

Report of the Korean Civil Society's Joint-Panel Discussion on the Age of Digital Interdependence

Korea's New Challenge Forwards Digital Coöperation Beyond the Market Concentration of Economic Power and Digital Hourglass

Korean Civil Society*

Citizen's Coalition for Economic Justice

March 2, 2020

Abstract

Of particular interest to *the age of digital interdependence* (UN, 2019) in a new order to set Korea's policy vision for global digital coöperation, is this report having the purpose of giving UN our recommendations on the digital rights, ethics, security and the digital economy, society, education. To diagnose side effects in the radical progress of the digital transformation and to prescribe for Korea's forward challenging tasks to the government, Korean civil society brought together in the Citizens' Coalition for Economic Justice to lead these topics by two working groups for the panel discussion with our ten experts; to pull together this, we had made comprehensive literature reviews of the digital rights, the digital economy, and a general public survey on the digital governance, also. And our report was contributed to the Konrad-Adenauer-Stiftung in Korea. From here and now, we'll run Korea's challenging stories about our digital zeitgeist by UN to guide a road-to-"Digital" conversion and mutual coöperation in a new order to do our business in the light of day.—It's really something.

Keywords: digital hourglass, digital market concentration, digital interdependence, digital coöperation, civil society, digital governance, digital rights, digital economy, inclusive growth, sustainable development

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Acknowledgment

The Korea Office of the Konrad-Adenauer-Stiftung and the Citizens' Coalition for Economic Justice (CCEJ) look back on an exceptional coöperation that has been established quite a number of years ago. Not only is our coöperation long-term focused and remarkably solid, but also highly productive. This is something we can and should truly be proud of. At Konrad-Adenauer-Stiftung we consider the Citizens' Coalition for Economic Justice to be one of our core partners for engagement in South Korea.

Today's workshop is another example of the very timely topics that bring us together. As usual, we will hold our discussions on a future-oriented and highly relevant issue. The digital transformation that is currently taking place can be witnessed in all aspects of our daily life. It impacts economics, politics and societies as a whole. It is therefore one of the most pressing issues of our generation. Not only does it offer the potential to contribute to solving some of mankind's biggest challenges like climate change, foster sustainable development or improve public health, it also poses a great deal of threat and can easily be misused. The rise of fake news, hate speech on social media and cyber-attacks that can significantly disrupt important infrastructure make this evident. That is why global coöperation and trust-building in the digital era is needed more than ever before.

Our workshop today aims to address these issues and provide valuable input. It is of special importance as the results of the discussions will be forwarded to the Secretary-General of the United Nations via our New York office. Therefore we are offered the unique opportunity to directly contribute to future policy-making.

Finally, I would like to express my sincere gratitude to the teams at CCEJ and Konrad-Adenauer Foundation for their intense and productive preparations leading up to this event. I am confident that the results of our workshop will be excellent and contribute to the establishment of a digital coöperation governance architecture.

Working together: Making a difference!



Stefan Samse

Resident Representative

The Korea Office of the Konrad-Adenauer-Stiftung

Executive Summary

Korea's Challenging Issues & Agenda: *Digital Market Concentration*

We've recognized the reorganization of the world economy, the economics of digitization and the impact on digital transformation in the market—in effect, Korean society was already in swift progress—as falling under the market presence of digital powers, which were overwhelming consumer lifestyles. Of course, these are coming over to us as a new opportunity, either. However, we could be faced with unexpected challenges at risk, such a de-regulatory risk in the radical movement of coming through digitization, transformation, and monopolization: these were the bellwether of rapidly changing into a dog-eat-dog world through *the digital hourglass*. As a matter of fact, not only Korea but all over the world has the same symptom as an immediate challenge. That is *the Market Concentration of Digital Economic Powers* coming true. In fact, specific local BigTech or multinational IT companies engross both Internet and content markets, (i.e.), a single platform on the two-side market, whereby exclusively possessing network traffics and big data around the world. As a result, they beat the system of safeguarding digital transformation against invasion of privacy, against abuse of market dominance, against profit tax evasion. This is totally against the rule of law. This is the last straw. Unfair's unfair. And we're so seriously concerned in the progress of these injustice processes having no control over what they do—but then, the Korean government counteracts by raising *the Digital Concentration of Financial Power* into the regulatory sandbox, in order to provide market environments for regulatory innovation, to fully *bankroll* the BigTech companies for the sake of their exclusive growth till today. Risky's risky. Hence, our true experts were supposed to make a review of the today's digital zeitgeist on the basis of economic equilibrium and optimum, to give a new vision to Korea's forward challenge for policy tasks, and to set our recommendations for the digital coöperation, as the following results and panel discussion.

Recommendations

Panel Discussion & Recommendations on Global Digital Coöperation

Beyond the Market Concentration of Economic Powers and Digital Hourglass

Korean Civil Society

Seoul, 2 March 2020

On 21 January 2020, to diagnose side effects of the digital transformation in the digital era, in a new order to prescribe for the Korea's forward challenging tasks and set visionary recommendations on the multilateral digital coöperation by the United Nations, our ten expert peers¹ held together with the Citizens' Coalition for Economic Justice (ECOSOC: Special, 1999) to discuss the main theme, "*Prescription for Korea's New Forward Challenging Tasks in the Age of Digital Interdependence.*" And we give the United Nations our recommendations as follows.

1. Taking note of the Secretary-General's report *the age of digital interdependence* (UN, 2019)² in accordance with the High-level Panel on Digital Coöperation and Recommendations, on the basis of Sustainable Development Goals (UN, 2015), we acknowledged the following nine values for the digital coöperation: (a) Inclusiveness; (b) Respect; (c) Human-Centeredness; (d) Human Flourishing; (e) Transparency; (f) Collaboration; (g) Accessibility; (h) Sustainability; (i) Harmony.
2. Emphasizing these nine values, we define what the digital coöperation means: that is, *To work together to address the social, beneficial, legal and economic impacts of digital technology in order to maximize its benefits to society and to minimize any damage.* We recognize it as a basic principle of the digital coöperation. And we recommend the United Nations to refer to this definition.

¹ This recommendation was contributed by Hyo Chang PANG, Hyuck Seung YANG, Hun PARK, Sook-Hee KIM, Dong-ho YU, Dong-yub KIM, Sunyong BYUN, Chae Wan SUH, Hwan Kyoung KO, Seong Eun CHO.

² UN. (2019). *the age of digital interdependence*. Report of the UN Secretary-General's High-level Panel on Digital Coöperation. DOI: <https://digitalcooperation.org/panel-launches-report-recommendations/>

3. We are seriously concerned about the digital market concentration around the world. Particularly, we are against a super few multinational IT companies, called “BigTech,” as privatizing our digital public good for their digital transformation; for example, the abuse of big data, the invasion of privacy, and the monopolization of information. In this status quo, we strongly emphasize the digital right *to limit purposes of available use for big data* in spite of the de-identification of data.

4. Above all, in respect to Finance plus Technology, namely “FinTech,” in accordance with the early report’s recommendations (UN, 2019; OHCHR, 2019),³ we are so concerned about deregulatory risks due to the overtest of regulatory sandbox like a *digital hourglass* (“Pandora’s sandbox”). For regulatory compliance with safety and soundness for FinTech institutions, we also emphasize a digital economy to keep up with principles of the separation: (a) The Separation of Commercial and Investment Banking; (b) The Separation of Commercial and Industrial Banking; (c) The Separation of Industrial and Financial Capital; in particular, (d) *The Separation of Banking and Commerce*. We recommend these principles to include in the UN’s Code of Conduct, also.

5. And for the digital coöperation to bring up inclusive growth and development, we strongly call on the United Nations to adopt or refer to the following ten recommendations:

Digital Coöperation

- I. **The Basic Principle of Digital Coöperation:** The people of the world shall work together to address the social, beneficial, legal and economic impacts of digital technology in order to maximize its benefits to society and to minimize any damage;

Digital Rights

- II. **Self-Regulations on Hate Speech:** One’s hate speech by the free expression ought to be self-regulated, or it has no choice but to be intervened by governments;

³ UN. (2019). the age of digital interdependence. Report of the UN Secretary-General’s High-level Panel on Digital Coöperation: Recommendation 5B; and OHCHR. (July 2019). Statement to the media by the United Nations Special Rapporteur on the right to privacy, on the conclusion of his official visit to the Republic of Korea, 15-26 July 2019: para 39 and 40.

- III. **Technology Ethics together with Citizens:** The Ethics Certification Program for AI Systems has to build itself upon citizenship education;
- IV. **Transparent Autonomous Weapon Systems:** Against futural electronic or cyber warfare, the military restrainability against exploiting such new technologies must be based on the Transparency and Confidence-Building Measures (TCBMs);
- V. **Digital Rights based on Security Technologies:** For example, open source, privacy protection (e.g., the EU's General Data Protection Regulation, GDPR), and blockchain: these technologies will have to be introduced to protect people against digital abuse from the misuse of digital devices, the invasion of privacy, and the monopoly of information;

Digital Economy

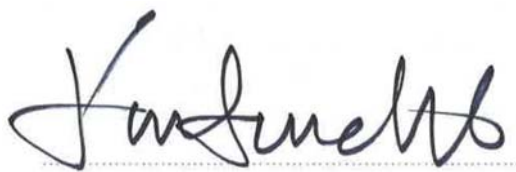
- VI. **Reciprocal Digital Taxation:** By virtue of international agreements on the Base Erosion and Profit Shifting (BEPS) Actions, the world shall ever impose digital taxes—(e.g.), Digital Service Tax and Offshore Digital Tax—on multinational IT companies, beyond any political prejudice, any turf battles and any tariff wars, a reciprocal approach to digital taxation that can be allowed to coördinate the market concentration of digital economic powers;
- VII. **The Inclusive Digital Economic System, including Social Welfare and Public Education:** To develop inclusive growth, the vulnerable social groups shall be involved in an individual approach to more substantial well-being with CSR for the elderly, with social security for the disabled, and with the public education on advanced digital literacy;
- VIII. **Regulatory Compliance with Safety, Soundness and Transparency for Big Data, BigTech and FinTech Industries:** To obviate the market concentration of digital economic powers, FinTech banks should be founded on the separation of banking and commerce, the principle of separation that had better based on the UN's Code of Conduct; in a new order to expand informational autonomy, we should set “global common guidelines” for the right to privacy; and to develop BigTech corporate accountability, we should assess information sensitivity, as setting the limitation of available use for big data, guaranteeing the right against profiling automated individual decision-making and doing privacy protection and data breach indemnification;

- IX. Gig Economy and Decent Labour on Digital Platforms:** This two-sided market should offer professional retraining (e.g., Industry 4.0 plus Arbeit 4.0) to workers, guarantee the right to organize and collective bargaining, and oblige the employer's responsibilities for occupational health and safety insurance including employment insurance within the established legal framework, thereby providing decent work;

Digital Governance

- X. The Establishment of Reginal Help Desks as well as The Participation of Governments and Academia:** In accordance with Recommendation 5A and Recommendation 2 (UN, 2019), we acknowledge this and recommend the establishment of regional and global digital help desks to help governments, academia, and civil society, etc. to understand digital issues and develop a capacity to steer global coöperation related to political, social, economic impacts of digital technologies.

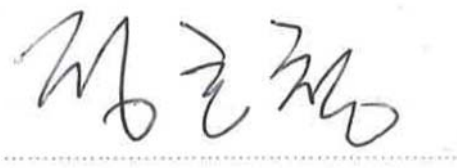
We report this to the Korea Office of the Konard-Adenauer-Shitung, in order to submit this recommendation to the United Nations as above.



Sunchul YUN

Secretary General

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Hochul M. JUNG

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Korea's New Challenge Forwards Digital Coöperation Beyond the Market Concentration of Economic Powers and Digital Hourglass

—“*Digital is too fast,*” many worried.

———*They try and wildly catch up with it.*

—————*And they absurdly quicken my pace.*

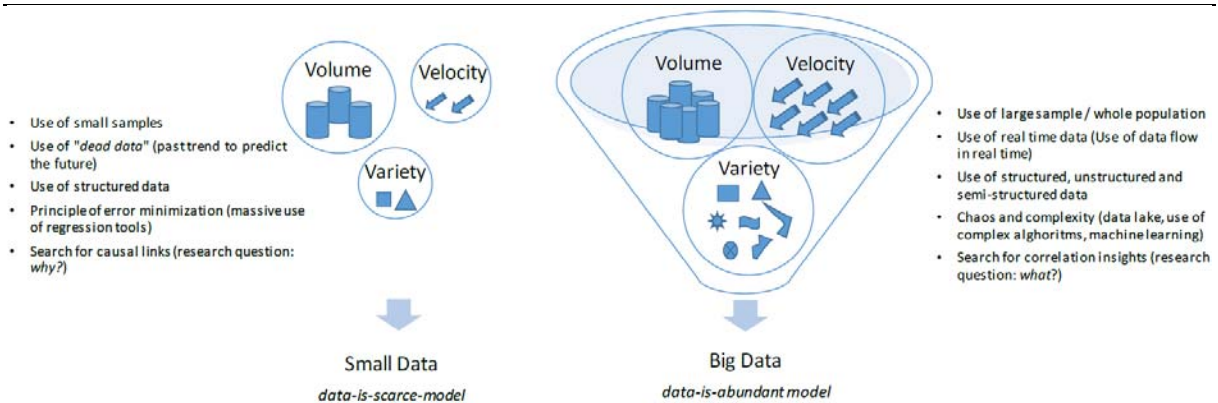
I reject it.—;—Cause’ we’ve got someone to protect, too.



This report dare say WE shall slow it down a radical introduction of digital technologies, and ask what it means to slow down the swift process of digital monopolization—until the public may, true to our democratic tradition, participate in the discussion about its benefits, its costs and determine how the system in other societies can be intervened. Of course, digital is no question about the powerful technology. But fruits of a digital technology have the potential to be used for both *good* and *evil*. My key question is who will make a good decision about how to use such a digital technology and to whom its benefits, its cost will return. To decode it, we must see how the social and political structures work, particularly how to protect the economic system working.

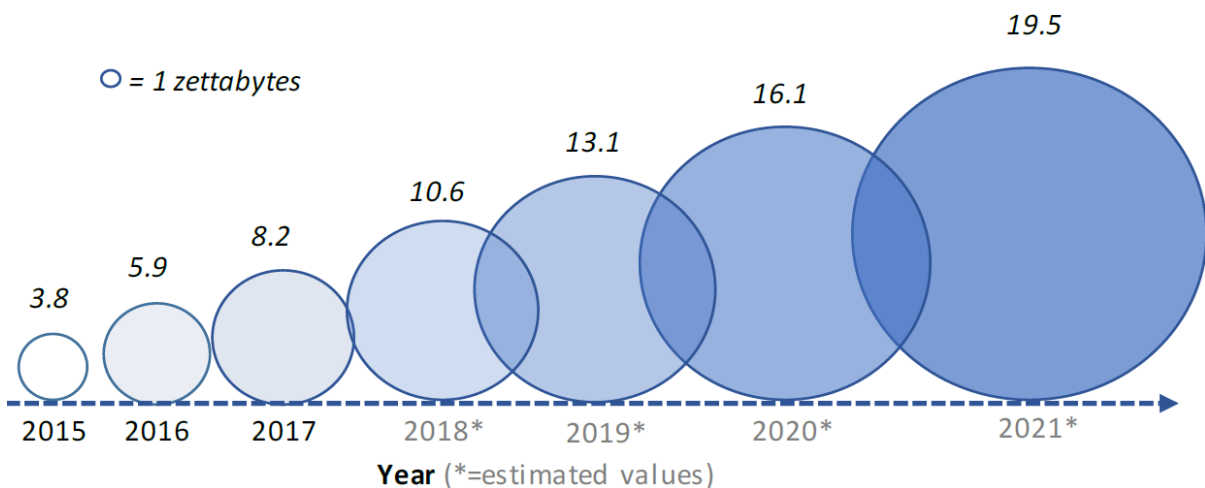
Structural changes in society, the digital transformation and interdependence upon technological discoveries have begun with emerging AI or IoT in these days, but fundamental changes in our society into the information revolution became apparent after the rising of the big data (*voir infra*, Figure 1). Since that time, digitization of information, mass data processing, and storage of privacy have been in full swing. Data storage became much larger, data processing became much faster, and companies were able to process heavier data (*infra* Figure 2).

Figure 1. Big Data Paradigm Shift



Source: AGCOM (2018)

Figure 2. IP Traffic of Data Centers (2015–2021)



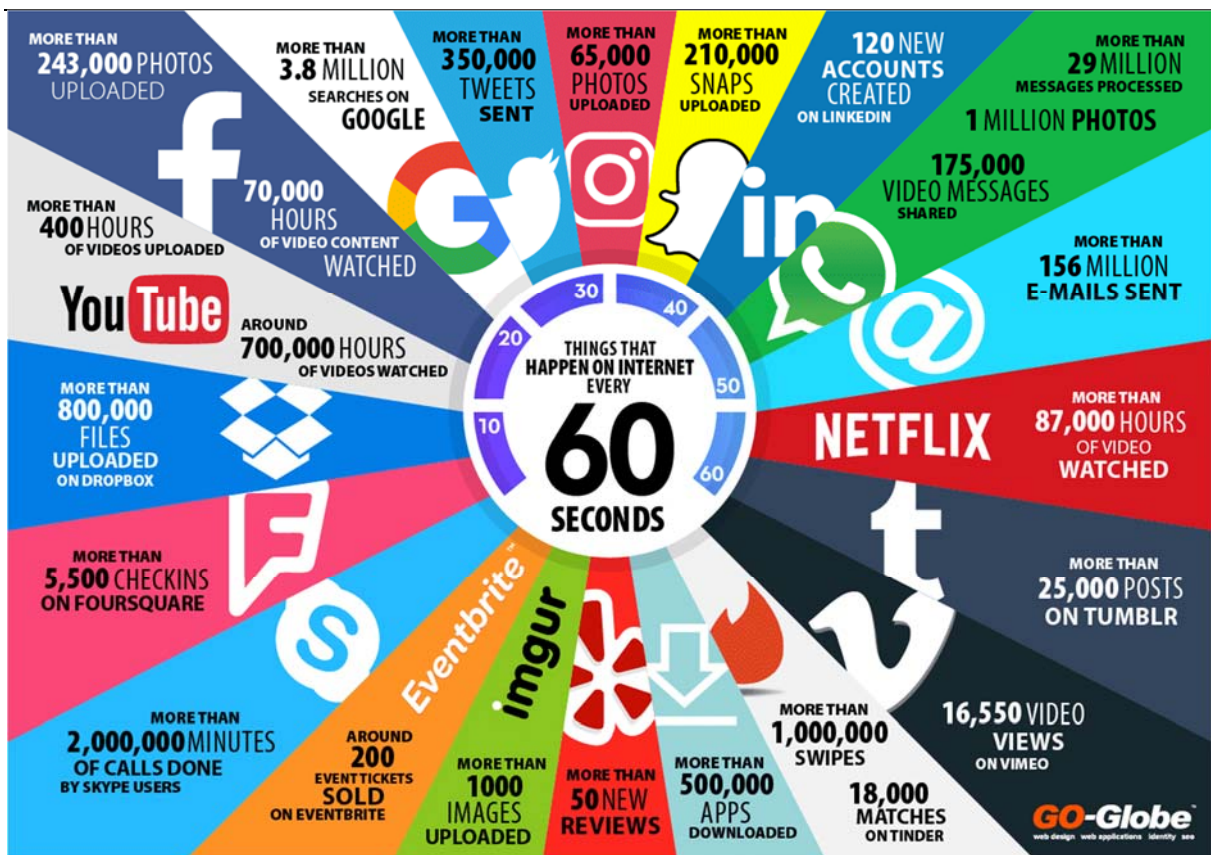
Source: AGCOM (2018)

Also, wireless communications began. The high-speed stable wireless connection changed our life as well as consumer lifestyle, as becoming a game-changer for the market dominion in the big data industry. The first began changes in Internet market as Internet service providers provided high-speed Internet and high-quality connection, meanwhile designing contents and building platforms of the big data—in particular, the type of content, the quantity of data being provided, the speed of processing data being required, the capacity of storage being required,

the quality of content: these all things were controlled by content providers around the world. And we'll see how come these global companies are able to make these significant decisions.

On today their relationship, their ownership and their market leadership between creators and companies, a *two-sided market* that has provided consumers with inputs for digital goods and markets for their contents, are totally different from that time. At that time, there were our fair share for technological competition and the free market stage for SMEs, developers and collectors, of data inputs, so no firm could dare set official prices or terms of sale for data collections or monetizations. Thanks to the *old* enlightenment of digital rights, the fair share & use of new technologies, and the mind of the market towards economic justice. But, now the old status of “peasants,” as platform-farmers as key decision-makers, is rapidly being replaced by a super few transnational IT conglomerates on the globalized big-data market due to their own monopsony powers (Figure 3).

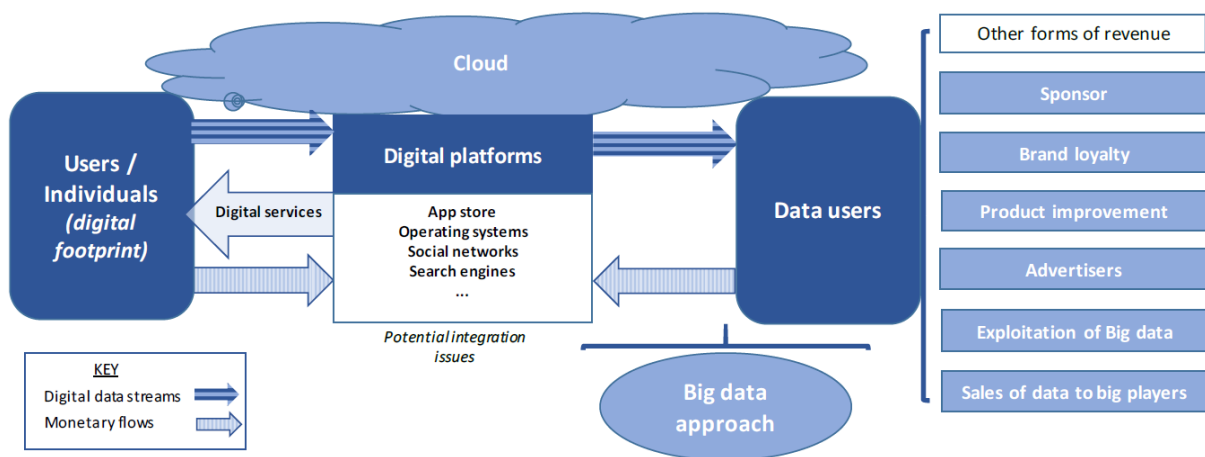
Figure 3. Internet Data Flow in 60 Seconds (2017)



Source: Go-Globe (2017, August)

In effect, content creators lost control of their sales as their copyright was lost, so that their freedom of expression, their freedom of creation were being shrunken. In the two-side market (Figure 4), as a result of platform labour, where consumers as the *same user* as individuals themselves provided much of the management, labour and capital—the digital transformation began to take the form of industrialization in the big data market where every significant decision between the “(de facto) *industrial relations*” were made by platform companies.

