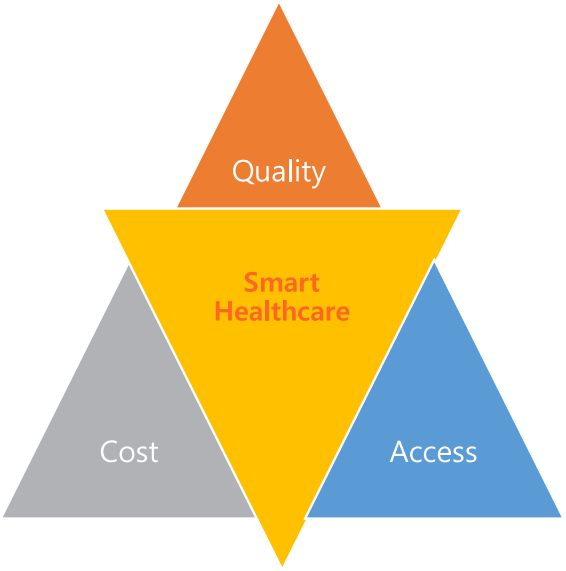
- The current status and problems of health care of low and middle income countries were identified through the Global Health Security Index (GHSI) analysis.
  - Those countries were vulnerable in prevention and health systems.
- They also typically have various issues in the Iron Triangle in Healthcare.



8

Breaking the Iron Cage?

- Real Transformation
- Artificial Intelligence (AI)
- Virtual Interaction
- Big Data



9

04.

Cases of Knowledge Sharing/Development Cooperation of International Organizations and Major Donors

10

SPEAKER PRESENTATION 3

International Organizations

Smart Healthcare

Examples of Development Cooperation

Organization	Contents	Countries
UN	• Smart Quarantine Robot • Medical Staff Digital E-learning Platform • Telemedicine E-clinic Network	• Rwanda, Kenya • Azerbaijan • Pakistan
UNICEF	• Maternal And Child Health Point-of-care Examination	• Sub-Saharan Africa
WHO	• Remote Counseling Center	• Nepal
World Vision	• Mobile Management Project For Malaria Control • Obstetric Management And Mobile Health Checkup Kit	• Angola • Ethiopia

11

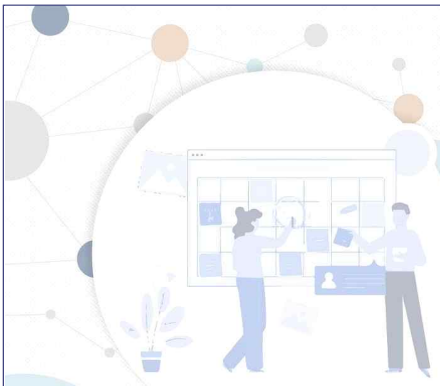
Implementing Partnerships

Smart Healthcare

GLOBAL DIGITAL HEALTH
PARTNERSHIP

- **33 Nations & 3 International Organizations**
  - Cyber Security
  - Interoperability
  - Evidence & Evaluation
  - Clinical & Consumer Engagement
  - Policy Environments

12



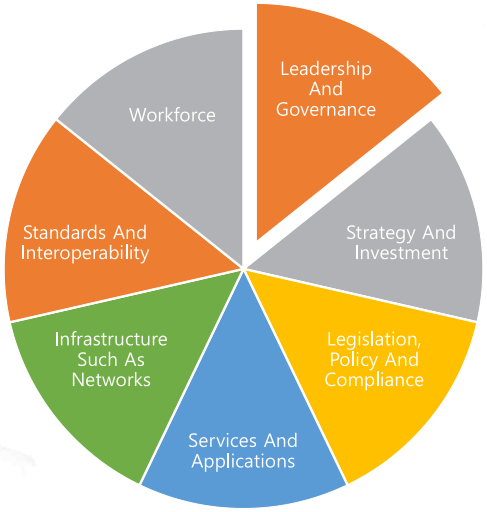
05.

Korea's Experiences

13

Facilitators for Smart Healthcare

7 Factors



14

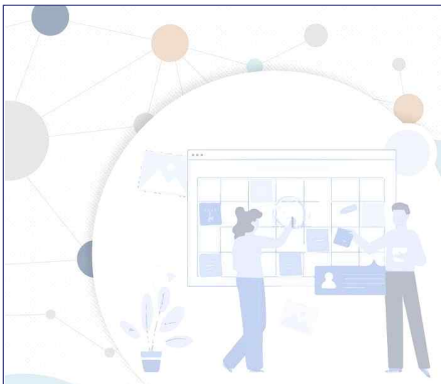
SPEAKER PRESENTATION 3

Trend of Smart Healthcare Projects

Domestic vs. International Projects

Smart Healthcare Services		
	Contents	
Domestic Projects	• Remote Health Care System Establishment In Island Areas • Mobile Health Care Business In Public Health Centers • Chronic Disease Management Pilot Project In Primary Care	
International Cooperation Projects	• Soonchunhyang University Local Hospital Telemedicine System Establishment • KT Global Infectious Disease Spread Prevention Platform (GEPP) Launch • Jeyun Medical's Smart Medication Monitoring Service	• Cambodia • Morocco

15



06.

Conclusions

16

Implications and Suggestions

In order to introduce smart healthcare to developing countries, it is necessary to prepare a cooperative plan that meets the constraints such as each country's infrastructure, manpower, and government regulations.

01 Patient-physician telemedicine service

- Enables non-face-to-face medical consultation and treatment.
- In addition to special infectious diseases such as COVID-19, counseling, treatment, and prescription for major diseases with high incidence by country can be considered.
- Depending on the smartphone penetration rate in each region, remote treatment with partner hospitals and treatment at the village level are possible.

02 Medical service and big data management through mobile app

- Regularly managing major diseases by country (prematurity, HIV, malaria, tuberculosis, etc.) using the mobile app.
- Using big data to create a model for predicting the occurrence and prognosis of future diseases.

03 Patient and medical staff education

- Need for IT technology education for the active introduction of smart health care.
- In addition to building infrastructure and equipment, patients and medical staff need training on how to use the software, and the training itself can be provided online.

17

Thank you!

thkim@yuhs.ac

18

2022 KDI Global Forum on Development Cooperation

Digital Policies and Global Cooperation for Sustainable Development

KDI Korea Development Institute