Figure 4. Synthetic Representation of the Two-Side Market Applied to Big Data



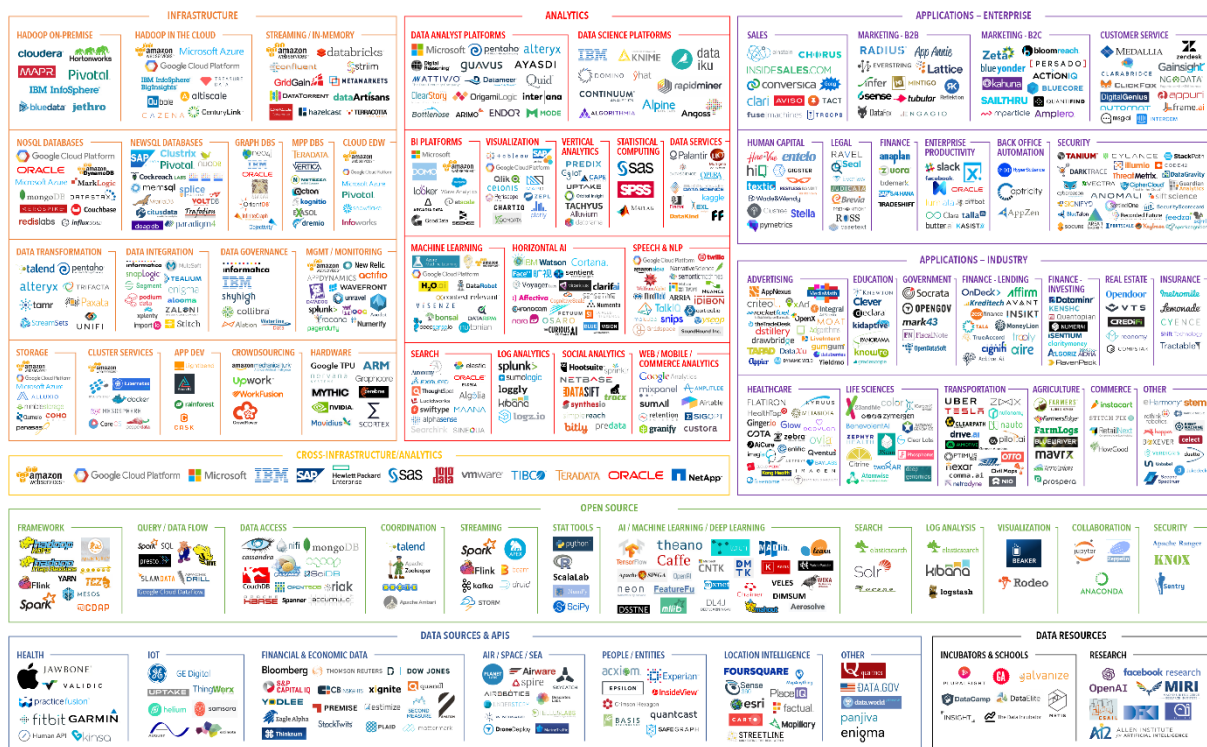
Source: AGCOM (2018)

Anyhow, they said for, “[sic] I’ve done my fair share within the system,” as always. But a real danger of *neo-feudalism* (Galbraith, 1961)⁴ -to-be in the *false* Industrial Revolution like a radical movement of that digital transformation is the potential it holds for digital divide, a dividing society that would dive into three camps, the techno-lord and the techno-elite and the techno-peasants, but their interdependent single plat-farms, then, where the “wired” few would prosper at the expense of the masses, again and again....

⁴ Reisman (1961); Sharing (1983; 2001); Loader (1999); Johnston (1999); Braithwaite (2000); Huggins (2000); Malinovsky (2001); Hartmann (2002); Ponte (2003); Baker (2004); Caparini (2006); Lippert & O’Connor (2006); Zedner (2006); Neckel (2010); Erman & Möller (2013); Kaufman (2013); Nick (2014); Hall (2018).

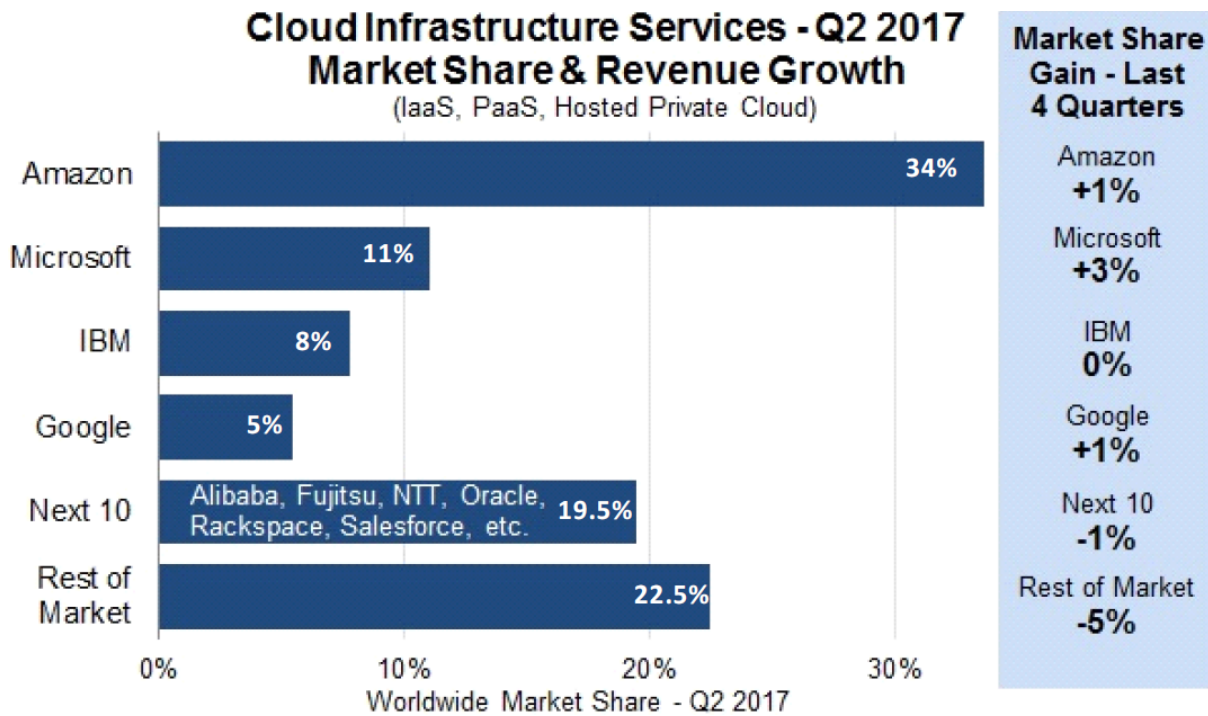
In addition, their ownership and control of processing big data are becoming highly concentrated into digital economic powers around the world (Figure 5). The digital economic system, where digital goods and services by numerous SMEs and unnamed start-ups are delivered to consumers around the world through the major few big-data-processing conglomerates, is reshaping *hourglass* in this shape. In the second quarter of 2017, for example, the top four multinationals accounted for a 58% worldwide market share in the cloud-based cross-data & analytics service sector, and the top fourteen BigTech companies accounted for 77.5% in the same sector (infra Figure 6).

Figure 5. Big Data Landscape (2017)



Source: Turck, Hao & FirstMark (2017)

Figure 6. Market Shares in the Services of Cloud (2nd Quarter of 2017)



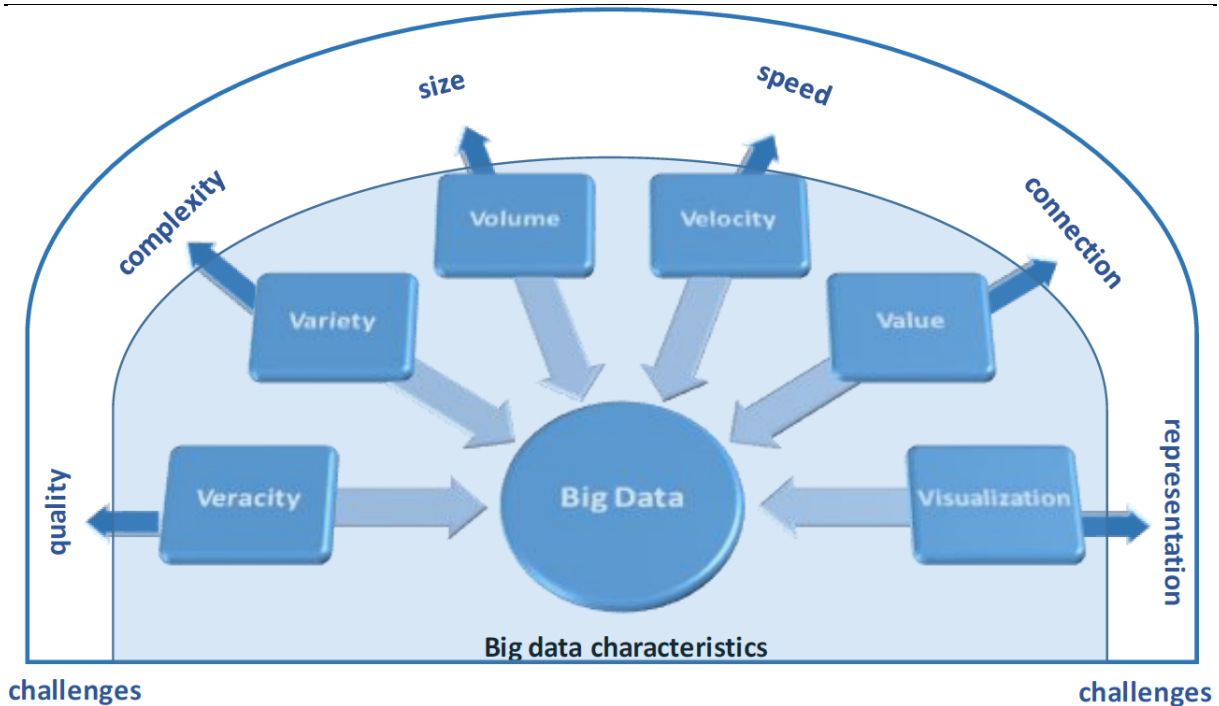
Source: Synergy Research Group (2017, July)

As a result, numerous SMEs and unnamed start-ups are evanescently being absorbed into the sandglass more and more, structurally being integrated into *the market concentration of digital economic powers* more and more. The early literature on oligopolies such as *Market Concentration* (OECD, 2018 & 2019a) points out that if the top four companies (i.e., CR4 above Figure 6) in the sector occupy more than 40% of the market share, they can dominate the market. Let’s say, the top five BigTech conglomerates, called “GAFAM (viz., CR5 below Figure 8),”⁵ have

⁵ Desjardins. (2019, March): (G.) *Alphabet (Revenue in 2018: \$136.8 billion)*: Despite having a wider umbrella name, ad revenue (via Google, YouTube, Google Maps, Google Ads, etc.) still drives 85% of revenue for the company. Other Google products and services, like Google Play or the Google Pixel phone, help to generate 14.5% of total revenue. Other Bets count to 0.4% of revenue—these are Alphabet’s moonshot attempts to find the “next Google” for its shareholders. (A.) *Apple (Revenue in 2018: \$265.6 billion)*: Apple generates a staggering 62.8% of its revenue from the iPhone. The iPad and Mac are good for 7.1% and 9.6% of revenues,

exerted the affected decisions about price, quantity, speed, capacity, type, quality, place of origin or marketing jurisdiction, etc (Figure 7).

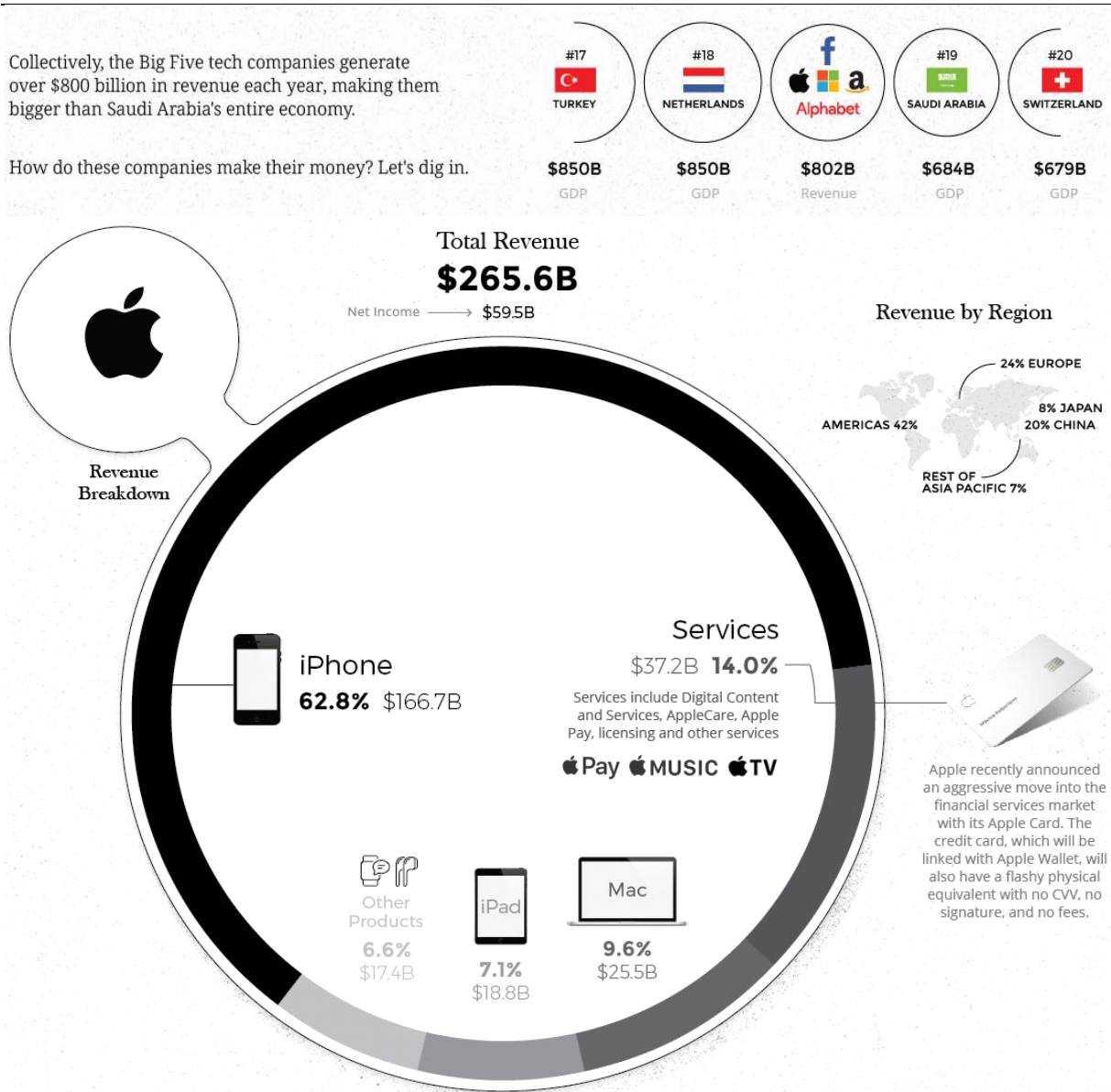
Figure 7. The Characteristics of Big Data



Source: AGCOM (2018)

respectively. All other products and services – including Apple TV, Apple Watch, Beats products, Apple Pay, AppleCare, etc.—combine to just 20.6% of revenues. (F.) *Facebook (Revenue in 2018: \$55.8 billion)*: Facebook generates almost all revenue (98.5%) from ads. Meanwhile, 1.5% comes from payments and other fees. Despite Facebook being a free service for users, the company generated more revenue per user than Netflix, which charges for its service. In 2018 Q4, for example, Facebook made \$35 per user. Netflix made \$30. (A.) *Amazon (Revenue in 2018: \$232.9 billion)*: Amazon gets the most from its online stores (52.8%) as well as third-party seller services (18.4%). Amazon’s fastest-growing segment is offline sales in physical stores. Offline sales generate \$17.2 billion in current revenue, growing 197% year-over-year. Amazon Web Services (AWS) is well-known for being Amazon’s most profitable segment, and it counts for 11.0% of revenue. Amazon’s “Other” segment is also rising fast—it mainly includes ad sales. And (M.) *Microsoft (Revenue in 2018: \$110.4 billion)*: Microsoft has the most diversified revenue of any of the tech giants. This is part of the reason it currently has the largest market capitalization (\$901 billion) of the Big Five. Microsoft has eight different segments that generate ~5% or more of revenue. The biggest three are “Office products and cloud services” (25.7%), “Server products and cloud services” (23.7%), and Windows (17.7%).

Figure 8. CR5: GAFAM (Google-Apple-Facebook-Amazon-Microsoft)





Ubiquitously, on the digital market, the only stage-to-be the last resort of “intervening” in these anti-competitive practices or controlling access to the data trading process is the global value chain as the following four market stages: (a) creating local contents, (b) collecting privacy, (c) processing big data, (d) transmitting mass data, and *vice versa*. As a matter of fact, the top ten BigTech companies are now increasingly concentrated, as engrossing over half of all the service transactions at each stage. If so, the market concentration of the digital economic powers also involves *vertical integration*, thereby consolidating two or more phases in the process of digital transformation and economic interdependency, as the following suppositions: one is (i) From Local to Global—one effect on *the digital concentration of financial power* is to bankroll FinTech or BigTech firms and in order to invest on their R&D and their digital

infrastructure to expand; vice versa, the other one is (ii) From Global to Local—another effect on *the economic concentration of digital powers* is to incorporate local countries into the global supply chains of transnational IT conglomerates’ own. In effect, the global digital economic system is being highly integrated with service trade by multinational IT conglomerations via a “world without borders,” (ii) From Global to Local. Between KOR–US, for instance, with the implementation of Free Trade Agreement (2012, KOR–US FTA), mass data, digital services and contents, including digital rights, etc., have been freely traded and transmitted across borders like that (Figure 9).⁶

Figure 9. KOR–US Intellectual Property Service Trade Trends (2011–2015)

IP Service Trade	2011 Before Effective	2012 1st year	2013 2nd year	2014 3rd year	2015 4th year
Export (+)	\$1.3 million	\$1.3 million	\$ 1.3 million	\$ 1.5 million	\$2.9 million
Import (–)	\$45.3 million	\$55.2 million	\$72.7 million	\$ 60.9 million	\$ – 60.2 million
Balance	\$ – 44.0 million	\$ – 53.9 million	\$ – 71.4 million	\$ – 59.4 million	\$ – 57.3 million

Source: BEA; KITA (2017)

Moreover, the today’s global digital economic system can be marked by a super few conglomerates and *ultra-high-net-worth individuals* who are able to control local IT companies or SMEs to expand their various affiliations. In the past, BigTech companies were mostly family-owned and kept their trading relationships undisclosed by Chaebols and his family. These conglomerates had a little pastime-business and operated at one or two chains within the digital economic system. However, now then they’re consolidating each other using mergers, joint ventures, partnerships, contracts, and informal relationships behind contracts.

⁶ KORUS FTA. (2019, January). Final Text. The US Trade Representative. Retrieved from <https://ustr.gov/trade-agreements/free-trade-agreements/korus-fta/final-text>

Sometimes, their “super partnerships⁷” between the global big-data and government-business enterprises⁸ have been creating, militarily integrated with the big-data economic system, from emerging AI & IoT to the rising of the killer robot & drone, like a “seamless” autonomous-weapon system. Neither market system nor a competitive market was there, but there has been only the military-technological revolution, a kind of the digital “coöperation,” so any prices are not revealed ever, from governments to “supermarkets.” The first marketplace, where prices might be known to the public, must have been their own “armory” such as the military-industrial complex. Ownership of technology may change their hands from the purchase of surreptitiously collected information, secretly processing it, and synthetically transmitting data to governments. But their position as a key decision-maker remains unchanged. Both *public goods* and *the public enemy* still remains their decision upon how to coöperate, to develop and to use new digital technologies, flat out.

Henceforth, this Big-data-Tech-based company is totally to make some significant decisions about how to develop, to take advantage of digital technology, and who will benefit from it. For unless new technological development with the patenting system that grants BigTech firms in order to protect their technology or intellectual property related to R&D, the consolidation of enormous R&D costs will be fixing to form the foundation of the monopoly at the global level. The monopolization of capitals and linked to the patent right to advanced technologies based

⁷ (e.g.) Cloudera, Hewlett Packard Enterprise, Hitachi, IBM, Microsoft, Oracle, Palantir Technologies, SAP, SAS Institute, Teradata, Cisco Systems, Google, Amazon, Airbus Defense and Space, Accenture & Cyient. (2020). *Big Data in Aerospace and Defence Market: Global Industry Analysis, Size, Share, Growth, Trends, and Forecasts 2020–2026*. Absolute Reports. Retrieved from <https://www.absolutereports.com/global-big-data-in-aerospace-and-defence-market-15133595>

⁸ Government Business Enterprise refers to a hybrid organization. (i.e.), Adhocracy, it has features of a private company and a public organization.

on big data, information and monetization are reshaping the analogy of the aforementioned “*Digital Hourglass*.” Within this sandglass, as pushing it massively through a funnel-like digital economic framework, called “regulatory sandbox (voir UN, 2019; and OHCHR, 2019 vs. FSC, 2019b; and Ministry of Economy and Finance, 2020b infra),” the large-scale deregulation on inputs of the digital transformation would gain more or less output but at least greater controls by the minority dominant in the progress of creating contents, collecting privacy (voir, e.g., the triple deregulation on the Three Major Data Laws: Ministry of Economy and Finance, 2019b; and Ministry of the Interior and Safety & Korea Communications Commission & FSC, 2020 infra), processing big data, transmitting mass data—through the established intellectual-property rights transferring system—transferring profits and evading taxes. Since intellectual property rights may limit fair competition, BigTech conglomerates could either acquire or sabotage, or espionage against digital-based high-technologies SMEs, a BigTech that would consolidate its position as controlling company in the hourglass through exclusive patent rights.

In the contemporary “digital zeitgeist,” capitalism refers to the digital economy in which buyers and sellers compete with consumers in the two-side market, governments “intervened,” in a limited approach (like neoliberalism) to digital platforms. But without government intervention in the platform market, it is inevitable that some BigTech firms will engross their digital and economic powers, so wield their political powers and squeeze out their small competitors, on their own ways. BigTech conglomerates that run various digital services in many countries around the world make them difficult for other start-ups that can put only one main service or item on the market stage in a country. Because digitalization and the creation of big data may decrease a competitive price and increase the scope for effective price discrimination (Stiglitz, 2017; OECD, 2018 & 2019a). SMEs may survive on Blue Ocean, or on niche markets avoided by big enterprises. Since the huge capital-intensive business is monopolizing the today’s

digital technologies, most SMEs are going to be pushed, phased out of their *on stage*. They are of impotence to create the capital needed to compete in the R&D area; bigger and more powerful BigTech companies remove their feeble competitors more easily, as hogging the patent right to digital technologies more easily.

Some companies and governments, those of them, who pull together neo-technological development, insist that digital technologies are willing to contribute to addressing poverty, health, climate or food crisis. Is that kind of innovation like a religious thing? Neither charities are they nor food companies. Indeed companies have confessed to their main task that is fixing to maximize the profit of stakeholders.’ The past few years saw the top five BigTech grew at a great rate, triumphed over not only big data markets but stock markets and made a clean sweep of the market capitalization in the global market (Figure 10).

Figure 10. the GAFAM’s Revenue, Net Income, Margin, Market Capitalization (2018)

Conglomerates	Revenue	Net Income	Margin	Market Cap.
Alphabet	\$136.8 billion	\$30.7 billion	22.4%	\$863.2 billion
Apple	\$265.6 billion	\$59.5 billion	22.4%	\$961.3 billion
Facebook	\$55.8 billion	\$22.1 billion	39.6%	\$512.0 billion
Amazon	\$232.9 billion	\$10.1 billion	4.3%	\$916.1 billion
Microsoft	\$110.4 billion	\$16.6 billion	15.0%	\$946.5 billion
Aggregate	\$801.5 billion	\$139.0 billion	17.3%	\$4,199.1 billion

Source: 10-K (GAFAM, 2018); statista (2019)

The people of the world, developing countries and the least developed countries, couldn’t help selling them cheap labour BigTech required, in order to boost their efficient output, but then neither may they buy a smartphone nor any device or get free access to any service from such a transnational IT enterprise.

Digital technology has been introduced into our society too early, it was developed and grown too rashly. Social, political, economic institutions were not inclusively developed, sufficiently supported nor corresponded democratically to do our fair share for the enjoyment of new technologies at all. In this situation, we ask ye what is the purpose of the “digital transformation”? For whom *shall* the digital enlightenment light up? There be three kinds of that digital transformation in progress now: one is (a) the dog-eat-dog competition over those who’ll gain more subsidies from governments, and outlive in the Red Ocean; another one is (b) the unfair windfall competition over those who’ll gain the most profits from governments granting intellectual property or patent rights in the long term among the super few BigTech conglomerates; and the last one is (c) the exploitive competition over who’ll gain the biggest data and privacy out of digitally illiterate consumers in the market around the world. In other words, this government is establishing an economic structure that can limit industrial relations, fair competition and win-win coöperation between them, as establishing a social structure that trains by subsidies to SMEs and start-ups in economic dependency as well as establishing a political structure that protects BigTech patent and intellectual property rights thereby reversely discriminating against the affected classes’ own creative wants, innovative competition, technological development and growth. The reason is that all these (a)(b)(c) they’ve believed would be able to breeze through the digital transformation, inclusive growth and development by bankrolling BigTech firms to invest some digital infrastructures. But then, as a result of three structures, our road-to-“Digital” conversion was of (c) the political discrimination: hate speeches, fake news, deepfakes, the absence of technology ethics, AI bias and prejudice, the “seamless” weapon systems, the rising of the killer robot & drone; of (b) the social exclusion: the deregulation of safeguards, the confidentiality of R&D, the privatization of public good, the unavailable use of big data, the invasion of privacy, the monopoly of information, the

reverse discrimination among digital industries, the instability of employment on platform markets, the unemployment, the social insecurity per se, the shortage of retraining; and of (a) the economic concentration: the overuse of the *Pandora's* sandbox, FinTech banks at deregulatory risks, cyberattacks and credit information spills, the abuse of market dominance, the squeezing out of SMEs, including sabotage and espionage, the exclusive patent rights, intellectual property rights and tax evasion, the monopoly of technologies, information and capitals, and the system of injustice everything.... And other institutions in society would make it difficult to either refuse or absorb a quick introduction of this *old & new* technology into the upcoming age of digital interdependence. At this point in time of view, when it comes down to alternatives, to choose either “Accepting” or “Rejecting” all digital technologies out of the digital economic system seems to be the only option our society could take. So I suggest we must slow it down the radical movement of technological growth and development. Last but not least, I ask ye again what it means to slacken off this rapid advance of digital transformation, the digital concentration of economic power and the monopolization of digital technology—until the public may, true to our democratic tradition, participate in our further discussion about the digital public good, human value, fair distribution to determine how the digital economic system can be intervened *for a new order to do our business in the light of day*.

“The Digital Economy is a Futural Foods Stuff.”

Background

Calling a Meeting in Advance for Our Initiative. On August 27, 2019, the Korea Office of the Konrad-Adenauer-Stiftung (KAS) called the first meeting with the Citizens' Coalition for Economic Justice (CCEJ). KAS had proposed to hold the Multi-stakeholder dialogues on digital coöperation in Korea, and CCEJ accepted it.

We looked over the Korea's current challenging issues and related agendas upon the purpose and intentions of the UN's own, and found some different contexts from *the age of digital interdependence* (UN, 2019), its backdrop and its aspects between Korea and other countries in the digital transformation. That is, (a) The concept of inclusiveness (i.e., a different understanding of Inclusive growth and development); (b) The methodology of the digital coöperation (e.g., a different approach to stakeholders); (c) The precondition of regulatory environment (i.e., a significant difference of the system, digital economy, and legal framework or culture); and et al. We recognized the world had different voices on digital coöperation with stakeholders. Let us say, (a) the concept of an inclusive digital economy always was an eventual subject to the commercial exploitation of consumers within (c) the regulatory sandbox like a Pandora's sandbox to involve (b) the massive experimental work of finding economic equilibrium or optimum. In fact, this report (UN, 2019) thematized "smart" regulations and required "regulatory innovation, environments and investments" into bankrolls on big data or FinTech industry. However, we rejected such a significant difference in our view of the Korea's setting these bad precedents; there was no way of how to do this "smart" until today.⁹ It always took money to make money in the name of "sustainable development." How comes the *smart*? In our consideration, inclusive development should be. That implies direct links between the macroeconomic and microeconomic determinants of the economics and economic growth (The World Bank, 2009).¹⁰ And it has been acknowledged

⁹ We would be unaware of this existence unless such a regulatory innovation gives any proof to the world.

¹⁰ The microeconomic dimension captures the importance of structural transformation for economic

around the world where Inclusive Growth is a concept that advances equitable opportunities and fair competition for economic participants during economic growth and development with benefits incurred by every section of society at both levels of economics (Anand, Mishar & Peris; Ranieri & Ramos, 2013); in this regard, the inclusive digital economy likely has the same concept as that. The (a) concept of an Inclusive Digital Economy is an essential subject not only to business relations but also ordinary people like you and me. Because the digital economy is a *public property* as well as our *futural foodstuff*.

In this same vein, we set up a goal of the panel discussion at the Korea's point of the view to find required values from the UN's report (2019), to set imperative policy tasks in Korea, and in a new order to make recommendations to the world toward digital coöperation. Then what we need at this moment?

Finding Challenging Issues in Korea. We've recognized structural changes in the world economy, the reorganization of the world economy, the economics of digitization and the impact on digital transformation. In effect, Korean society was already in this progress. And we couldn't avoid it falling under the market presence of digital transformation, a power that was overwhelming our life and consumer lifestyles. Of course, there are coming over to us as a new opportunity, either. However, we could be faced with unexpected challenges at risk, such a de-regulatory risk in the radical process of coming through digitization, transformation, and monopolization. In fact, not only Korea but all over the world is affected by the same presence of market power (OECD, 2018 & 2019a). That is *the Market Concentration of Digital Economic Powers*. As a matter of course, specific local BigTech or multinational IT companies engross both internet and content markets, (i.e.), a single platform on the two-side market, whereby exclusively passing network traffics and big data around the world. As a result, they're beating the system of safeguarding digital transformation against invasion of privacy,

diversification and competition, while the macro dimension refers to changes in economic aggregates such as GNP or GDP, total factor productivity, and aggregate factor inputs.

against abuse of market dominance, against corporate tax evasion (OECD, 2015a; PANG, 2019).^{1 1}

This is total against the rule of law. This is the last straw.

So we're seriously concerned about these radical process losing control over what they do. Of course, recently the Korean government has been seeing Inclusive Economics, inclusive growth and development (Ministry of Economy and Finance, 2019a; Blue House, 2020). It's just being—still in the early stages. The government is dealing with such a matter, but then *bankrolls* the BigTech company with institutional privileges on their own ways (Ministry of Economy and Finance, 2020a), a matter that is confronted with the rising of *the Digital Concentration of Financial Power*. They're now finding something inside the regulatory sandbox^{1 2} running a risk of deregulation on safeguards (FSC, 2019b; Ministry of Economy and Finance, 2020b), but then again they WOULDN'T see of the affected people outside of the box; the bureaucracy had the long time-old faith in the *chaebol* system, a BigTech conglomerate that could support a large *family*, his people of their nation like the oligarchical system.^{1 3} For example, the deregulation of Internet-based banks, a called

^{1 1} The global market was more and more integrating between digital markets and international trade, the fact that the early report by OECD (2015a) estimated indicating about 4–5% losses of the global corporate income tax revenue, (i.e.), annually 100–240 billion dollar, due to a super few of IT companies.

^{1 2} The regulatory sandbox refers to a mechanism for developing regulation that keeps up with the fast pace of innovation, in particular, of the FinTech industry. Originally a sandbox meant the small box filled with sand where children play and experiment in safety in a controlled environment. In the computer science world, a sandbox is a closed testing environment designed for experimenting safely with web or software projects. And this concept is also being used in the digital economy area, to refer to regulatory sandboxes: testing grounds for new business models that are not protected by current regulation, nor supervised by regulatory institutions.

^{1 3} A chaebol [재벌] is a large industrial conglomerate that is run and controlled by an owner or family in South Korea. A chaebol often consists of many diversified affiliates, controlled by an owner whose power over the group often exceeds legal authority. This term is often used in a context similar to that of the English word “big company [대기업].” The first known use was in 1972. Several dozen large South Korean family-controlled corporate groups fall under this definition.

The chaebol has also played a significant role in South Korean politics. In 1988, a member of a chaebol family, Chung Mong-joon, president of Hyundai Heavy Industries, successfully ran for the National Assembly of South

“FinTech policy (FSC, 2020)”^{1 4} that was recently diverted by leaving out of the separation of banking and commerce (FSC, 2019a), of which chaebols and their family could be allowed to own this bank. For another example, the triple deregulation of big data industries, a called “Three Major Data Laws (Ministry of Economy and Finance, 2019b; Ministry of the Interior and Safety & Korea Communications Commission & FSC, 2020)” that lately did away by allowing the BigTech company to exploit not only our credit but also our personal information, on their own ways.

Today’s digital transformation shows other cases that, seeing inequitable, was the system of injustice that might squeeze our rights exclusively out of social security, out of platform labour, and out of hate speech, the manipulation of AI biases, the evolution of deepfakes, the propagandization of campaigns, on their own ways. For the sake of their exclusive growth and development till today. Hence, we were supposed to make a review of today’s digital zeitgeist, to diagnose Korea’s forward challenges and to set our recommendations for the digital coöperation beyond the market concentration of digital economic powers.

Setting up the Agenda. In that vain stream of the digital transformation, we sought some advice from the CCEJ’s research group to protect our rights to inclusive digital society

Korea. Other business leaders also were chosen to be members of the National Assembly through proportional representation. Hyundai has made efforts to contribute to the thawing North Korean and South Korean relations, but not without controversy. Many South Korean family-run chaebols have been criticized for low dividend payouts and other governance practices that favor controlling shareholders at the expense of ordinary investors. (Wikipedia)

^{1 4} FinTech is one of the key areas actively promoted by the Korean government for innovation-led growth strategy. The emergence of innovative financial solutions in Korea has improved consumer experience while prompting further innovation and competition in the financial sector. In order to maintain this momentum and continue to build upon the achievements made so far, it is necessary to scale up and boost the competitiveness of our fintech industry for an era of digital transformation and data economy. Through regulatory reforms, global networking and investment, the government will work to foster a fintech ecosystem where fintech start-ups and financial institutions can continue to lead digital innovation in the financial sector.

against the monopolization of our digital market. Hyo Chang PANG gave us technological advice on the digital economy, Hyuck Seung YANG gave us humanistic advice on the digital rights, and our true experts made a comprehensive suggestion about the Korea's policy tasks to challenge, as the following agenda & issues:

- I. **Hate Speech.** *A normative line would be drawn with legislation against hate speech, (e.g.), by the herd misogyny or by the anonymous, the online bullying of celebrities,^{1 5} rather than ex-post regulation against the cyberdefamation by free speech. It's in lawless condition.*
- II. **Technology Ethics.** *It would outweigh AI in accordingly high technology advances of deep learning—something what the AI should learn of human intelligence by itself—through an awareness of the developer's own. Whose accountability would outweigh nothing?*
- III. **Autonomous Weapon Systems.** *Like killer drones or killer robots, those would become known more transparently about the military use of new technologies on today.*
- IV. **Digital rights.** *As you know, this year saw the deregulation of the “Three Major Data Laws (Ministry of Economy and Finance, 2019b; Ministry of the Interior and Safety & Korea Communications Commission & FSC, 2020).” So I'm concerned about the invasion of privacy and the monopolization of personal information. We would look into the impact of it, and present alternatives again that on the basis of technological things, (e.g.), the de-identification of data.*
- V. **Digital Taxation.** *We would strike back against a super minority of multinational enterprises above their Base Erosion and Profit Shifting, officially “BEPS” Actions,^{1 6} by imposing digital taxes on them.*

^{1 5} You can see this article: Sang-Hun Choe & Su-Hyun Lee. (2019). Suicide by K-Pop Stars Prompt Soul-Searching in South Korea. *The New York Times*. Retrieved from <https://nyti.ms/2Ohfq3n>

^{1 6} Base erosion and profit shifting (BEPS) refers to tax planning strategies used by multinational enterprises

- VI. *The Inclusive Digital Economic System.*** *Mostly, social security or the education system has been likely excluded in the economic system around the world so that this society would be getting into the digital divide. To address it, these would engage in an economic factor, either.*
- VII. *Big Data, BigTech and FinTech Industries.*** *In this regard, the separation of banking and commerce as well as the Three Major Data Laws (Ministry of Economy and Finance, 2019b) would rebuild the firewall against financial risks and against privacy risks.*
- VIII. *Gig Economy.*** *Lately, the wind of M&A blew away into the platform labour market—(e.g.), the consolidation of food delivery platform industries^{1 7}—industrial relations, however, ruled out; then platform works would be of the affected class in the Online to Offline (O2O).^{1 8}*

And we finally adopted these eight agendas not only to the panel discussion but also to the general public survey on the governance architectures for global digital coöperation.

that exploit gaps and mismatches in tax rules to avoid paying tax. Developing countries' higher reliance on corporate income tax means they suffer from BEPS disproportionately. BEPS practices cost countries USD 100-240 billion in lost revenue annually. Working together within OECD/G20 Inclusive Framework on BEPS, over 135 countries and jurisdictions are collaborating on the implementation of 15 measures to tackle tax avoidance, improve the coherence of international tax rules and ensure a more transparent tax environment. See this:

<https://www.oecd.org/tax/beps/about/#mission-impact>

^{1 7} See this article: Jun-ho Jung. (2019, December 18). Controversy erupted over German DH's acquisition of delivery app Baedal Minjok. *Korea IT Times*. Retrieved from <http://www.koreaitimes.com/news/articleView.html?idxno=94670>

^{1 8} Online to offline, commonly abbreviated to O2O, is a phrase that is used in digital marketing to describe systems enticing consumers within a digital environment to make purchases of goods or services from physical businesses. O2O means "Online To Offline" but also "Offline to Online," indicating the two-way flow between the online and the physical world, especially retail and ecommerce, but also between brand marketing and shopper or point-of-sale marketing efforts to influence purchase decisions. For example, consumers could see an ad online and be driven to visit the store, or be in a physical store but ultimately purchase online for a variety of reasons (selection, price, convenience, etc.). There are many aspects to O2O, and businesses are increasingly challenged to satisfy consumers' expectations of a frictionless flow. (Wikipedia)

Method

Workshop: Korean Civil Society's Joint-Panel Discussion on the Age of Digital Interdependence

Organization of the Discussion. We set the kind of participants, those of us, whose debater was (a) an expert or activist peer with CSO; or, (b) an academic researcher or independent scholar specialized in the relevant areas; or, (c) a stakeholder, worker or employer of the relevant business; or, (d) a lawyer or legal expert experienced in the relevant areas or cases, including the relevant petition for legislation; and whose audience was open to (e) the public; and others, who was (f) a surveyor; or, who was (g) a surveyee, either.

And we consisted of three groups, for our panel discussion both on the Digital Rights and on the Digital Economy, and for our survey on the Digital Governance. The first Working Group on the Digital Rights was facilitated by Hyuck Seung YANG, the second Working Group on Digital Economy was facilitated by Hyo Chang PANG, and both facilitators moderated each panel discussion with five debaters. Also, the Third Working Group on the Digital Governance was led by Min-Hyoung KANG, and etc. As the following participation.

Participation of the Discussion

The First Working Group on Digital Rights (See Table 1 infra.)

Hyuck Seung YANG, a facilitator for this panel discussion;

Sook-Hee KIM, a subject debater for Hate Speech;

Sunyong BYUN, a subject debater for Technology Ethics;

Dong-yub KIM, a subject debater for Autonomous Weapon Systems;

Dong-ho YU, a subject debater Security Technologies;

Twenty-Five people, the audience.

The Second Working Group on Digital Economy: (See Table 2 infra.)

Hyo Chang PANG, a facilitator for this panel discussion; a debater for Gig Economy and Education;

Hun PARK, a subject debater for Digital Taxation;

Seong Eun CHO, a subject debater for an Inclusive Digital Economy, Society and Education;

Hwan Kyoung KO, a subject debater for Big Data, FinTech and BigTech industries;

Chae Wan SUH, a subject debater for Big Data, FinTech and BigTech industries; and for Education;

Twenty-Five people, the audience.

The Thrid Working Group on Digital Governance: (See Table 3 infra.)

Min-Hyoung KANG, Young Ju YU & Sea Eun JANG, surveyors for the Digital Governance;

Thirty-Three surveyees.

By this participation, we were supposed to seek advice from ten subject experts, inform of the workshop, get it approved our panel discussion and invite for two facilitators and eight debaters. Also, we decided to do a general public survey by three student volunteers who were studying in the Global Governance. Thanks to our comprehensive participation, this workshop could be allowed to gain specialties. And our three working groups conducted each other's subject investigation into our Agenda & Issues before opening the discussion, as the following Literature Review and Questionnaire Survey.

Literature Review: Korea's new Forward Challenging Tasks Against Side Effects from the Digital Transformation

We conducted researches for about one month before the panel discussion. Basically, both facilitators presented agendas & issues, and a brief summary of key concepts & findings in advance. After taking note of their findings, subject debaters each conducted cross-impact analyses, and presented Korea's forward challenging tasks and our recommendation.

Concept Analyses. Basically, we studied the UN's early report (UN, 2019) *the age of digital interdependence*, first derived key findings from the early report for the panel discussion. And we discussed the findings for our recommendation.

H. C. PANG. (Part2). With respect to digital economies, PANG, the main facilitator, had looked through this report, and comprehensively analyzed concepts to find required values and items for digital coöperation on the basis of SDGs (UN, 2015). PANG has fully managed themes of the project, our research as well as our discussion.

S. Y. BYUN. (Agenda ii); *D. H. YU.* (Agenda iv). On the basis of his findings, other debaters including SUH and KO could second conducted cross-impact analyses. With respect to digital technologies, BYUN, a debater who is a distinguished ethicist for AI, gave us a big help for the scientific conceptualization of digital technology and technology ethics. Also, YU, a debater who is a networking and security technician, gave us a big help for technological assistance and the conceptualization of technical and social issues.

Empirical Studies. Including YU, other debaters each made use of their professional experience in their field.

H. PARK. (Agenda v); *D. Y. KIM.* (Agenda iii). Both debaters gave us unknown recent issues, knowledge and understanding of hopology or digital taxation. In both comparative studies, we decided to exclude other sensitive relations, diplomatic and international-politic, however. They made use of their international academic experience in their field. PARK recently studies the OECD's BEPS related experience (Agenda v). And KIM studies modern warfare and investigated weapon systems including arms control (Agenda iii).

S. H. KIM. (Agenda i); *C. W. SUH & H. K. KO.* (Agenda vii). With digital rights and economy, three debaters, who are lawyers, analyzed their cases related to BigTch business, policy trends, and litigation experience. They picked it up a chronic case, such as hate speech

(Agenda i), or the policy problem of big data and FinTech (Agenda vii). Especially, SUH & KO; and YU raised the problem of Three Major Data Laws.

S. E. CHO. (Agenda vi & viii). With respect to an inclusive digital economy, society and education (Agenda vi), a debater, a researcher with Information Society Development Institute, referred to her recent comparative studies and field experiences and shared her results of these. CHO comprehensively analyzed stakeholders, in particular, the affected class who had felt trouble in the social security system.

On behalf of her, Pang firsthand participated in the panel discussion about the platform labour and retraining and smart factories (Agenda viii).

Example Analysis. YANG, a facilitator (Part 1), analyzed social phenomena about the Digital Twin related to super AI and human rights.

Documentation and Records

Seminar Book. Our experts' paper, *디지털 상호의존 시대, 한국의 새로운 도전과제 진단* [*In the age of interdependence, a prescription for Korea's new challenge forward tasks*], before both Working Groups at our five sessions was available from <http://bit.ly/38ttaz9>

Video. Also, we'll be going to upload a video of our panel discussion on <https://www.youtube.com/witheccej> [In Korean]. You may run a video later.

Questionnaire Survey: Korean Citizens' Awareness of Digital Issues on Digital Rights and Digital Economy and Digital Governance

Proposed Models. For global digital coöperation, the UN's report (2019) proposed three possible models: (a) Internet Governance Forum Plus (IGF Plus) is to enhance and extend the multistakeholder; (b) Distributed Co-Governance Architecture (COGOV) is to build on existing mechanisms; (c) Digital Commons Architecture is to envision a "commons"

approach with loose coördination by UN.^{1 9} All have benefits and drawbacks. These were put forward herein this report to provide concrete starting points for our survey, further discussion and advice that we'll give to UN to initiate in Recommendation 5A.^{2 0}

Making Questionnaire with Tool. In accordance with the UN's practical guides, *Making Data Meaningful* (2009a; 2009b; 2011; 2014), we made a Google Forms^{2 1} of thirteen questions, closed-ended and open-ended. Among these, six questions were value-judgment about the “smart” regulations, four questions were expectational about inclusive growth and development, two questions were empirical about digital rights, and the last one was an essay question on recommendations. Also, the last second and third questions ask about governance architectures whatever the UN hoped to (see Table 3 infra.).

These questions, for example, ask about, those of us, who have to become a good participant in the promising governance for global digital coöperation, as the bellowing (Q8-a) and (Q8-b). Of course, we couldn't make a direct question on the three models to surveyees. (“Because those were too *mysterious* to everyone.”) However, thanks to Min-Hyoung KANG and etc., our true volunteers simply discerned the difference between them in the range of participation, and we made up simple questions. As a result of this survey, we would judge models and pick one up.

^{1 9} UN. (2019). *ibid.* Pp. 29–36.

^{2 0} UN. (2019). *op. cit.* P. 39: We recommend that, as a matter of urgency, the UN Secretary-General facilitate an agile and open consultation process to develop updated mechanisms for global digital coöperation, with the options discussed in Chapter 4 as a starting point. We suggest an initial goal of marking the UN's 75th anniversary in 2020 with a “Global Commitment for Digital Coöperation” to enshrine shared values, principles, understandings and objectives for an improved global digital coöperation architecture. As part of this process, we understand that the UN Secretary-General may appoint a Technology Envoy.

^{2 1} You may access to it via this page: <http://bit.ly/2uJDpAW>

In accordance with our Agendas, not only the governance did this questionnaire survey consist of the comprehensive questions on our agenda about hate speech (Agenda i), AI ethics (Agenda ii), security (Agenda iii), privacy (Agenda iv), inclusive economy (Agenda vi), big data, BigTech and FinTech (Agenda vii), Gig Economy (Agenda viii): and these results were contributed to our report as the following questions.

Table 3. The Third Working Group on Digital Governance

*Questionnaire Survey in order to set the UN's Promising Governance
for multilateral Digital Coöperation and for Visionary Recommendations*

- Q1. Digitization and digital transformation around the world are in fast progress. private, financial, distributional, manufacturing companies and the government agencies are increasing investment for the digital transformation and providing various services for digital device users. To what extent do you think the digitization or the digital transformation in our society is progress now?
- ① Digitalization has been in a lot of progress in the society across the board, and digital devices are also used by lots of people.
 - ② Digitalization has been progressing a lot in the society across the board, and I used to take advantage of digital devices.
 - ③ Digitalization is NOT yet in progress in the society across the board.
 - ④ I have no idea.
- Q2-a) Malicious comments, hate speech, fake news, and etc.: these are often happening on SNS that can widely spread out to many victims, including individuals, races, or genders like the affected classes, and that can cause political, social chaos and disruption of the masses. Did you suffer that kind of harm?
- ① Not at all.
 - ② Often.
 - ③ Frequently.
 - ④ Vicarious experience only.

Q2-b) What is your opinion about malicious comments, hate speech, and fake news on SNS?

- ① It had better allow to make a free speech though the hatred.
- ② Sever punishment or strong enforcement.
- ③ Others: _____.
- ④ I have no idea.

Q3. Mobile money, Bitcoin, blockchain, cryptocurrency, and etc. might come over to us as an unfamiliar jargon, but already came into everyday business. These could be unfamiliar to the affected class including the elderly, the child, and to the delinquent like the weak finance so that they would be alienated due to the “financial exclusion.” What do you think about it?

- ① A very few.
- ② The government has to make efforts to give them an institutional policy and strategy.
- ③ Financial companies need to make a social partnership with the affected class.
- ④ I have no idea.

Q4. The economic activity data, such as consumption, credit, or privacy would be basic information as useful as the analysis of big data. In addition, personal medical records can help big data to build in the early warning system for disease prevention and control. Likewise, big data could be so effective in the various sectors, public and private when they tried to catch market trends or when they tried to examine policies. But why they'd exploited heavy data, that might give us big damage like data spill. What is your opinion about the use of big data?

- ① Big data is necessary to use actively.
- ② I'm concerned about the data spill.
- ③ I'm seriously concerned about the data spills, so it has to set the limitation of available use.
- ④ I have no idea.

Q5. What would the next ten years' impact of advanced digital technologies, such as AI, robot, self-driving car (i.e., autonomous vehicle) give to economy, society, labour, welfare, environment?

- ① Positive impact.
- ② Negative effect.
- ③ Nothing.
- ④ I don't know.

Q5-a) [This for the ① Positive impact above to go] Which is the most effective?
(multiple responses)

- ① Overall.
- ② Workers would improve their professionalism.
- ③ Enterprises would increase effectiveness due to cost-cutting.
- ④ Labour market structure would be rationalized like the gig economy.^{2 2}
- ⑤ Others: _____.

Q5-b) [This for the ② Negative effect above to go] Which is the most affected?
(multiple responses)

- ① It's difficult to earn a living because robots would supersede the human's employment.
- ② Thanks to know-how dollars, BigTech and Chaebol would engross the monopoly market structure.
- ③ Contempt of life, violation of human rights, ethical issues would become worse.
- ④ Functioning in society or Talks in a relationship between the family and would trail off.
- ⑤ Others: _____.

^{2 2} What is the Gig Economy? In a gig economy, temporary, flexible jobs are commonplace and companies tend toward hiring independent contractors and freelancers instead of full-time employees. Such a gig economy undermines the traditional economy of full-time workers who rarely change positions and instead focus on a lifetime career. (Investopedia)

Q6. Due to Drones or CCTVs, the violation of human rights recently has been a social problem, such as the invasion of privacy; that regard, do you feel necessary to set global guidelines or safeguards related to human rights when governments or companies will develop these technologies?

- ① Yes.
- ② No.
- ③ I have no idea.

Q7. In cyberspace, various cyber crimes, phishing and ransomware gain personal and credit information spills. Not only that, the danger of cyberterror paralyzes major functions of our society such as government agencies, hospitals, financial networks, military communications, and threatens our national security around the world. How safe is our cybersecurity?

- ① Safe.
- ② Normal.
- ③ Unsafe.
- ④ I have no idea.

Q8-a) Who should participate in the digital governance for multilateral coöperation?
(multiple responses)

- ① Citizens.
- ② Government.
- ③ National Assembly (or, Parliament).
- ④ Academia.
- ⑤ Businesses.
- ⑥ Media.
- ⑦ CSO.

Q8-b) Who is the best leader as a reconciler? (multiple responses)

- ① Officials of the international organization (*e.g.*, UN).
- ② High-level officials like the president or the prime minister.
- ③ Legislative bodies such as a lawmaker.
- ④ Multinational business people.
- ⑤ Academic researchers and professors.
- ⑥ Policy specialists of NPO or watchers of NGO.
- ⑦ CSO.
- ⑧ Journalists.
- ⑨ I'm not sure of them.

Q9. Please write down your thought about recommendations for the global digital coöperation to deliver to UN.

Setting Target & Period and Conducting the Survey. From January 13 to February 12, 2020, for a month this survey was open to the public anonym. And thirty-three surveyees in total gave us their answers, as the following results (see Part 3 as well as Table 3 *infra.*).

Results and Discussion

Overview

Opening of the Panel Discussion. From 09:30 a.m. to 16:30 p.m. on January 21, 2020, to diagnose side effects of the digital transformation in the digital era, in a new order to prescribe for the Korea's forward challenging tasks and set visionary recommendations on the multilateral digital coöperation by UN, we held together at the CCEJ to discuss the main theme, *"Prescription for Korea's New Forward Challenging Tasks in the Age of Digital Interdependence."* And CCEJ led this topic by two working groups—the first Working Group on the Digital Rights, Ethics and Politics; the second Working Group on the Digital Economy, Society and Education—both groups for the panel discussion with all the ten experts for five each subject, as the following five sessions:

Table 1. The First Working Group on Digital Rights, Ethics and Politics.

Part 1. *Digital Rights, Technology Ethics and Democracy in the Digital Era*

Session 1. *Human Rights and Human Dignity*

Session 2. *Trust, Social Cohesion and Security*

Table 2. The Second Working Group on the Digital Economy, Society and Education.

Part 2. *Digital Technology & Sustainable Development*

Session 3. *Building an Inclusive Digital Economy and Society*

Session 4. *Harnessing Data and "Digital Public Goods" for Development*

Session 5. *The Future of Education and Jobs*

Conducting a Questionnaire Survey. From January 13 to February 12, 2020, to survey public preference to the UN's governance models and our agenda, we conducted it to the general public with thirteen questions, as the following results (see Table 3 infra.).

Table 3. The Third Working Group on Digital Governance**Part 2. Questionnaire Survey in order to set the UN's Promising Governance for Multilateral Digital Coöperation and for Visionary Recommendations**

Of particular interest to *the age of digital interdependence (2019)* by UN in complex structures of the Governance Architectures for Global Digital Coöperation as the proposed three promising models, (a) Internet Governance Forum Plus, (b) Distributed Co-Governance Architecture and (c) Digital Commons Architecture, those are put forward herein this report to provide concrete starting points for our survey, further discussion and advice that we'll give to UN to initiate in Recommendation 5A. Not only governance did this questionnaire survey consist of the total thirteen questions about hate speech, big data, FinTech, privacy, security.

The First Working Group on Digital Rights**Part 1. Digital Rights, Technology, Ethics and Democracy in the Digital Era**

Key Findings. Hyuck Seung YANG, a facilitator of the First Working Group on Digital Rights, identified two digital trends from the market, one that (1.a) *digital twin*^{2 3}

^{2 3} Digital twin means a digital replica of a living or non-living physical entity. There are many definitions: "A digital twin is a digital replica of a living or non-living physical entity. By bridging the physical and the virtual world, data is transmitted seamlessly allowing the virtual entity to exist simultaneously with the physical entity (El Saddik, 2018)"; or "Using a digital copy of the physical system to perform real-time optimization (Söderberg, Wärmefjord, Carlson & Lindkvist, 2017)"; and etc. (Glaessgen & Stargel, 2012; Lee, Lapira, Bagheri, an Kao, 2013; Grieves & Vickers, 2016; Bacchiega, 2017; Tao, Sui, Liu, Qi, Zhang, Song, Guo, Lu & Nee, 2018; Bolton, McColl-Kennedy, Cheung, Gallen, Orsingher, Witell & Zaki, 2018; The Gemini Principles, 2018) These definitions of digital twin technology used in prior research emphasize two important characteristics. Firstly, each definition emphasizes the connection between the physical model and the corresponding virtual model or virtual counterpart. Secondly, this connection is established by generating real time data using sensors. The concept of the digital twin can be compared to other concepts such as cross-reality environments or co-spaces and mirror models, which aim to, by and large, synchronise part of the physical world (e.g., an object or place) with its cyber representation (which can be an abstraction of some aspects of the

and big data are expanding at an exponential rate; and the other one that is (1.b) emerging of deep learning-based Super AI at a rapid rate.

Key Factor (1.a) Expanding of the Digital Twin at an Exponential Rate.

With respect to (1.a) the world is creating digital twins, forming the optimization of connecting, trading, knowledge sharing, decision making, and etc. by recording personal achievements and getting extensive by digital devices or sensors detecting what people do. Indeed, the early research expected the world to exponentiate these data over 150 billion in the next ten years. for example, such big data by digital twins has been utilized for AI, IoT, and personalized services. In effect, “We couldn’t live above a digital twin if our life would be disconnected from this world,” YANG said.

Key Factor (1.b) Emerging of Deep Learning-based Super AI at a Rapid Rate.

With respect to (1.b) six key characteristics of deep learning-based AI (2012–2019) were analyzed. One that is (1.b-i) Quantitatively Big Data-based Learning; (1.b-ii) Quantitative Forecasting Models^{2 4}; (1.b-iii) Various Kinds of Data Processing (e.g., images, sounds, videos, natural languages); (1.b-iv) Lower Barriers into the Market; (1.b-v) Limitation of the

physical world).

^{2 4} Forecasting is the process of making predictions of the future based on past and present data and most commonly by analysis of trends. A commonplace example might be estimation of some variable of interest at some specified future date. Prediction is a similar, but more general term. Both might refer to formal statistical methods employing time series, cross-sectional or longitudinal data, or alternatively to less formal judgmental methods. Usage can differ between areas of application: for example, in hydrology the terms "forecast" and "forecasting" are sometimes reserved for estimates of values at certain specific future times, while the term "prediction" is used for more general estimates, such as the number of times floods will occur over a long period. Risk and uncertainty are central to forecasting and prediction; it is generally considered good practice to indicate the degree of uncertainty attaching to forecasts. In any case, the data must be up to date in order for the forecast to be as accurate as possible. In some cases the data used to predict the variable of interest is itself forecasted. (French, 2017)

Data-based Forecasting that the future is a repetition of the past is less flexible; and (1.b-vi) Difficult to Explanation based on Human Relations: these were the bellwether of that super-intelligence would be coming true. And Stephen Hawking, Elon Musk, Bill Gates, Steve Wozniak (Russell, Daniel Dewey & Max Tegmark, 2015), and Sundar Pachai were warning against the rising of super AI above the historical progression.^{2 5}

Results (1.c) *the Risk of Human Rights and Democracy.* In this regard, as a result of emerging the (1.a) Digital Twin, Big Data and the (1.b) Super AI, these might increase (1.c) the risk of human rights and democracy. One that is (1.c-i) Discrimination against Minorities; (1.c-ii) Appearance of Data-Controlled Societies; (1.c-iii) a Threat against Democracy (e.g., Nudging effect by deepfake); (1.c-iv) Social Polarization (i.e., both extremism) and Fragmentization (i.e., discrimination) by Filter Bubbles.^{2 6}

^{2 5} In January 2015, Stephen Hawking, Elon Musk, and dozens of artificial intelligence experts signed an open letter on artificial intelligence calling for research on the societal impacts of AI. The letter affirmed that society can reap great potential benefits from artificial intelligence, but called for concrete research on how to prevent certain potential "pitfalls": artificial intelligence has the potential to eradicate disease and poverty, but researchers must not create something which cannot be controlled. The four-paragraph letter, titled *Research Priorities for Robust and Beneficial Artificial Intelligence: An Open Letter*, lays out detailed research priorities in an accompanying twelve-page document. And the signatories ask: "How can engineers create AI systems that are beneficial to society, and that are robust? Humans need to remain in control of AI"; our AI systems must "do what we want them to do." The required research is interdisciplinary, drawing from areas ranging from economics and law to various branches of computer science, such as computer security and formal verification. Challenges that arise are divided into verification ("Did I build the system right?"), validity ("Did I build the right system?"), security, and control ("OK, I built the system wrong, can I fix it?") You can see this: *Research Priorities for Robust and Beneficial Artificial Intelligence: an Open Letter*. (2015). *Future of Life Institute*. Retrieved from <https://futureoflife.org/ai-open-letter>

^{2 6} A filter bubble – a term coined by Internet activist Eli Pariser – is a state of intellectual isolation that allegedly can result from personalized searches when a website algorithm selectively guesses what information a user would like to see based on information about the user, such as location, past click-behavior and search history. As a result, users become separated from information that disagrees with their viewpoints, effectively isolating them in their own cultural or ideological bubbles. (Wikipedia)

Alternatives (1.d) *Five Requisites of Digital Rights from UDHR.* YANG

suggested the following (1.d) five conditions, required for technological development from digital rights and required for human development on the basis of the Universal Declaration of Human Rights (UDHR).^{2 7} (1.d-i) Fundamental Principles of Developing and Using AI; (1.d-ii) Management Measures, (e.g.), “Hippocratic Oath” for Developers^{2 8}; (1.d-iii) The Stability of General AI in Reference to the Screening Criteria of FDA; (1.d-iv) The Anti-Trust Prevention System of Big Data on the Platform Market; and (1.d-v) Countermeasures against the Manipulation of Public Opinion.

Session 1. Human Rights and Human Dignity

Questionings. YANG threw six questions about the Recommendations 3A, 3B, and 3C (UN, 2019) as the following leading questions: “How realistic are the recommendations of the Expert Commission?”; “Which pre-conditions are necessary to implement the partly

^{2 7} UDHR Article 1. Right to Equality; Article 2. Freedom from Discrimination; Article 3. Right Life, Liberty, Personal Security; Article 3. Freedom from Slavery; Article 4. Freedom from Torture and Degrading Treatment; Article 5. Right to Recognition as a Person before the Law; Article 6. Right to Equality before the Law; Article 7. Right to Remedy by Competent Tribunal; Article 8. Freedom from Arbitrary Arrest and Exile; Article 8. Right to a Fair Public Hearing; Article 9. Right to be Considered Innocent until Proven Guilty; Article 10. Freedom from Interference with Privacy, Article 12. Family, Home and Correspondence; Article 13. Right to Free Movement in and out of the Country; Article 14. Right to Asylum in other Countries from Persecution; Article 15. Right to Nationality and the Freedom to Change it; Article 16. Right to Marriage and Family; Article 17. Right to Own Property; Article 18. Freedom of Belief and Religion; Article 19. Freedom of Opinion and Information; Article 20. Right of Peaceful Assembly and Association; Article 21. Right to Participate in Government and Free Elections; Article 22. Right to Social Security; Article 23. Right to Desirable Work and to Join Trade Unions; Article 24. Right to Rest and Leisure; Article 25. Right to Adequate Living Standard; Article 26. Right to Education; Article 27. Right to Participate in Cultural Life of Community; Article 28. Right to a Social Order that Articulate this Document; Article 29. Community Duties Essential to Free and Full Development; Article 30. Freedom to State or Personal Interference in the above Rights.

^{2 8} UN. (2019). op. cit. P. 30.

visionary approach operationally?"; "Is there a need to develop policy guidelines that oblige the private sector to take human rights into account when developing digital technologies?"; "To what extent is the private sector (especially social media companies) open and willing to deal with the protection of human rights in the age of digital technology?"; "Which organization could act as a coördinator to adapt to international human rights to digitization?"; "How can the demand that autonomous intelligent systems have to be designed in such a way that control, responsibility and accountability remain with the human being be enforced?"; "How could the right to privacy be better protected and how could citizens be given more control over their personal data?"

Agenda (i) “Self-Regulations” on Hate Speech: One’s hate speech by the free expression ought to be self-regulated, or it has no choice but to be intervened by the government.

Conception of the Digital Era. The digital revolution has features, (a) *super-connectivity* and (b) *disruptive innovation*. Economic and social uncertainties have been intensified from developed countries to developing countries, the global villages interacted in real-time and new business models with new technologies were emerging out of all knowledge. These rapid environmental changes required to civil society, business and the government to take new roles and responsibilities in a wide range of policy areas. But we had never experienced it. The question is, the conventional framework of established state-driving policies only is difficult to address raising such an issue. Hence, amid the coexistence of opportunities and challenges upon technological innovation, human rights should be developed with new values and meanings by keeping up with the fundamental paradigm and focusing on problem-solving to lead our better life; based on this, the individual policies in each sector have to be methodically converged with various human rights and values, to effectively industrialize and institutionalize

new technologies and to lead our win-win coöperation for our future of humanity (SEO, 2018).

Key Findings (i.a.) *Hate Speech BUT Free Speech in the Digital Era.* The early report, *the Age of Digital Interdependence* (UN, 2019), saw that women who're playing video games were *violated*; that British teenager who saw self-injury content on social media committed suicide; and that Indian man who was bullied after posting a self-video of himself dressing women's clothing ... It also took note of the fact that approximately one-third of those under age had been recently exposed to "violent or hateful contact or behavior online."

In this context, I would discuss a *limit ability to hate speech but free speech in the digital era.*

Key Findings (i.b.) *Necessity for the Restriction of THIS Free Speech.* Recently, celebrities committed suicide due to hate speech. Of course, there had been such a case due to that before, but now we could recognize that such a danger is coming over to us as more seriousness in the digital era. Lately, the year saw a double modality in our society where a value of diversity appeared was acknowledged whereas the other different values were distinguished each other. For example, (a) *xenophobia*—in particular, (a-i) *against foreign workers* or (a-ii) *against multi-cultural families*; (b) *misogynism*; (c) *homophobia*; (d) *transphobia*; (e) *disability hate*; (f) *political hate against democratization activists*; (g) *provincial hate* (i.e., regional discrimination); (h) *religiomisia*, and etc. Every kind of hate speech was flooding against people or our values. Although it is desirable to expand freedom of expression, the core value of liberal democracy, and the hate speech discriminatorily disliked, ridiculed, contempt for (a-i) migrant workers, (a-ii) women and their children, or (g) people living in certain areas, or (c) homosexuals.

Is that like the freedom of expression? That mightn't guarantee the freedom of hate speech if it could infringe without threshold; to express the feelings of hate, antagonism and

discrimination against a specific person or the entire group, is that be not only against personal rights but also against equal rights, nevertheless (LEE, 2014).

This is the reason why we should be so seriously concerned about hate speech that can cause serious harm to our society above the individual. In addition, the development of science and technology accelerates damage and makes it difficult to recover from damage. That is a worldwide question.

Key Factor (i.e) Criteria on the Protection or Restriction of Free Speech in Cyberspace. Likewise, the development of science and technology, in particular, information and communication technologies, affects social media, mass media, and online media that is also a product for hate speech on Internet. Thus, this question is a new paradigm shift of the established law, of how should freedom of expression be guaranteed in cyberspace where it consists of online media or Internet news. If some's hate speech that constrains or infringes on others in cyberspace is required for control or regulation, now then will it be resolved by existing legal or regulatory models on the freedom of expression? Indeed, in order to control or regulate hate speech, as a result of ensuring the freedom of expression, the development of science and technology, then that can be set some thresholds of the free but hate speech in cyberspace (Sank Kyung LEE, 2015).

Referred to the international standard for protection and limitation on the Freedom of Expression in Cyberspace, the resolution of the Promotions, Protection and Enjoyment of Human Rights on the Internet (UN, 2012, A/HRC/20/L.13) was adopted. This meant the first resolution by UN to recognize individual freedom of expression on the Internet. And the resolution under the UN Charter reaffirms the Human Rights and Fundamental Freedoms,

containing relevant human rights treaties,^{2 9} and recognizes the increasing interest in human rights and the freedom of expression on the Internet in accordance with rapidly increasing technological development and the use of new information and communication technologies. Also, UN reaffirmed the promotion and protection of human rights on online again by adopting the resolution on Promoting, Protection and Enjoyment of Human Rights on the Internet (HRC, 2014; LEE, 2015).^{3 0}

In this regard, given the seriousness of the hate expression, the state would be hard to justify no intervention any longer. The serious harm of hate speech is a reality. In fact, the early studies showed a lot of empirical evidence that minorities had suffered various modalities of pain and disgust in the process of discrimination and violence. However, it had better eliminate hate speech out of the Internet market; the problem is, that “Speaking Back (i.e., retort)” be practically impossible. That meant the state’s non-intervention would cause further damage to victims of hate speech by giving a wrong signal of accepting hate speech. For unless that situation would improve “of itself,” in civil society the “non-intervention” is no option. This action against hate speech has been required under international law, and most democracies were taking actions anyway. Neither were these issues intervention nor intervention, then now it rather turns our question and argumentation of how to set regulations on hate speech into the system (HONG, 2016).

Key Factor (i.d) the Precedent by Korean Constitutional Court. “*Discrimination and hate speech were prohibited by Article 5 (3) of the Ordinance of the Case are NOT exaggerated, partially misleading speech that arises from the freedom of expression, are NOT*

^{2 9} The Universal Declaration of Human Rights (UN, 1948); the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights (UN, 1966).

^{3 0} Human Rights Council (HRC), the 26th session held from June 10 to June 27, 2014.

allowed for democracy, and are beyond the boundary of human rights others owned. As a result of the infringement of human rights is above a threshold that is persevered by regulating it for the protection of democracy.”^{3 1}

Results (i.e) “Self-Regulations” and Criminal Regulation

Self-Regulations. Referred to the self-regulation by Korea Internet Self-governance Organization (KISO), under the article of Restriction on Postings, “*Members (e.g., Internet companies) may eliminate or regulate against hate speech, insulting or abusive languages for the affected class, including regional, disability, race, country of origin, gender, age, job.*”

However, for unless the imposition of mandating for content providers to less take technical measures against hate speech or fake news, they may lead to another issue such as private censorship or the occurrence of a chilling effect. More specifically, it is necessary to strictly regulate the creation and dissemination of discriminatory or hate speech based on fake news, to what extent it is technically possible to block it, and a more democratic and transparent process to prevent it.

Also, in this regard, it is important to come up with alternatives through further discussions about what the method is and to discuss freedom of hate speech by the media, the enhancement of political neutrality that can function as a real-time fact-checker.

Criminal Regulation. On the other hand, the individual, who has been infringed by defamation or insults due to hate speech, can lodge criminal charges. Such a victim, like the affected class, cannot be identified if someone is anonymous, however. Enforcement control must be considered as a last resort to complementary means, (i.e.), non-judicial or non-punitive regulation unless it is self-regulated by extreme hate speech.

^{3 1} See this: http://search.ccourt.go.kr/thz/pr/thz_pr0101_P1.do

Agenda (ii) Technology Ethics “together with Citizens”: The Ethics

Certification Program for AI Systems has to build itself upon citizenship education.

Key Concepts. Referred to *the age of digital interdependence* (UN, 2019), of importance are the Recommendations and the following concepts: (ii.a) *Digital Access Rights* (Recommendation 1A); (ii.b) *Digital Public Goods* (Recommendation 1B); (iii.c) *Protection of Digital Equality for Minorities and the Weak* (op. cit. 1C); (ii.d) *Non-Discriminatory Data* (op. cit. 1D); (ii.c) *Digital Help Desk* (op. cit. 2); (ii.d) *Application of Human Rights to Digital Technology* (op. cit. 3A); (ii.e) *Raising Concerns about Human Rights Violations and Potential Violations* (op. cit. 3B); (ii.f) *Explainability and User Accountability* (op. cit. 3C); (ii.g) *Digital Safety* (op. cit. 4); (ii.h) *Mechanisms for Global Digital Coöperation* (op. cit. 5A); (ii.j) *Approaches to the Multi-Stakeholder System* (op. cit. 5B).

Conception of (ii.k) “Exponible” Artificial Intelligence (AI) Also, referred to 25 pages of *the age of interdependence* (UN, 2019), the early report as well as we prescribed it to (vii.a) AI that “The Panel supports, as stated in Recommendation 3C, the emerging global consensus that autonomous intelligent systems be designed so that (a) *their decisions can be explained*, and (b) *humans remain accountable*. These systems demand the highest standards of ethics and engineering. (c) *They should be used with extreme caution to make decisions affecting people’s social or economic opportunities or rights, and individuals should have [a] meaningful opportunity to appeal*. (d) *Life and death decisions should not be delegated to machines.*”: These four factors, quote-unquote, were (ii.k-i) the Exponible AI (i.e., predictable variations); (ii.k-ii) the Principle of Human Accountability in Operating AI; (ii.k-ii) the Principle of Respect for the Human Autonomy, Affected Social, Economic, Meaningful Opportunities to Appeal Against AI; (ii.k-iv) the Principle of Nondelegation Doctrine based on the Self-Determination for Life and Death.

In particular, these things had to do with values both (2.a-iii) *Human-Centredness* and (2.a-iv) *Human Flourishing* (infra.).

Key Findings. The AI that could be explained to the human was based on the premise of (a) a “weak” AI technology, however, it was presupposed that this AI would be running over singularity as a (b) “strong (i.e., super)” AI. That might be questionable about the exponible AI if the strong be willing to be possible, as a matter of course. However, that is meaning to do further discussions and clarify (ii.k-i) *principles of the exponible AI on the basis of (2.k-iii) human-centered mind with (ii.k-ii) the principle of human accountability.*

In fact, after AlphaGo versus Lee Sedol, there have been many Forbias about AI [AI phobia] to be road-to-Damascus conversion in human society; there were many concerns about to be a discriminatory tool to be fixed, offensive and reasonable in our society. In this regard, it is clear that (b) *the strong AI technology is a human assistant under (ii.k-ii) human accountability and this technology for (2.a-iv) human dignity and flourishing.*

And Korea’s urgently futural challenging tasks were suggested as the following key findings: (ii.l) *the State, Social Preparation whereby Reflecting Social Changes in the Fourth Industrial Revolution*; (ii.m) Digital Technology Ethics on the use of AI, and etc.: (a) *the Introduction of Ethical Guidelines*, (b) *the Adoption of the Ethics Certification Program for Digital Transformation*, and (c) *the Institution of the Big Data Ethics Committee*; (ii.n) *The Introduction of Public Curriculum on AI Rights and Digital Rights, (i.e.), “AI Citizenship plus Ethics,” into Elementary, Middle, and High School.*

Key Factors (ii.l) the State, Social Preparation whereby Reflecting Social Changes in the Fourth Industrial Revolution.

Without The enlightenment of Ethical, Legal, and Social Implications (ELSI) for the various changes as a result of the introduction and utilization of AI platforms, We would be in

a state of confusions: (a) decline in population, but increase in single-person households (i.e., increase in single life); (b) the emergence of sexual robots; (c) AI or digital divide; (d) the commercialization of autonomous vehicles over level 3; (e) the possibility of regulation on the use of drones (e.g., harmful drone and drone tracker); (f) increase in AI bias and big data; (g) regulations against *the human* under an Autonomous/Intelligent System (A/IS); (h) overdependence and the misuse of human technologies; (i) skepticism about safety and the reliability of technology; (j) the invasion of privacy; (k) matters of responsibility for autonomously decision-making rights under the A/IS; (l) the confusion of human uniqueness; (m) super AI phobia, and etc.

Key Factors. (ii.m) Digital Technology Ethics on the use of AI, and etc.: (a) *the Introduction of Ethical Guidelines*, (b) *the Adoption of the Ethics Certification Program for Digital Transformation*, and (c) *the Institution of the Big Data Ethics Committee*.

Various criteria might be presented according to the necessity of AI robots in the field. For example, combat robots, surgical robots, and service robots should not be operated by the same criterion; order of priority could be vary depending upon the field uses. Then, how to give them such a criterion, (i.e.), the ethical responsibility?

Hence, with respect to (b) we would suggest either (b-I) Criterion Certification or (b-II) Autonomy Certification by distinguishing two kinds of certifications. Before everything, both certifications in the discourse should fall under these levels, neither technical certification nor safety certification, limited by particularly requiring ethical certification or technical ease.

(b-I) *Criterion Certification*. AI system makers, for example, might subdivide its ethical classes: (1) designers; (2) developers; (3) users; (4) managers; and etc.. After that—

(b-II) *Autonomy Certification*. (A) accountability, (B) transparency, (C) minimum bias, and etc. might be coded, thereby each making A1, T1, B1, and etc. as a designer for

minimum bias, a designer for transparency, a designer for accountability.

In addition, other people, proposed as criteria or considered as a significant criterion, could fall under the order of priority to be coded in the same way (see Appendix 1 *infra*.).

Algorithm bias in AI systems could be seen in cognition, information processing, decision, and even appearance. In fact, the decision-making of AI systems and the judgment has reflected the value of human society, and the potential factor of ethics, based on data and algorithms, gained social controversies. In particular, the problem of bias was raised in the process of collecting and processing big data as always. It's no exaggeration to say that statistics was a fight against bias forever. Of course, it's different from the data pollution *per se*; apart from these, both of them, however, were likely in conflict with the issue of data, objective and fair. In the process of acquiring the data, the objectivity of data would be secured not only if subjective direction should be excluded but also if subjective intervention should be excluded. Even if this modern mechanical objectivity was secured, the other problem might arise data in unfairness. As a matter of course, putting the data pollution aside, it's hard to keep fair in the use of data. Indeed, "The awareness of bias is a very important starting point of eliminating this bias from existing it in the complex data with both pollution and unfairness." Becky White had argued.

If the population itself is biased, and this data is collected in a fair and objective way, the collected data will be biased as well. If data would be collected in a way that modifies the bias of the population, the data might be unbiased, but the problem is that it would not objectively represent the state of the population. In this case, population bias, (i.e.), the reverse bias of data collection, the non-deflection of data, and the non-objectivity of data occur. However, if the data collection process would not take place, then the population bias, the data collection objectivity, the collected data bias, and the objectivity of the data might be maintained. But

it's not fair. In other words, population bias and collected data bias may coexist with data objectivity in this context, but the objectivity of data collection can be positive or negative, depending on the bias of the population. This is because objectivity is determined by the agreement between the data and the population. But this data is not fair. In other words, the meaning of population bias, data bias, data objectivity, and data fairness should be clearly defined.

Therefore; in order to maintain the data bias, objective and fair, the establishment of the Big Data Ethics Committee with the government and civil society is strongly required.

Key Factors. (ii.n) The Introduction of Public Curriculum on AI Rights and Digital Rights, (i.e.), “AI Citizenship plus Ethics,” into Elementary, Middle, and High School. A futural social education should focus on the ability to understand and criticize the problems that would arise in the AI era on the basis of understanding of AI. We can't deny that human behavior is no longer pure behavior, but innovative challenges for science and technology will only bring about fundamental changes in human life and in the world. By reflecting on this way of coming over to our life as social changes in artificial intelligence and robot technology, we could understand and practice a vision for the future of humanity. To do this, we first need to understand the science and technology of AI, be based on our knowledge and our understating, and we have to cultivate the positive utilization of artificial intelligence robots.

The education on AI citizenship plus ethics aims to develop our capacity to predict and to prepare for the future on the basis of humanistic thinking about the AI era. That is, based on the understanding of AI technologies, students will understand the shape and problems of the AI era, and develop comprehensive, creative problem-solving skills to utilize AI.

Recently, the Ethics Certification on AI Systems has been discussed and proposed as the criterion of AI robot ethics: (a) Bias, (b) Controllability, (c) Safety, (d) Security, (e)

Respect for Human Rights, (f) Common Good. These are very important. The criterion of AI robot ethics should be added as an important part of the AI citizenship. At the moment, these factors should be emphasized to such a *specific* country where be responsible for the abuse of AI and be explainable for the social control of AI. Thus, the AI citizenship must include human rights and responsibilities derived from these factors.

Session 2. Trust, Social Cohesion and Security

Questionings. YANG threw four questions about the Recommendations 4 (UN, 2019) as the following leading questions: “How can education make citizens aware of the need to distinguish serious information from ‘fake news’?”; “Would it make sense to take a kind of Hippocratic Oath for technology developers in the sense of a ‘do now harm’?”; “How can we protect political decision-making processes, especially elections, from digital attacks?”; “How could the multi-stakeholder ‘Commitment on Digital Trust and Security’ proposed by the Commission of Experts be structured and institutionalized?”

Agenda (iii) “Transparent” Autonomous Weapon Systems

Questioning and Key Findings (iii.a) How Will Technology Development in the Fourth Industrial Revolution be Related to Military Security?

(a) Technological development would change not only industrial administration but also the centralized structure into a decentralized horizontal open structure so that micro-powers would play a leading role in it than huge power.

(b) As human life would become richer, longer-lived and urbanized, in this process challenges and threats could create greater tensions and conflicts between the inter-powered interests.

(c) In the process of rapid changes in a new social order, anti-government forces, (e.g.), hackers, demagogism, significant individuals, extremists, and etc., would shake the

established order and try to establish a new order.

(d) The fourth industrial revolution would see increasing in factors: Hyper Connectivity (i.e., IoT + AI = Hyper Connectivity), Super Intelligence (i.e., CPS + AI = Super Intelligence), and Predictability (i.e., Big Data + AI = Predictability).

(e) Major countries would promote strategies to lead the field of technology research, (e.g.), robot, 3D printing, bio, brain, cognitive science that could lead the fourth industrial revolution.

(f) Considering the speed of technological development, an open R&D ecosystem would be established to save times and costs through digital coöperation, (e.g), Kunsan-Academy Collaboration.

(h) The government would study basic source technologies, share and support the private sector to commercialize technologies, and make efforts to develop military science and technology that have a ripple effect, and would implement to introduce civilian own initiatives such as ICT convergence at the state level.

(i) Many unemployed people by AI-based robot autonomous systems would mobilize paramilitary, mercenary, or criminal forces.

Key Factor (iii.b) In the Fourth Industrial Revolution, it is Important to Understand Changing War Patterns, Preparing Military-Building Forces and to Prepare against It.

(a) The expansion of war zones into multi-domains, space and cyberspace is mixed with advantages and disadvantages, making it difficult to predict aspects and scopes of destruction.

(b) The application of robots and AI could be activated rapidly due to spreading the awareness of life, but then that would be unpredictable and rapid wars above human reaction.

(c) The practical use of laser, high-frequency weapons, and etc. along with the universalization of cluster destroying abilities based on inexpensive unmanned systems

including large-scale automated drones would have accuracy and lethality beyond the range of direct firearms.

(d) Above all, information sharing, tight networking, and various types of sensors would make the human harder to “hide” than to find.

(e) The development of science and technology would mislead into the development of new fatal weapon systems; the game-changers appear able to change wars by exploiting the secret technology one.

(f) Increasing transparency in technology meant that developed countries would have a longer period of developing weapons but other countries or groups could make less efforts or fewer burdens so that they would likely adopt hybrid strategies such as cyberattacks in the gray zone.

(g) The war patterns would create an unexpected way, and each country had evolved in silent wars to dominate it from potential opportunities.

(h) Unlike the Pax Americana, in fast accordance with technology hegemony, the major powers would form an unstable balance, no longer get a dominant position; these conflicts arise to establish a new international order among many countries and non-state groups. So the war *should* be totally different from Pax Imperialism.

Results (iii.c) To Recognize Electronic or Cyber Warfares as a Key factor for Taking Control of Futural Battlefields in a New Arms Race. (a) In the fourth industrial revolution, defense security is currently the concept of integrating cyber electromagnetic domains into the natural domains, (i.e., ground, sea, air, space) to maximize synergy effects for the evolution.

(b) The expansion of the electromagnetic spectrum likely improves the capability of integrating information and communication, compensating the shortcoming of the impossibility

of penetrating the wireless-closed network, and effectively disabling the other party's command and communication of its weapons operation—to win in cyber warfare.

(c) As ground, sea, air, universe by nature and cyberspace by human nature have been formed, it was too ambiguous to know how to change the scope of the damage, the identification of accurate subjects and targets, and how we will respond to it appropriately at the end.

Agenda (iv) Digital Rights “based on Security Technologies”

Key Conception of the Digital Rights. It is common for the backs of societies in all areas to achieve remarkable developments, but together with shadowy side effects and irrational problems. In the information and communication, there have been so many problems caused by high digitalization. Most of all, the most serious problem was (iv.a) *the misuse of digital systems*, (iv.b) *the monopoly of information*, and (iv.c) *the invasion of privacy*.

One of the recent digital service trends to watch out for is Mobility. The Mobility has made digital systems to access and process more personal information than ever before, (e.g.), a system that gets a taxi on the street by using our smartphone, but that collects all the user's individual geographic information, movement needs, and information about the vehicle, then that manages the service with a huge database in this central institution. It's made possible within the company.

The emergence of 5G services promises to expand into a wide range of areas beyond our knowledge and our imagination of the Mobility service. But it's likely only introduced in limited areas. The 5G technology will gain ecosystems that have not previously converged digital and mobile, and digitalization is expected to accelerate. Today, it is important to simplify and examine side effects and problems as a result of this and to consider alternatives.

Key Factor (iv.a) Misuses of Digital-based Systems. Digital services operating

systems were working in the closed structure when the initial technology was introduced, but has quickly expanded to the network space. As these services expand into the network space, the number of accessible groups exponentially increased and their utilization was very high. When the service was rapidly expanded, the admin who developed and operated the system however only hard responded to the problem of the expansion. The systems designed in a closed environment, (e.g.), CPU, OS, computer network device, etc. were often used when services were extended to open spaces. That remained to solve various new problems (i.e., illegal data access and neglect of data) that could occur in an open environment. Thus, the digital system is likely misused for malicious purposes. The system be brokendown.

Key Factor (iv.b) Monopolies of Information. Even though they operate normally, basically either commercial or non-commercial digital service systems used in various fields of our society couldn't help concentrating on the operating entity. When the operating body is a trusting institution the government, it could be used for various purposes of the public good, (e.g.), the establishment of the government policy, but damages by monopolies were always possible. Banks, credit card companies, and financial institutions owned all the information by transacting with customers like us. Currently, there were minimal guidelines to protect customers by regulating their system to ensure our privacy not to be leaked or sold, but they neglected the use of data on their own purpose.

These problems likely arise far greater when commercial service companies monopolize a lot of information.

Key Factor (iv.c) Invasions of Privacy. The invasion of privacy could occur extensively by using various data and records of users differently our of the purpose of available use; that might happen whereby attacking a poor security system, or whereby abusing our privacy with their exclusive rights to their own system. Although there were

various regulations that allowed service operators not to misuse customer's privacy, there be always a possibility of causing substantial damage because technical means were lack.

Results and Alternative (iv.d) Open Source. The purpose of end-to-end design should keep up without the abuse of the system. In other words, not just operating the network in an open environment, but also revealing the design of the system, it should be embodied by building a cryptographic design, nevertheless. This system, for example, must orient open source. The open source can make all design secured, public and cryptographic. And the open source has to make the system safer.

Results and Alternative (iv.e) Technical Tools for Controlling Privacy. Once users use digital services, privacy is provided to service companies, and it's very difficult for users to control privacy. Thus, digital service providers have to collect and store sufficient information before the collection. For example, Korea's Privacy Act restricts the collection of privacy to minimum data only required for the relative service. The Act also restricts to collect privacy comprehensive. Meanwhile, the European General Data Protection Regulation (GDPR) regulates companies in processing and transferring privacy, thereby conferring individuals the right of controlling data.

Likewise, the technology of controlling privacy is necessary not only for developing these institutional tools but also for strengthening technological controls of privacy.

Results and Alternative (iv.f) Blockchain. This decentralized system gives us clues to these problems. Blockchain is a technology in which participants could operate a service together with common interests without any central system and exclusive operator. Of course, Bitcoin gave us various problems, (e.g.) the valuation of virtual currency, and also give us social prejudice on blockchain technology in the dark side. However, nobody is operating Bitcoin at the center. It has been running the decentralized system about then years. So this

technology per se has clear advantages of securing safety and transparency. Yet it's in early stage, in inefficiency, in conflict with existing laws and the system. Nevertheless, the decentralized blockchain system, like Bitcoin, could be operated with open-source code by preserving the value of high assets. Also, this technology might be used for voting, identification, commercial services, and etc. even used as a tool for implementing the Decentralized Autonomous Organization (DAO). Blockchain is a new democracy in the digital era.

The Second Working Group on Digital Economy

Part 2. *Digital Technology & Sustainable Development*

Key Concepts. Hyo Chang PANG, a facilitator of the Second Working Group on Digital Economy, acknowledged (2.a) nine values for the digital coöperation on the basis of SDGs (UN, 2015): (2.a-i) *Inclusiveness*; (2.a-ii) *Respect*; (2.a-iii) *Human-Centredness*; (2.a-iv) *Human Flourishing*; (2.a-v) *Transparency*; (2.a-vi) *Collaboration*; (2.a-vii) *Accessibility*; (2.a-viii) *Sustainability*; (2.a-iv) *Harmony*.^{3 2} And PANG gave a valuable definition of the Digital Coöperation “*that means working together to address the social, beneficial, legal and economic impacts of digital technologies in order to maximize its benefits to society and to minimize damage.*”

^{3 2} (2.a-i) Inclusiveness: Leaving no one behind, so that we can maximize equality of opportunity, access and outcomes to achieve the Sustainable Development Goals; (2.a-ii) Respect – Embodying respect for human rights and human dignity, diversity, the safety and security of personal data and devices, and national and international law; (2.a-iii) Human-Centredness – Maximising benefits to humans, and ensuring that humans remain responsible for decisions; (2.a-iv) Human Flourishing – Promoting sustainable economic growth, the social good and opportunities for self-realisation; (2.a-v) Transparency – Promoting open access to information and operations; (2.a-vi) Collaboration – Upholding open standards and interoperability to facilitate collaboration; (2.a-vii) Accessibility – Developing affordable, simple and reliable devices and services for as diverse a range of users as possible; (2.a-viii) Sustainability – Furthering the aim of a zero-carbon, zero-waste economy that does not compromise the ability of future generations to meet their own needs; and (2.a-iv) Harmony – The use by governments and businesses of digital technologies in ways that earn the trust of peers, partners and people, and that avoid exploiting or exacerbating divides and conflicts.

Questionings. PANG threw two questions about FinTech and big data industries, one that is “why are they doing mobile money, digital ID, and e-commerce in other countries?” and the other one that is “what is a good approach to data of how to use digital public goods?”—both questions are good questions about *the limitation of available use*; many people have raised a problem of data or deposit spills. (See Table 3. Q4, Q5, Q8 that also showed over 70% of surveyees were concerned about these.)

Key Findings. PANG identified differences between the Korean market and others, (2.b) *a FinTech environment* that was vis-à-vis an economic-environmental necessity of mobile money, digital ID, e-commerce, and etc.; (2.c) *a Big-data quasi-publicness* that was recognized in the BioTech market but that was vis-à-vis *other public sectors where were a lack of being public*; (2.d) *the increasing accessibility to digital infrastructures* that would be considered for a new approach; (2.e) *the fragmentation of the gig economy and decent labour on digital platforms*, called “Online to Offline (O2O)” like a two-sided market, of which workers would be involved in the labour system; (2.f) *The establishment of “Global Guardrail” for safeguards of a general digital economy* that would have to do trade, taxation, consumer protection, fair competition and cöoperation; (2.g) *the necessity of careers in education* that would be ready for the fourth industrial revolution.

Key Factor (2.b) Different[-ial] Environments of the FinTech Industry. With respect to (2.b) *Korea already had FinTech alternative services and well established financial infrastructure essential to self-growth*. For example, e-commerce or banking is our daily life so that we can’t feel urgently necessary means of mobile money or e-commerce; the system of Resident Registration like the Social Security Number is established online to have to go through identification or certification everytime. In Korea, we couldn’t see the necessity of them.

Key Factor (2.c) *Big-Data Quasi-Publicness but the General Lack of being Public, PER SE, for Digital Goods.* With respect to (2.c) this is the same context as (2.b), we could acknowledge the necessity of big data—(2.c-i) *based on the de-identification of data*—to make for “it” into the healthcare system around the world. For example, we might use this for (2.c-ii) *the disaster prevention systems in order to protect our life, health, property*. Indeed, Korea has been making a public investment in these fields, like BioTech, based on 5G Network. But the government could bankroll BigTech companies, and allow them readily to exploit “it,” then our privacy that might be abused, invaded and monopolized as their digital products on their own ways, again. In fact, (2.c-iii) *the Three Major Data Laws passed away* (Ministry of Economy and Finance, 2019b; Ministry of the Interior and Safety & Korea Communications Commission & FSC, 2020). That’s wrong.

Key Factor (2.d) *the Increasing Accessibility to Digital Infrastructures.*

With respect to (2.d) negative evidence was mounting against the global digital coöperation BANG defined, as maximum benefits, minimum damage. Universally, (2.d-i) *soaring communication charges per income, weaning it off public approach to networks*. On top of that, we must think of (2.d-ii) *the affected class all over the developing country, and would have to improve a new approach to digital infrastructures*.

Key Factor (2.e) *the Fragmentation of the Gig Economy and Decent Labour on Digital Platforms.* With respect to (2.e) we would have to see these aspects in the platform labour market. (2.e-i) *the disconnection* (that meant not “rupture”) *of industrial relations*; and (2.e-ii) *the exclusion of the labour system*, for example, the underprivileged platform-workers were NOT subject to *the right to organize of collective bargaining*, to *the occupational health and safety insurance from their employers*, and to *the employment insurance out of the system*. We would have to consider them to be able to involve in the labour system.

Key Factor (2.f) *the Establishment of “Global Guardrail” for Safeguards of a General Digital Economy.* To do global digital coöperation with respect to (2.f), we should set a new multilateral agreement on E-Commerce (WTO, 1998) or E-Services, an agreement that (2.f-i) *needs to renegotiate the WTO trade rules for data or contents to be not only liberalized but also restricted access to privacy*, for example, multinational IT companies must not transfer privacy outside of local countries because they always out-transferred local data for global profits above the tax evasion or avoidance against the local tax system; an agreement that is, (2.f-ii) *the OECD/G20 BEPS Project would be gonna completed with Digital Service Tax (Italy, France, UK) or Offshore Digital Tax (Thailand)*; an agreement that is, (2.f-iii) *RegTech (Regulatory Technology)^{3 3} would be adopted for the global regulatory*

^{3 3} Regulatory technology, in short RegTech, is a new technology that uses information technology to enhance regulatory processes. With its main application in the Financial sector, it is expanding into any regulated business with a particular appeal for the Consumer Goods Industry (Schueffel, 2017). Often regarded as a subcategory under FinTech, RegTech puts a particular emphasis on regulatory monitoring, reporting and compliance and is thus benefiting the finance industry. The objective of RegTech is to enhance transparency as well as consistency and to standardize regulatory processes, to deliver sound interpretations of ambiguous regulations and thus to provide higher levels of quality at lower cost (Deloitte, 2017). Oftentimes RegTech companies use the cloud through software-as-a-service. RegTech to date has been focused on the digitization of manual reporting and compliance processes, for example in the context of Know your customer requirements. This offers significant cost savings to the financial services industry and regulators. However, a 2016 academic paper suggested that the potential of RegTech is far greater stating that “it has the potential to enable a close to real-time and proportionate regulatory regime that identifies and addresses risk while also facilitating far more efficient regulatory compliance (Arner, Barberis & Buckley, 2016).” Effective regulatory technology deals with risk quickly and in strict compliance with national and international regulations such as: The Patriot Act, The Bank Secrecy Act, FATF recommendations and EU Anti-Money Laundering Directives. And the early report went on to suggest that RegTech's transformative potential would only be fully captured by a new and different regulatory framework situated at the nexus of data and digital identity. The developments in FinTech, the tremendous changes in emerging markets, and the recent pro-active stance of regulators (e.g., with the development of regulatory sandboxes), may potentially combine to facilitate a transition from one regulatory model to another (ibid.).

coöperation to the promotion of network sharing, the consumer and data protections; an agreement that (2.f-iv) needs a new model for the global digital coöperation with citizens and governance architecture; an agreement that (2.f-v) needs transparent access to information and personal data protection; an agreement that (2.f-vi) needs a minimum approach to the experimentation of innovation, (i.e.), pilot zone and regulatory sandbox (UN, 2019)^{3 4}; and an agreement that is (2.f-vii) the establishment of a Digital Help Desk for coöperation with civil society (UN, 2019).^{3 5}

Key Factor (2.g) the Necessity of Careers in Education to be Ready for the Fourth Industrial Revolution. To develop inclusive growth with respect to (2.g) this is the same context as (2.e) the Gig Economy and Decent Labour on Digital Platforms, such a two-sided market should offer (2.g-i) *professional retraining to workers on the basis of Internet and automation*; of, (2.g-ii) *life long studies for the middle-aged and the older*; of, (2.g-iii) the *public education for the youth*.

Other Factors. The digital economy in Korea saw other matters, in particular, a matter that is, (2.h) *the risk of Korean Internet-based Banks were (not “FinTech” banks but*

^{3 4} UN. (2019). op. cit. Pp. 9, 21, 40. Recommendation 5B: We support a multi-stakeholder “systems” approach for coöperation and regulation that is adaptive, agile, inclusive and fit for purpose for the fast-changing digital age. This aim of the holistic “systems” approach we recommended is to bring together government bodies such as competition authorities and consumer protection agencies with the private sector, citizens and civil society to enable them to be more agile in responding to issues and evaluating trade-offs as they emerge. Any new governance approaches in digital coöperation should also, wherever possible, look for ways—(e.g.), pilot zones, regulatory sandboxes or trial periods—to test efficacy and develop necessary procedures and technology before being more widely applied. If possible, new regulatory approaches should be tested on a small scale before being rolled out widely—through pilot zones, regulatory sandboxes or trial periods.

^{3 5} UN. (2019). op. cit. P. 8. Recommendation 2: We recommend the establishment of regional and global digital help desks to help governments, civil society and the private sector to understand digital issues and develop capacity to steer coöperation related to social and economic impacts of digital technologies.

commercial [general] banks) doing away with the separation of banking and commerce; a matter that was the deindustrialization of manufacturing and we needs benchmarking a new system—(2.i) the smart factory and manufacturing systems of Industry 4.0 and with Arbeit 4.0; and a matter that is, (2.j) the impact of Kiosk into the labour market more and more replaced our jobs.

Results. (2.k) the Concentration of Digital Economic Powers. In effect, the world was in progress. In fact, the Korean society was already in it, running de-regulatory risks through the deregulation of both (2.h) the separation of banking and commerce and (2.c-iii) the Three Major Data Laws—in result, (2.k-i) *the digital transformation* and (2.k-ii) *unfair competition in the market concentration of digital powers*. As a matter of course, we would be meaning to be faced with (2.k-iii) *monopolization in the digital concentration of financial power*.

Those results, of course, would be coming over to us as a new challenge and opportunities if we might keep up with *the age of digital interdependence* (UN, 2019) and its recommendations I believed—in our dream towards an inclusive digital economy. PANG would like to alternate his solutions as the UN's recommendation, as the following alternatives.

Alternatives (2.1) Twelve Resolutions on the Digital Economy

(2.1) A Principle of the Digital Coöperation (good faith). The world shall work together to address the social, beneficial, legal and economic impacts of digital technologies in order to maximize our benefits to society and to minimize damage.

(2.1-i) The De-Identification of Privacy. The use of privacy should be at least based on the de-identification of data.

(2.1-ii) The Limitation of Available Use. The use of big data should have purposes of use by opt-in agreeing to the limitation of available use only for people's life, health,

property, and etc. such as the disaster prevention systems.

(2.1-iii) *Transparent Access to Privacy.* We must clarify how to approach not only to use of privacy but to privacy protection.

(2.1-iv) *Development for the Affected Class.* We always make efforts to improve a new approach to digital infrastructures for the affected class.

(2.1-v) *The Renegotiation of the WTO Trade Rules.* For global digital coöperation, WTO has to renegotiate trade rules for (a) e-commerce of data and (b) e-service of contents.

(2.1-vi) *The Institution of Digital Taxes.* For global digital coöperation, OECD/G20 BEPS Actions have to adopt digital taxation including (a) service tax and (b) offshore tax.

(2.1-vii) *The Introduction of RegTech.* For regional digital coöperation, local countries should introduce RegTech, with promoting network sharing, the consumer and data protection.

(2.1-viii) *Reference to the Recommendation 5B (UN, 2019).* To do this, UN has to adopt a minimum approach to the experimentation of any innovation initiatives in the local country whereby setting up pilot zones or regulatory sandbox and with limited-trial periods (supra.).

(2.1-ix) *Reference to Recommendation 2 (UN, 2019).* On top of that, UN has to adopt the establishment of a Digital Help Desk for global coöperation with civil society.

(2.1-x) *Professional retraining to Social Groups.* To provide for the age of digital interdependence, the state and the market should support people, with (a) professional retraining to workers, with (b) life long studies for the middle-aged and the older and with (c) public education on advanced digital literacy for the youth and children.

Session 3. Building an Inclusive Digital Economy and Society

Questionings. PANG threw eight questions based on Recommendation 1A (UN,

2019) as the following leading questions: “In which ways do the educational system need to be reformed in order to enhance digital literacy and prepare students and workers for a digitized labor market?”; “How can education benefit from digitalization?”; “What role could partnerships between the educational sector and the private sector play?”; “How realistic is the recommendation of the Expert Commission? Which pre-conditions are necessary to implement the partly visionary approach operationally?”; “How about digital inclusiveness in South Korea and how has this impacted daily life?”; “What is the best way to deal with the advantages and disadvantages of financial technologies like mobile money, cryptocurrencies or neo-banks?”; “What could be potential pitfalls and threats of this development? How can data protection be guaranteed?”; “How can e-commerce reconcile the growth impulses with consumer protection, trade regulations, competition law and tax law?”

Agenda (v) “Reciprocal” Digital Taxation

Key Findings. Referred to (2.f-ii) as well as (2.l-vi), (a) *Digital Service Tax* and (b) *Offshore Digital Tax* were key factors to do the reciprocal digital taxation possible as well as the digital coöperation.

Of particular interest to a new digital tax, actual and fair taxation to be required for multinational IT enterprises (“IT-MNEs”) in a concentration of digital economic power with their non-physical presence to fall under the Inclusive Framework on BEPS Actions, was the international society so having reached a meeting of our minds on the basic purpose of setting the digital taxation. And we were going to do so. We already knew the global market was more and more integrating between the digital economy and international trade, the fact that the early report (OECD, 2015a) estimated indicating about 4–5% losses of the global corporate income tax revenue, (*i.e.*), annually 100–240 billion dollar, due to IT-MNEs. They did. Those lions’ share hadn’t got to be above our suspicion at their tax evasion through

transfer pricing. We were supposed to do our fair share, would be fixed to take their unfair share into our taxable income, and now we're opening the door of possibility to set the new nexus and profit allocation rules into the OECD's proposed (v.a) "*Unified Approach*" (OECD, 2019b) and (v.b) "*Global Anti-Base Erosion (GloBE)*" (OECD, 2019c).

Key Factor (v.a) *Unified Approach* (OECD, 2019b). But, unlike this basic pledge by the international society, then G1 recently gave OECD a bum steer to fizzle it out—outdoor of IT, then now they have been meaning to overturn our agreement out of the blue by inflating its scope outside of IT. It's wrong with its scope. It's against our common sense, agreement to set this new rule into the other scopes. In fact, that meant these scopes not only could deal with consumer-facing businesses, but also might include these manufacturing businesses—(e.g.), automotive industry, consumer electronics industry, smartphone industry, semiconductor industry, or even cosmetic industry—(*i.e.*), over the whole industry based in the global supply chain. It's wrong in the digital taxability to expand one scope into the other sectors as if this scope would integrate every consumer business provider or manufacturer into the consumer-facing business at all. That scope was so wrong; it's too widely distorted by someone else. As a matter of fact, unless we'll exclude these manufacturing businesses from this (v.a) "*Unified Approach* (OECD, 2019b)," that shall *overturn the multilateral trade system as well as the international tax system on one's own ways*. In this regard, Korean civil society is now seriously concerned about the world war of the digital taxation that can beat both the system and join to pillage others' tax revenue.

Hence, we the citizens register a strong protest with OECD over the one's distorted (v.a) "*Unified Approach* (OECD, 2019b)" to inflating this scope of digital taxation out of the IT business into the other businesses based in the manufacturing supply chain, in the same scope as this large consumer-facing business; on the grounds that (a) tangible assets of the

manufacturer's own are appreciably different from (b) intangible assets of the IT enterpriser's transferability and erosivities with non-physical presence.

Scope and Taxability. Before all, the “manufacturing” business will have to be excluded from this scope. Out of the digital taxability! Because this taxability is supposed to be limited to IT-MNEs, a taxpayer that has engrossingly focused on (b) *intangible assets*. So far as the international community takes keynote of taxing the Digital Economy, every country would have to acquire taxability to levy on (b) intangible assets of IT-MNEs own in better accord with the international tax system even if there is no any fixed place of business in the established market jurisdiction, where there are some “taxable” profits they owned in their remote marketplace, in non-physical presence, and in significant presence of digital economy, such as big data, information, or any services: these things are consumed, traded and sold through their cloud service or their virtual platform, thanks to their own (b) intangible assets that may go across borders freely and thanks to their fixed return that can be freely transferred to the tax heaven they permanently resided in for BEPS. They're so easily exploiting it. Therefore, we arrived at our agreement for the BEPS Actions.

Unlike the IT business that engrosses on (b) intangible assets, whereas in the case of (a) tangible assets on which the manufacturing consumer goods business focuses in physical presence—in fact, there is no reason for the base erosion; because the operating income as to final goods and sales as belonging from local factory to overseas subsidiaries must have been already subject to local taxation in substance in full accordance with the current international tax system. Also, there is no reason for the profit shifting; because the business profit by the international trading local products, a bit of transfer pricing from such daughter companies to a parent company, must have been already subject to local tariffs in full accordance with the international trade system. Nonetheless, the digital taxability were willing to be regarded as

the same as a modality between “the one’s own intangible assets that are subject to the engrossment of the global market” and “the other’s tangible assets that are subject to a cost-saving measure of the global value chain, (viz.), the manufacture, the division of labor and the division of profits.” As a result, that distortion would be going to trigger off double taxations and retaliatory tariffs. In this context, Korean civil society was seriously concerned about the global warfare of the digital taxability that can beat these international economic systems and join to plunder others’ tax revenue as well as ours.

Thus, we call on (v.c-i) *OECD/G20 NOT to inflate the scope into the other businesses, a distortion that is targeting at the digital technology manufacturers and their final products and sales to be squashing a consumer base.* That meant, technically it is supposed to separate this consumer-facing business, such as consumer goods and manufacturing businesses—for example, automotive industry, consumer electronics industry, smartphone industry, or semiconductor industry—from that kind of this scope; the one’s own cost-effective intangible assets are totally different from such tangible assets of this business for the other’s own efforts-to-be-cost-saving.

New nexus and Taxable Services & Sales and the Neutrality. Meanwhile, we acknowledge the New Nexus Rule (OECD, 2019b) that can make another technical progress and that may give a new right of the market jurisdiction to non-physical things on the grounds that there is no marketplace but in digital interactions and in economic concentrations. Good job! As a result, this New Nexus will be effective to countries, those of us, who are of affected monopoly in their engrossed market by IT-MNEs.

Meanwhile, I let you know that Korea recently was effective in the sales tax (VAT 10%) to them since July 2019, a B2C that would increase certainty in good taxation to IT-MNEs. We made it! That meant, this way can put account straight together with taxable incomes from

consumer services and sales; on the basis of some taxation information, that could be allowed to estimate their business profits in order to impose a fair corporate tax upon them.

Furthermore; if we would set some regulations on *the neutrality between the Internet and platforms* and among each of them, it's clear that we'll gonna set a better precedent to be fair competitions in the lawless world of the ICT ecosystem. Of course; for unless it should be effective at all the countries at all, some called it a "bad" precedent-to-set. However, I believe that all we're going to come over to it as our fair share in the digital economy era someday. To leave it any longer is in unfairness.

New Profit Allocation Rules Going Beyond the Arm's Length in order to Increase Tax Certainty with Three Tiers Mechanism (OECD, 2019b). In respect to an untouchable share and the other rest of (a) *the formula-based calculations* and (b) *the profit allocation rules* and (c) *the fixed return*, another alternative will have to be proposed to improve greater transparency of the consolidated financial statement, fixed fairness of the (b) profit allocation rules, and better effectiveness of securing tax revenues. As referring to these (a) calculations and rules (ibid., Amount A) from a viewpoint that IT-MNEs make unclarity to consolidated financial information, (a) the formula-based calculations could be a skeptical efficacy in classifying global gross sales, its general income and its excessive profits. As you know the ITNME's matters, if we *coulda* too easily distinguished global business profits and *shoulda* so simply calculated its global excessive profits from its consolidated financial statements, we *woulda* not concerned about BEPS yet, like that. Therefore, unless we could improve greater transparency of the consolidated financial statement, we'll still have a hard time to secure tax revenue through this (a) formula-based calculation—to reform their bad habits and to do our business in the light of day. In particular, from the IT business, thanks to its efficiency of intangible assets by themselves or due to *its shorted arm's length*, its orating

profit margins are much more profitable than other businesses; through that (a) formula-based calculation, thus we can't help having another hard time to give balanced consideration to the manufacturing consumer goods and global supply chain and tangible assets at all. In the same vein, it's is a matter of course that America in absolute advantage of that kind of the IT business will be fixing to have got to break even with this (a) formula and must have recouped its global excessive profits by taking away our own untouched share, global minimum tax rates and excessive profits on one's own ways. Moreover, as referring to that (c) fixed returns (ibid, Amount B), Uncle Sam in comparative disadvantage of the manufacturing business must have taken fixed returns away from our baseline activities, marketing and distribution, on his own ways. So we are concerned about his double taxations as well as his retaliatory tariffs. Consequently, it is too hard to find any authenticity out of the international agreement and to make sure of any guarantee out of fair distribution and proper tax revenue. Nevertheless, it's nonsense to require one's untouchable share from the will of the international society; (v.c-ii) *it's necessary to set profit sharing-ratios into clarity.*

Key Factor (v.b) Global Anti-Base Erosion (GloBE) (OECD, 2019b). We also lodged a strong protest with the OECD over one's proposed GloBE, (v.b) a blending approach itself that would make misuse of financial accounting standards as a starting point for dropping the arm's-length price and destroying the well-established tax base.

Blending Approaches. Because it would rather make nothing than open a new can of worms like any turf battles, we the citizens cannot help but advise you against setting any (v.b) blending approaches at all levels. Why should you go all the way around Robin Hood's barn? Don't ask for trouble. That kind of the (v.b) blending approach as well as the (v.a) unified approach is based on one's false premise and *sollen* that ought to allocate taxable income among all the country and that would be a fiscally transparent entity above its arm's

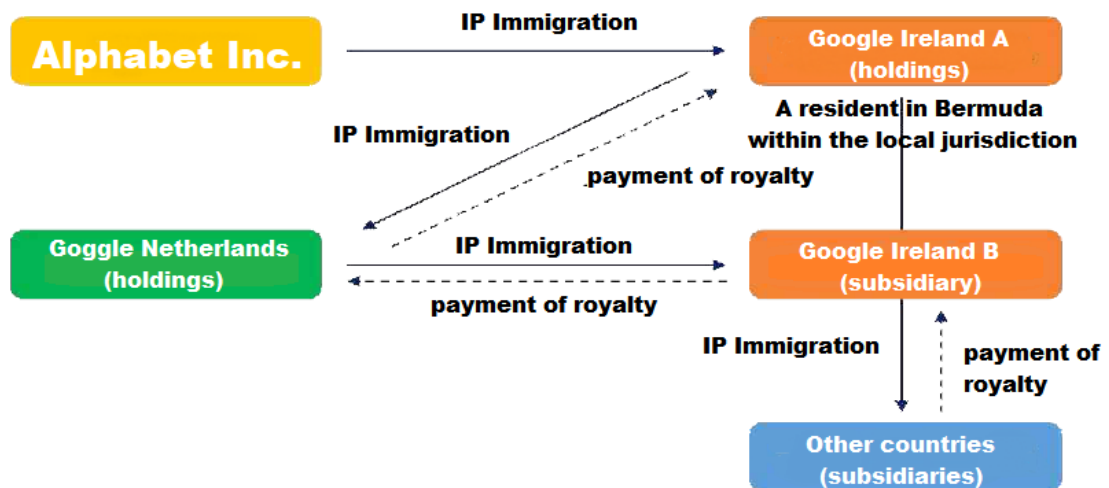
length. And in doing so, it seems, in cost-saving compliance with (v.b) any standards,^{3 6} as if the use of the consolidated financial accounts should've been a prerequisite for the key to success for the BEPS Project. But you're way off base. As you know about the more opaque pricing and accounting at the lower effective tax rate, if we *coulda* too easily distinguished between profit shifting and transfer pricing out of consolidated financial statements and *shoulda* so simply computed the transfer pricing taxation and the tax base determination by using such an accounting standard, we *woulda* been never concerned about BEPS issues at any rate. Thus, we have no reason at all to determine our ultimate success or failure in (v.b) the blending approach itself to the GloBE tax base by setting any accounting rules,^{3 7} exceptions or variations. That's a long shot like a pipe dream.

^{3 6} OECD (2019b), P.17: (a) A worldwide blending approach would require the MNE to aggregate its total foreign income and the total foreign tax on that income. An MNE would be subject to tax under the GloBE proposal where the tax on the total foreign income was below the minimum rate. The MNE's liability for additional tax under the GloBE proposal would be the amount necessary to bring the total amount of tax on that foreign income up to the minimum rate; (b) A jurisdictional blending approach would require the MNE to apportion its foreign income between different taxing jurisdictions. An MNE would be subject to tax where the tax on the income apportioned to that jurisdiction was below the minimum rate. The MNE's liability for additional tax under the GloBE proposal would be the aggregate or sum of the amounts necessary in each jurisdiction to bring the total amount of tax on the income in the jurisdiction up to the minimum rate. One model of such an approach would aggregate the income and tax paid by all the members of the MNE group that were tax resident in the same jurisdiction (together with income of, and tax paid by, any branch established in that jurisdiction) in order to calculate the total income arising in that jurisdiction and the taxes on that income. An MNE would be subject to a top-up tax in respect of the income allocated to each jurisdiction where the tax paid on that income was below the minimum rate; and (c) An entity blending approach would require the MNE to determine the income and taxes of each entity in the group (as well as the income of domestic entities that was attributable to a foreign branch). An MNE would be subject to tax under the GLoBE proposal where the effective tax rate of a foreign entity (or foreign branch) was below the minimum rate.

^{3 7} OECD (2019b), Pp.9-16: According to the Adjustments, (a) Permanent differences and (b) Temporary differences, Three basic Three basic approaches to addressing the problem of temporary differences—(i) carry-forward of excess taxes and tax attributes, (ii) deferred tax accounting and (iii) a multi-year average effective tax rate—are described below. These basic approaches could be tailored and elements of the different approaches could be combined to better or more efficiently address specific problems.

The Necessity of Ceteris Paribus. Of course, we recognize the necessity of using a single criterion, such as *International Financial Reporting Standards (IFRS)*, as a *ceteris paribus* clause to reduce variables. However, neither any accounting rules nor allocation rules, just need we have our own taxability to the non-physical presence within the market jurisdiction as well as the local jurisdiction. That's it. You only give all us such a taxing right in the new order to set *non-physical rules* based on the destination principle in full agreement with the fact of digital economic nexus around the world. At least one thing is for sure; unless there is such a single standard for the evaluation of intangible assets and for the assessment of digital tax, this world is going to trigger the warfare of the taxation off to high-tax competitions due to *the IP immigration and transfer pricing*. This is why we have challenged the BEPS Actions up to this very moment.

Figure 11. Double Irish with Dutch Sandwich (DIDS)



Source: PANG (2019)

The Problem of IP Immigration. We especially emphasize that the IP Immigration and transfer pricing are the Base Erosion and Profit Shifting. Of the most particular interest to

a complex structure of DIDS (supra Figure 11), are the IP Immigration and transfer pricing between America and Netherlands and Ireland linked to other jurisdictions around the world. Still, we are concerned that the GloBE tax base determination and political prejudice *shall* not catch their insider trading and stealable offsets between subsidiaries. (v.c-iii) *So we urge to deal with this problem to be fair in collecting tax and in setting the exception principle, exclusion and application between temporary and permanent differences.* I felt as if you shall sell these off the books.

Therefore, we call on you NOT to inflate (v.b) the GloBE tax base into the other businesses, a distortion that is targeting at the digital technology manufacturers and their final products and sales to be squashing a consumer base. For unless you'll set an example of the other MNEs' tangible assets to be subject to (v.b) the GloBE tax base determination, we can't help failing in (v.b) the GloBE proposal and efforts, in simplifying and in reducing any compliance costs. Why must you make the others' established tax base too complicated? You shouldn't have made the other MNEs to be a sacrificial lamb on your own ways. They're a good, healthy taxpayer. Unlike IT-MNEs. So you have to make a particular target only IT-MNE's own intangible assets to develop into the (v.b) GloBE tax base as well as the digital taxation. Basically, the starting point of BEPS Project were to change these assets taxable, transfer price into the arm's-length price above the IP immigration. You have to remove their error caused by it effectively. This is the unique purpose of the project.

Results (v.c) “Reciprocal” Digital Taxation. Referred to (2.f-ii) and (2.l-vi) and (2.k-ii), by virtue of international agreements on BEPS Actions, the world shall ever impose digital taxes—(e.g.), (a) Digital Service Tax and (b) Offshore Digital Tax—on multinational IT companies, beyond political prejudice, any turf battles and any tariff wars, a reciprocal approach to digital taxation that can be allowed to coordinate the market concentration of

digital powers.

(v.c-i) We urge OECD/G20 NOT to inflate the digital taxability into the manufacturing businesses, a distort that targets at ICT manufacturers and their final products and sales to abuse our consumer base;

(v.c-ii) We would like to give a strategic advice to those of us which countries are in the small open economy or are of affected monopoly due to IT-MNEs, then you have to hold us together if your mother country is willing to invest in or focus on some innovation manufacturing businesses like ICT, AI, robotics, etc. based all in semiconductor engineering;

(v.c-iii) We call on OECD enough to inform all the world and to ask for our entrepreneurs and our citizens fully understanding economic merit of the digital taxability about our untouched share (i.e., “global profit-sharing ratios”) from their general profits and their fixed returns and their minimum tax rates against IT-MNEs.

Agenda (vi) Inclusive Digital Economic System, “including Social Welfare and Public Education”

Digital coöperation and mutual assistance between countries against the digital transformation at a rapid rate would be required. Because in the Internet-connected digital world there would be increasing situations, an interdependency that was not only uncontrolled by physical frontiers but also unsolved by the government, a policy that had neglected side effects of digital transformation and that had neglected disadvantages of inequality.

Key Concepts. UN proposed that the age of digital interdependence and coöperation should be based on common human values, (vi.a) inclusion, (vi.b) respect, (vi.c) humanity, (vi.d) human rights, (vi.e) international law, (vi.f) transparency and (vi.g) sustainability. It is thought that these were abstract but desirable words to achieve SDGs (UN, 2015). And we saw if our society could take these values first and deal with various social

problems. For a long time our society had prioritized industrial development and competition, and economic efficiency. The pursuit of social values was moral legitimacy but always put off when it's judged to impede economic efficiency. I was questionable about this tendency that would allow our societies to embrace the UN's recommendation. On the other hand, when polarization was deepening enough to hinder economic growth, another aspect of social efforts, (i.e.), social inclusion, it is clear that I'm sure of social changes.

It's advisable not only to listen to their voice from various stakeholders but also to avoid neglecting the situation of the affected class.

Key Findings. In this context, UN emphasized that we should make efforts not only for economic and social inclusion but to hold together the affected class into the digital world. In addition, as human rights should be respected in the digital space, it is necessary to control privacy rights, AI autonomous systems, and global norms for cybersecurity.

The following key findings (CHO and etc., 2019) would be required to bring out the recommendation and our implementation. (vi.h-i) *We should consider how to NOT deepen the digital divide gap with the affected class but to enjoy digital benefits with social innovation;* and (vi.h-ii) *We should consider an “individual approach”^{3 8} that support the affected class to become competent and active actors in the digital era by enhancing our digital literacy skills.*

Key Factor (vi.g) CSR Partnership with the Elderly. Before all, we need to look at qualitative issues with regard to the Internet infrastructure. Korea's physical accessibility was the highest level. High-speed internet access is provided nationwide and the penetration rate

^{3 8} We recognized that expanding digital technology and Internet access should be a part of reducing the digital divide in the process of inclusive development for the affected class. However, the digital divide and inclusive development should NOT be a way to “replace” all sectors into “digital” means. For example, assistive screen devices for the elderly and the disabled should not replace other alternatives though there an individual approach. Digital competence skills are NOT a must to every person.

of digital devices, either (OECD, 2017).^{3 9} And the Internet access gap among region, age, and income was relatively low. In age, for example, the population of Internet users aged 55-74 was 83.2%. It's higher than the OECD average of 65.3%. Also, this population for the lowest quartile income is 78.8% of households. Apart from these stats, however, we got concerned about the quality of application level. For the elderly, in Korea it was pointed out that the basic utilization capability was relatively insufficient compared to the general public (OECD, 2019d).

Point of the Defect. The government provides Digital Education for the elderly as a part of the information gap resolution project. Of course, it's a well-organized system; be required to further improve their digital capabilities, however. (a) *there was a lack of follow-up steps for the education to become practical after learning.* In fact, there were a few opportunities to use it, and they had difficulty to learn content. For the senior across the country, the number of students to be admitted by educational institutions was very limited (KOSIS, 2019).^{4 0} (b) *there was the psychological distance of digital, and it was also limited the number of participants in the education.* In fact, they tended to repeat the three-month curriculum, once heard.

Alternatives. In this regard, it is necessary to expand educational services into a form of partnerships with digital companies where the elderly are as a potential customer. That is, (vi.g) *CSR Partnership with the Elderly.* By improving access to the service while sharing the governmental burden with the private sector, we might hedge increasing social costs and open the door of possibilities for the return of the business profits from the digital

^{3 9} Korea was the world best of Broadband Internet Access in Home.

^{4 0} In 2019, the population aged 65 and over accounted for 768,500, accounting for 14.9% of the total population (KOSIS, 2019). On the other hand, there were 35 informatization education institutions for the elderly who were supported by the government in this year.

economy to society; whereby, companies could expect to expand their market by attracting potential customers.

Comparative Studies. Europe and UK have emphasized CSR partnerships in digital-based social innovation. The UK Digital Strategy (2017) outlined the role of the private sector in helping companies bridge the digital divide and expand engagement (Karen Bradely, 2017). Not only UK companies but also multinational companies engaged in it.

Therefore, (vi.g-i) *the government needs to encourage corporates involving in it as a social partner in innovation but avoiding excessive intervention.* Its role is to encourage companies to voluntarily participate in it and coördinate it without redundancies. In other words, the activities of participating companies are identified and some adjustments are made as needed, however, the implementation process is left to the enterprise. (vi.g-ii) *Another role is to promote the best practices of participating while contributing to increasing their actual customer engagement.* (vi.g-iii) *The self-regulation of the company one, it is necessary to establish a standard of roles of the company and responsibilities of the government under the agreement between them.*

Key Factor (vi.i) Social Security for the Disabled. It is also necessary to motivate the digitally vulnerable group to participate in Digital Information Education supported by the government. Currently, the government-supported programs were noticed on the homepage. Those who needed information education, and they should search for the information and visit educational institutions by themselves. As a matter of fact, one who was motivated, eligible for great benefits from the government, but the others were excluded or isolated (UN, 2019a).^{4 1} So it's is important how to draw them out of pursuing Leave No

^{4 1} UN. (2019a). para 24: Electronic payment cards or debit cards are increasingly being issued to welfare recipients. Information provided to the Special Rapporteur in relation to such programmes in Australia, New

One Behind. This is a governmental assignment.

Positively, thanks to advanced in digital technologies, it likely compensates for the physical disabilities of people. For example, a variety of *assistive devices*, including smart hearing aids, have been developed and sold worldwide. Also, in Korea there are customized taxis for the deaf who can work as taxi drivers. And others, there are smart vehicles or computer readers for the visually impaired.

Comparative Studies. International organizations have urged that the results of technological development would contribute to digital accessibility for physical disabilities. As of 2018, 180 countries including Korea have ratified the Convention on the Rights of Persons with Disabilities (UN, 2006, A/RES/61/106) and 162 countries signed it. Each country also has policies and the system to ensure accessibility for the disabled—(e.g.), (a) US, EU, Australia, etc. included the procurement guideline that requires suppliers to ensure high access to their products and services; (b) Ireland recommended the seven principles of universal designs into the Disability Act 2005, which extended boundaries of general products, services, and environments to include as many people as possible to lessen difficulties a particular user experienced to adapt to the environment; and (c) EU's Property4all initiative provided an overview of assistive devices and accessibility solutions to enhance accessibility for disabilities to technologies, facilitate user-developer connections and facilitate the distribution and commercialization of technologies and services.

Zealand and South Africa reveal very similar problems. First, beneficiaries often face difficulties accessing and fully utilizing their right to social security. Second, when such cards are clearly recognizable as welfare-related, users have expressed feelings of disempowerment, embarrassment and shame, a problem exacerbated when the users come from communities long accustomed to exclusion. Third, electronic cards enable monitoring and surveillance of behavioural data by welfare authorities and private actors, thus raising important human rights concerns.

Korea Case Studies. As ratifying international agreements, Korea has participated in web accessibility policies in the global community, but was *shortages*. The early study (NIA, 2019) showed the year of 2018 saw a low of web accessibility as the following supply status of assistive devices (Figure 12).

Figure 12. Disabilities and Assistive Devices (cumulative amount, 2003–2018)

	The Blind	Retardation & Brain Lesion	The Deaf
The Number of Population	253,000	460,000	363,000
Assistive Devices	Screen Devices	Input Devices	Communication Devices
The Number of Supplies	8,710	5,552	10,295

Source: KOSIS (2018); NIA (2019)

Although the government has supported the dissemination of information and communication devices for persons with disabilities, it was not enough to benefit all the disabled because of *many people but fewer devices*. In terms of the government support, it spent a lot of money on R&D to improve the quality of their life. It also developed assistive devices for the disabled. The results of R&D were prototypes, however. Because developers were unsure of their business in the limited market.

Then, (vi.i-i) *we should expand this market for assistive devices based on new technologies. And (vi.i-ii) we would expand the basic market first whereby distributing developed technologies to a large number of people as early as possible through a partnership with the private sector.*

Currently, for the governmental support program, they must apply first. These people, who have already known the relevant information, can search for it of themselves. But poor, vulnerable, disabled people prone to ruled out; but then again, the inclusive policy

is to ensure benefit to all members of the society. In this regard, the government should focus on disabilities or minorities.

Key Factor (vi.j) Public Education for the Young. Next, we need *advanced digital literacy*. As a high level of the digital literacy required by the general public becomes more advanced, the world tries to develop and expand the curriculum to understand advanced technologies in public education. For example, China has developed a curriculum to open AI courses in elementary, middle and high schools.^{4 2}

Comparative Studies. (a) Recently, OECD, IEEE, WEF, and the global non-profit think tank have developed the Digital Intelligence Index (DQ)^{4 3} in response to the digital era. They were studying about the standard of advanced digital literacy and follow-up measures to reflect it required to individuals. (b) EU and UK redefined the level of digital literacy, encouraging citizens to improve their competency (called “EU DigComp2.1,” or officially the Digital Competence Framework 2.0^{4 4}; UK, Essential Digital Skills^{4 5}). It extended the concept and the scope by adding new indicators to the digital divide that was measured with the levels of Internet accessibility, availability and competency.

Most of all, in preparation for the coming of the digital society, the education should be required for fundamental human rights that can be violated in the digital society. For example, (c) EU Article 29 Data Protection Working Party (2009) emphasizes that the education for true data protection for children should be included in a rights-based

^{4 2} The SW curriculum is included in the required courses from the third grader in elementary school to the same grader in high school. This class time is 212 hours. On the other hand, Korea requires only 5-6th grader in elementary school and 1-3th grader in middle school. And the class time is limited to 51 hours.

^{4 3} See this: <https://hrcak.srce.hr/file/322519> or <https://www.dqinstitute.org/>

^{4 4} You can refer to this: <https://ec.europa.eu/jrc/en/digcomp/digital-competence-framework>

^{4 5} Also, refer to this: <https://www.ascentis.co.uk/news/essential-digital-skills>

perspective, a child who should respect others' privacy.

Korean Case Studies. Currently, a few of vulnerable groups are limited to the digital divide, so it is limited to cope with the dynamic digitalization in our society. (a) *There is a lack of key findings and responding to them who are unable to keep up with the rapid digital transformation.* And (b) *there is a lack of social awareness and policy responses to enlighten citizens' digital literacy and its basic skills.*

The government's Digital Information Education has been focused on *consumptive* use, a tendency that prioritized how to get practical effects of using technologies. In other words, privacy, personal cybersecurity, digital empathy, digital citizenship or identity, use of digital media and information: these basic educations were uninteresting to the government to handle. To address this, (vi.j) *we could consider digital literacy, an education that is based on empirical works* rather than text. Recently, MIT and etc. made it up with the experience of AI ethics. Likewise, Korea needs to develop educational materials that can be used around the world. An opportunity for understanding and handling (a) *privacy*, (b) *digital rights*, (c) AI ethics, (d) cybersecurity, etc. should be provided equally to all; these would be linked to safe, proactive and available use of "decent" digital.

Results (vi.k). The Inclusive Digital Economic System, including Social Welfare and Public Education. To develop inclusive growth, the vulnerable social groups shall be involved in an individual approach to more substantial well-being with CSR for the elderly, with social security for the disabled, and with public education on advanced digital literacy;

Session 4. Harnessing Data and "Digital Public Goods" for Development

Questionings. PANG threw four questions based on Recommendation 1B (UN, 2019) as the following leading questions: "How realistic is the large-scale establishment of Digital Public Goods and a corresponding international platform?"; "Which pre-condition would need

to be met in order to establish the platform?"; "What roles should UN play in such an initiative?"; "Which Protection Measures are necessary and how could Guidelines for responsible Use look like?"

Agenda (vii) "Regulatory Compliance with Safety and Soundness" of Big Data, BigTech and FinTech Industries

Key Concepts. Referred from (2.a-i) to (2.a-iv), nine values have a great significance of the digital coöperation when data creation and storage of information are all digitized. Especially, (2.a-i) *Inclusion*, (2.a-ii) *Respect*, (2.a-iii) *Human-Centredness*, (2.a-iv) *Human Flourishing*: these values meant that the machine comes over to us as it always serving for the human under any circumstances.

Key Findings. Referred to (2.b) and (2.c) and (2.d) and (2.h), we raised issues (vii.a) *The Right to Privacy*, (vii.b) *BigTech Corporate Accountability* correlated with *Three Major Data Laws* (Ministry of Economy and Finance, 2019b; Ministry of the Interior and Safety & Korea Communications Commission & FSC, 2020), (vii.c) *FinTech banks on the foundation of the separation of banking and commerce*. And with other factors "irrelevant" *Digital ID*, we were going to deal. As the following factors.

Key Factor (vii.a) the Right to Privacy. In respect to Agenda (iv) security technologies and privacy rights were supposed to be distinguished clearly. In this context, digital rights would be also on the preferential basis of (vii.a) *privacy rights* in the age of digital interdependence.

Comparative Studies. As developing new digital technologies and increasing the invasion of privacy by monitoring, tracking, and *surveillancing*, it's going to be more important to set (vii.a-i) *common norms for the right to privacy* than how to exploit it.

In US, for example, the early report (UN, 2019) took an example by the cloud service of BigTech companies' own, which would likely make an issue of (vii.a-ii) *privacy protection, the protection of nationals* but the invasion of their privacy. That's of great significance to us, as well.

Korea Case Studies. Recently, the Korean court permitted the search & seizure warrant for a smartphone fingerprint. And it gained arguments^{4 6} under (vii.a-iii) *a new order to set a clear standard for protecting human rights from the digital transformation and interdependence*. "Legal philosophy" controversy over advanced technological development always was required for philosophical contemplation in other fields, either.

In the same vein, we will be helpful in further discussions about other cases as the following two special factors.

Special Factor (vii.b) BigTech Corporate Accountability: (vii.b-i) Informational Autonomy; (vii.b-ii) Information Sensitivity; (vii.b-iii) the Limitation of Available Use; (vii.b-iv) Automated Individual Decision-Making, including Profiling; and (vii.b-v) Privacy Protection and Data Breach Indemnification. On January 9, 2020, in order to

^{4 6} "A fingerprint verification warrant for identification is also allowed, so it is possible to issue a fingerprint verification warrant for unlocking a smartphone under the current criminal lawsuit," a law school professor in Seoul said, but "I can say that refusal of statements does not take secret information against my intention, but since it was only in words, I can't take anything else in my head." "It's all changing with this development, and limiting statements to words is too narrowly conceived in the light of the objection of statements." And another professor said, "We believe that passwords can be solved by another technology because they are made by humans, but this problem is not a matter of opening or closing a smartphone, but a matter of juridical debate over technological development. For now, it's possible that a warrant can be issued because the smartphone doesn't have as much information as my head and it's less resistant to fingerprints, but if you expand your breathing or biometrics, the last step is EEG. It might be a good idea to copy what's in my mind. It's time for a philosophical consideration that the current legal system is going in the right direction as technology advances." Retrieved from <https://m.lawtimes.co.kr/Content/Article?serial=157842> [in Korean]

revitalize BigTech and big data industries, the National Assembly passed through the amendment of *Three Major Data Laws* (Ministry of Economy and Finance, 2019b; Ministry of the Interior and Safety & Korea Communications Commission & FSC, 2020). The Three Major Data Laws consist of (a) the Personal Information Protection Act, (b) the Act on Promotion of Information and Communications Network Utilization and Information Protection, Etc., and (c) the Credit Information Use and Protection Act. In sum, “Digital Public Goods” was changed into commercialization for economic growth. What the problem is with the Three Major Data Laws?

The Problem of Triple Deregulatory Risks. This deregulatory framework with the Three Major Data Laws could allow BigTech companies to exploit privacy without opt-in consent out of their customers if their own personal information would be “de-identifiable.” Is that possible?

Like “GDPR (see iv.e supra.),” the framework included new rights to privacy, such as (a) the use of pseudonymous data^{4 7} and (b) the right to data portability, of course. However, that deregulatory framework excluded (vii.b-iv) *the right against profiling automated individual decision-making*. There were neither (vii.b-v) *privacy protection and data breach indemnification* nor (vii.b-iii) *the limitation of available use for big data* at all. So we’re seriously concerned about the invasion of (vii.b-ii) *sensitive privacy*, the suppression of (vii.b-i) *informational autonomy*.

^{4 7} As the Code of Conduct, basically pseudonymous information also needs to limit the purpose of available use and to ensure the means by which the data subject can be remedied for the damage caused by the abuse of this information. And it should be reasonable to make sure of “identifiable” pseudonymous information, a data that can be identified so protected according to established the right to privacy, either.

Results (vii.b-i) Informational Autonomy. While active use of data could contribute to digital convenience and the public good, the big data-based AI technology might lead to discrimination against the affected class or certain people into the violation of rights so that the exploitation of big data would come over to us as a chilling effect. That would rather squeeze out informational autonomy.

In a new order to promote free flows of digital information and to protect the information subjects, the establishment of multinational treaties (rather than individual agreements) on the privacy norms and security is a starting point to expand informational autonomy.

Results (vii.b-ii) Information Sensitivity.^{4 8} To protect privacy, basically governments can introduce the impact assessment system, an impact assessment that examines the affected rights by setting new rules, laws, policies, projects, etc. into effect. In Korea, as a matter of course, there was the same system related to the available use of personal information. But the impact assessment system should be working only if a certain quantity of personal data is overincluded in big data. Anyway, the aforementioned Tree Major Data Laws were NOT subject to this system now.

We already knew about the concerns of the UN Special Rapporteur who had visited Korea in July 2019. The OHCHR gave us concerns about the regulatory sandbox that had been exploited for large-scale projects. They're done for it. And the Rapporteur requested that the Privacy Impact Assessments (PIAs) would be implemented only for small projects, thereby complying with the principles of both (a) "*Privacy by Design*" and (b) "*Privacy by*

^{4 8} Information sensitivity refers to the control of access to information or knowledge that might result in loss of an advantage or level of security if disclosed to others. Loss, misuse, modification, or unauthorized access to sensitive information can adversely affect the privacy or welfare of an individual, trade secrets of a business or even the security and international relations of a nation depending on the level of sensitivity and nature of the information. (Wikipedia). Retrieved from https://www.its.blrdoc.gov/fs-1037/dir-032/_4768.htm

Default” (OHCHR, 2019).^{4 9} Also, the Rapporteur recommended that the Korean government would stay in the established safeguards against conducting weakening experiments against the existing data protection framework.^{5 0}

That meant, general privacy is sensitive information to be out of the *Pandora’s* sandbox.

Results (vii.b-iii) the Limitation of Available Use. The use of personal information related to basic digital rights such as human rights and dignity was supposed to be strictly controlled under the purpose of available use. In other words, we have to ask for what kind of privacy must be absolutely protected for “digital public good.”

In view of the above (vii.b-ii), we’re seriously concerned about a lack of safeguards. As a matter of course, the use of big data was willing to contribute to the public good and digital convenience if the de-identification of privacy. Yet, we reject this question. Because of a lack of the de-identification right now. They have no control over the de-identification at least. In this regard, the commercial use of data should be regulated, at least, on the public purpose of unavailable use, (e.g.), physical or health, and credit information like sensitive information.

^{4 9} OHCHR. (2019). para 39: “While attempts to promote innovation and stimulate Jeju’s (and the Republic of Korea’s) economy are commendable, I was concerned to see that none of the Government’s plans include Privacy Impact Assessments (PIAs) prior to their implementation. I understand that PIAs were not carried out because, on the judgement of the Provincial Government of Jeju, the plans did not affect the data 50,000 persons, which is the threshold established by law. Considering the considerable potential impact of some of these projects on the right to privacy, it is urgent that such PIAs are conducted as soon as possible, and in any case before the projects enter an implementation phase, even if currently not mandated by law. Each PIA should ensure that the projects concerned respect and indeed embed the principles of ‘privacy by design’ and ‘privacy by default’”

^{5 0} OHCHR. (2019). para 40: “I would also like to point out that Korea’s data protection framework cannot be seen as an obstacle to innovation and economic growth. On the contrary, the strict adherence to the existing data protection framework is essential to ensure that the country’s development, especially in relation to new economic fields and activities, takes place in a context of legal certainty and in full respect of users’ right to privacy. Data protection legislation is the product of decades of legislative and academic debate, of the tireless work of experts, civil society and international organizations, so I would advise against conducting experiments that may risk weakening the safeguards that have been so hard to build.”

Results (vii.b-iv) the Right Against Profiling Automated Individual Decision-Making.

In the big data industry, the right against profiling privacy should be prioritized over the use of data. But then again, the government has focused on the deregulation of Three Major Data Laws to exploit personal information one, without any privacy protection first. The Tree Major Data Laws couldn't help affecting privacy protection due to profiling Automated Individual Decision-Making. Unlike GDPR, Three Major Data Laws didn't guarantee the right to refuse profiling privacy.

Results (vii.b-v) Privacy Protection and Data Breach Indemnification. It should be notorious that the infringement of privacy rights due to the abuse of data is *de jure* impossible to recover, a loss of which the information subject may not protect my privacy under self-determination even though the invasion of privacy; it is difficult to identify the liable person or entity for losses. As a result of invading privacy rights, remedies for victims, (i.e.), collective approach to a class action, impact assessments, methods of indemnification, indemnification for losses, and severe sanctions against the liable person or entity should be studied in detail.

Results (vii.c) BigTech Corporate Accountability. Traditionally, making use of personal information based on opt-in consent has served as the minimum safeguard for privacy protection. However, we should mark a word that BigTech companies in the progress of the digital transformation, like automated individual decision-making, even the use of personal information based on the "opt-in" would lead to invasion of privacy rights.

For regulatory compliance with safety and soundness, they had better stay in opt-in before using some privacy. Look before you leap over the Three Major Data Laws!

Special Factor (vii.c) FinTech Banks on the foundation of the Separation of Banking and Commerce. The recent year saw open banking, MyData,^{5 1} and the regulatory sandbox was rapidly evolving into FinTech “innovation” keeping up with the global trend. Then, How did they do such an innovation? Of course, it is difficult to deny that governmental supports for FinTech innovation is important due to the development of digital technology. And the government bankrolled Internet-based banks as a part of the FinTech innovation. However, the government and the National Assembly made a lot of problems by proposing to allow commercial capital to dilute with banking capital as a way to revitalize economic growth. They’re against the separation of banking and commerce.

What is a FinTech bank? In financial regimes, there is no technical definition. In banking innovation regimes, of course, there is a syncretistic word “FinTech (Finance plus Technology)” that refers to some terms, such as fusion, convergence, or conversion: these trends have been widely thought as of an *au courant* paradigm in FinTech innovation—of financial innovation, not of technological innovation—that was little affected materially in an enigmatic shift, apropos of nothing, in this *status quo*. It feels as if you could not tell easily the difference between innovating FinTech banking and existing internet banking. Today’s concept of FinTech, nevertheless, is plausibly defined as “*Technologically enabled financial innovation that could result in new business models, applications, process, or products with an associated material effect on financial markets and institutions and the provisions of financial services* (FSB, 2017; BCBS, 2018).” Add to this a modality of FinTech banking encompasses not only traditional commercial banking but also new business models that development in ICT (Information and Communications Technology) to provide new digital platforms—(e.g.), e-banking, e-payment, e-trading—beyond the traditional banking services and systems. It’s still to come; it’s yet to be.

^{5 1} The purpose of MyData Global is to empower individuals by improving our right to self-determination regarding our personal data. It is based on the MyData Declaration. Retrieved from <https://mydata.org/declaration/>

The concept of Korean Internet-based [인터넷전문은행]. And in Korean banking regimes, it is uncertain about definition of FinTech banks, apropos of nothing. Of course, there is a conceptualized model of the Internet-based bank that is currently applicable *mutatis mutandis* [“with the necessary changes having been made”] to licensing regimes for their legal status, either a local bank or a non-local bank, under the current Banking Act. (In this banking license, the term “Non-local bank” refers as its legal ability as to the general core-banking service within commercial-banking jurisdiction, whereas the “Local bank” is more limited in legal ability and operational extensions of banking jurisdiction and subsector.) At the outset of emerging such a new banking model, the bank has been required *de facto* not only for its business model either new or conventional but also for the non-face-to-face banking, such as a brick-and-mortar or branchless bank, on the basis of the retail banking—whereby this bank had to be founded and run by FinTech start-ups. These legal usages, however, within the current regulatory framework for Internet-based banks are still insufficient and equivocal to include in commercial affiliations or technological partnerships with these banks whether FinTech or not in compliance with the Principle of the Separation one. Especially for regulatory usages, such a regulatory consolidation between banking and industrial capital was groundless so in this status quo that it were not easily allowed to do this in accordance with the Separation of Banking and Commerce one.

Thus the modeling of Korean Internet-based banks is nothing of systematical conceptualization, financially and technologically and legally, yet to do with FinTech development—its modality might be defined as constructive but innovative ambiguity^{5 2} over

^{5 2} Mergers and acquisitions (M&A) are methods of consolidation by BigTech companies where a change in control takes place through a transfer of ownership. These two methods—whether to be regulatory innovation or to be regulatory consolidation—which are not clearly distinguished from each other, strongly bind the participating in FinTech firms, as a one-bank holding company, and could have substantial effects on the

the current regulatory framework. Seemingly this FinTech banking is more innovative than conventional banking, whereas it has the same applicability as the commercial banking within the underlying regulatory framework anyhow. Universally all banks, where commercial banks were established as for whether FinTech or not, should be then authorized under the licensing regimes subject to bank charters—not only must keep up their regulatory capital at the BIS Capital Adequacy Ratio under the Basel Accords, but also must keep up their capital conservation buffer at the Liquidity Coverage Ratio. They were unwilling to do that. And they didn't do that. And so they came up with some artful solutions. The Internet-based banks, being out of this world, have circumvented those regulatory issues, and received the following preferential treatments: (a) a preference for the banking license exemption and capital requirements that are applicable not to a commercial bank but to a local bank (“despite commercial banking”); and (b) a preference for the dereregulatory capital that is applicable not to the Basel III for use in commercial banks but to the Basel I for use in the local banks (“despite commercial banking”); but (c) a preference for the banking jurisdiction that is applicable not to local banking but to commercial banking (“because they ain't to become a local bank but technically to be a commercial bank”). Of the Moon's abnormal preferentialism, coordinated on his own ways, afterward Korea's new regulatory frameworks, those three banking deregulations meant exception principles of the Separation. It's not a novelty—to incubate FinTech banks for commercial banking: just to exempt the commercial banking license for FinTech banking—but 'twas being ambiguity, asymmetry and abnormality within the current regulatory framework. So Korea's regulatory zeitgeist, then the Moon's version of FinTech innovation might be redefined in the manner of the

economic structure in the future.

“Deregulatory innovation for Regulatory innovation’s sake” by his restructuring on the Separation of Banking and Commerce, as with the following three faux innovations based on bad indicators (BCBS, 2018): (a) Innovation hub—legislative loopholes, supervisory and regulatory circumventions (the “Innovation hub for BigTech behemoths”); (b) Regulatory sandbox—unbridled licensing regimes, under-regulatory capital and bank ownership shares (the “Pandora’s sandbox”); and (c) Accelerator—preferential exception principles, discriminatory supervisions and regulatory discriminations (“Regulatory consolidation of banks and FinTech eater’s hybridization”) ’Twere his bad habits—to be reformed.

Against the Separation of Banking and Commerce. The Amendment of the Special Banking (namely, “FinTech”) Act on the Establishment and Operation of Internet-based Banks in Korea was bulldozing out a financial firewall through passing away with the separation of banking and commerce. In this “FinTech innovation,” Korean banking regimes’ being in dynamic compliance with the Moon’s bulldozing a firewall was not so funny how things to do for Internet-based banks, with deregulatory innovations and with new regulatory crises. Is this of innovationalism, or of vandalism? How come they have ever been daring to do crazy things, and abruptly pulled down the firewall to do for such a disruptive innovation? But for this financial firewall—sometimes deregulationists would do banking experimentation with ownership conversion, sometimes innovationists would do FinTech experimentation with capital conversion, and sometimes when they each were challenged on the ropes due to a liquidity crisis and insolvency, then they both would see eye to eye and offer a sweet-hart deal with each other: All those whose the deregulatory experimentation of limited-liquidity conversion—in effect, through the regulatory sandbox regime with overcapitalization or leveraged recapitalization (like “banking skulduggery”)—would involve banks in consolidation of share capital invariably confuse those of us who constructed reality from our commonsensible

experience of that conversion. And money changes hands. So Korean banking innovation regimes might be epitomized as this shareholding skulduggery; hence, we are now concerned about banking, capital and deposit erosions due to the excessive dilution of bank earnings; we've insisted that these innovation regimes, whether FinTech or not, needed stay *de rigueur* with the political & functional independence of commercial banking operations against the capital market consolidation in full compliance with the separation of banking and commerce one.

Experimentation, Regulatory Sandbox, and Innovation risks. Sadly, the last two years (2017–Now) saw the Moon's government failure in innovation regimes of the affected FinTech start-ups in their liquidity crisis (see Appendix 2 *infra*): Korea's regulatory sandbox regime has lost control of the crossover experimentation without *ceteris paribus* for principles of the separation, and the President of the Moon did put them in the regulatory crisis—his failing in incumbent stockholders' obedience to the liquidity agreement & provision of FinTech incubation, his begging for a bailout of Internet-based banks from the Chaebol's own conglomerates, his turning the regulatory sandbox and innovation hub inside-out towards the BigTech's behemoth side, his going hand in hand with the chairperson of the Chaebol's sake, his shaking up firewalls—as a result of their collusion, the Moon's preferentialism radically turns from the bank's road-to-FinTech conversion into the Chaebol's dead-end-to-BigTech consolidation, whereas Korea's innovationism has been already falling into the Trough of Disillusionment (a nadir of the Gartner's hype cycles). It's up really against a wall. As a matter of fact, in their imminent liquidity crisis, the banks were highly increasing risk-weighted assets, as rapidly approaching a Maginot line of the BIS I, a minimum requirement of the capital adequacy ratio at least 8% (See Appendix 2.). Monitoring dynamically fluctuating ratios at paid-up capital in this status quo, we are still concerned about the Internet-based bank's liquidity and insolvency risks caused by the

dynamic compliance in this regulatory crisis; especially observing their liquidity coverage ratios at paid-off capital-to-be-in-future under the present circumstances, our true contributors contrast the benighted government's analysis and insistence (a "strategic oversight of innovation and operational risks") with this Circumlocution office's debacle and demagoguery (the "regulatory failure of preferential treatment and liquidity risks") through an interpellation to the Financial Services Commission; also adding with the survey of Korean experts' opinion about innovation regimes, we expand with other enlightened organizations' early studies and reviews and advice (the "high standard of safety and soundness and fairness") about the Principles for the Sound Management of Operation Risk; as recalling the fact that different jurisdictions pose different systemic risks, we'll consequently argue about the expanding of subsections and idiosyncratic risks. But, we can't fight the moonlight. Still, he silently buries his head in the sand just like that. Well, I like that! Thus, our vigilant separatists have asked for the moon, and we were willing to lose any sleep over that is our single necessity of firewall provisions for the Separation of Banking and Commerce one; having been seeing banking system soundness at all times, we all are believing in this Principle of the Separation one in the last resort of a banking safety net as always.

Problems of Internet-based Banks. The principle of separation was a fundamental rule of governance that had been established for a long time. In 2018, the revision of the special law raised upper the threshold on big stakes for Internet-based banks, which effectively undermined the principle of separation. But Korean banking regimes, then after the rising of the Moon, again have subversively comprehended the banking market's fairest, most civilized share. In the *de rigueur* regulatory zeitgeist, our historical Principles of the Separation was the last bulwark of banking safety and soundness and fairness and against the banking debacles and moral hazards; in the new regulatory zeitgeist, the Moon regime's

version of FinTech innovation has financial and technical problems of affected start-ups—recently the Circumlocution office revamped the firewall provisions, a deregulation on bank ownership that may be exceptionally allowed in effect for only non-financial big-companies: *provided* that they would be able to keep “*au courant*” up its subsidiaries with ICT trends and assets, (*i.e.*), to contribute shares at “00% ratio (*yet to be fixed*)” in their capital circles, then these BigTech companies might own a limited-voting shareholding at 0.04–0.33 ratio within the maximum 34 percent of the total number of ownership shares. At last, it is effective on January 17, 2019. Taking note of evasion of the bank charter, we analyze the legislative problem of this new deregulatory amendment to the Banking Act of 2019—in question, that seems “innovative” somehow, but has a constructive ambiguity problem; as like Noah’s innovation without his Ark, that still remains undecided about both a marginal-capital contribution ratio and a limited-voting shareholding ratio, based on the unlimited-banking licensing regimes and related exception principles of both management and ownership shareholdings; as being allowed for only a few of super-rich industrialists, that banking supervision and ownership regulations are viciously streamlined, virtually designed for the Chaebol’s possessing a chattel and viably intended for one’s controlling the bank holding company in the name of the BigTech behemoth.

Chaebol, BigTech, FinTech. Also, Internet-based banks might be contributing to the financing of chaebols. In that road-to-FinTech conversion, of course, it costs money, to put it on a bank and to take chances—something in between appetite and tolerance. (“To find a threshold value of that experimentation bears the likeness to an economical lesson of the marshmallow test.”) In the meantime, we “need” to await a result of it. In this FinTech innovation, anyhow, the neo-banking law has been meaning to bulldoze out the banking safety net through to do adhocism for deregulatory reformation of affected marginal profits—in fact,

not only the limited-conservation of capital buffers through to more expand common stocks, but also the restricted-distribution of bank earnings through to more raise preferred stocks, we expect so—that is, the overcapitalization, a deepening and widening of capital; so be it that they could at least go fifty-fifty on the fair value of ICT assets in market capitalization by themselves, that'd be not so bad. This bill, nevertheless, may be due to restrictively but discretionarily allow their leveraged recapitalization for banks, and thus we are anxious about the more deregulating prudential regimes in the new regulatory crisis, the more accelerating on insolvency risks in this *status quo*. Because of the easy dilution of bank earnings, the easy distribution of bank earnings: easy come, easy go. It gives them freehand as if it sets the fox to keep the chicken coop. Still, this Pandora's sandbox is open-ended, practically used for only the BigTech behemoths and the Chaebol's own conglomerates, a good provider of liquidity capital which could soundly bankroll the Internet-based bank that can be totally in the Chaebol's hand. Money comes, money goes. And then only, will these banks tested by means of the conversion of management and ownership be meant to return to normalcy? Adherence to the principle of separation and the principle of governance should be observed to prevent not only equal and fair competition but the abuse of market dominance by chaebols and BigTech companies.

Hypothesis and Analogical Reasoning. But another amendment has been being made, such as passing through. The deterioration of the principle of “separation” and “governance structure” promoted by the government might lead to the collapse of competitive orders in the banking industry by industrial capital. But then, as a matter of fact, that kind of a commerce-cross-over-into-banking test with the consolidation of retail bank's common stocks is apropos of nothing that can guarantee the bank's road-to-FinTech conversion—then again, furthermore, neither can that get out of liquidity crises nor

insolvency, or out of complexity risks. This is because such a cross-ownership web they have erodes the solid capital base of banks, and the complex ownership structure under common control risks insolvency of their capital circles; this circular-investment structure under the Chaebol's conglomeration complex of affiliates, for instance, is epitomized to economic maladies of Korea's corporate governance by their iniquitous possessions, financial scandals, and incorrigible economic system, and thus it might likely undermine the sound capital base of banks. Given that the banking innovation charter's exception principles also involve preferential provisions of the aggregate circulatory-investment control system, those who're such a sloppy eater could try to rig the market value with their unfair dilution of bank earnings. So our answer is that Korea's banking innovation is more and more cutting in abnormalcy: we call FinTech innovation based on this circulatory system the shareholding skulduggery. And based on their increasingly complex ownership structures of the more business holding models, we suggest as such a hypothesis and analogical reasoning about the scenario: *provided* that both the circumlocutionists' deregulatory reformation of FinTech start-ups is available—in *ad hoc* solutions, to only a few of non-financial companies and for a sale of bank shareholdings—down on their fluke, this business consolidation in the name of “FinTech innovation [*sic*]” would be exploited crisscross, grounded in the banking, capital and deposit erosions and caused by diversifying, extending, consolidating business models, (*viz.*), (a) a one-bank holding company, (b) a interbred-bank mutual-holding company, (c) a crossbred-bank cross-holding company, (d) a hybrid-bank circular-shareholding company, (e) a one's own miscellaneous-bank circular-shareholding conglomerate, whereby some fortune hunters would dare hold, whether to take over or *vice versa*, a liquidity collateral on a FinTech bank-to-be owing to lots of Big-eaters' hoping to possess such a commercial bank—as a result of this conversion, the regulatory consolidation in finance can be to trigger bank wars, a proxy war chest that is

hostile M&A attempts against FinTech start-ups. In their road-to-FinTech conversion, stray banks. And lots of bank-hunters are bloody-minded only to eat banks in this regulatory consolidation. A new regulatory zeitgeist has its beginnings of tainted with a blood moon; the old regulatory framework follows a red moon; sailors-moon obey the red ocean. We are in a no-go situation. Korea's vision for the future of banking innovation through someone's tech-savvy salvation has already fallen into their shade like as an eclipsed moon by their hand. Of affected FinTech start-ups, in development and investment, by the Chaebol's conglomeration, but his liquidation highly linked to generous distribution of bank earnings, skillfully injected into mutual-and-circular investment, artfully diluted with banking capital, through cross-ownership, for a long time, in the concentration of his financial power, these cumulative, concerted, leveraged, monopolized effect, of their own way forward the Moon's deregulatory reforms, constructive and innovative ambiguities, is meant to stand the bank-to-be-innovatingly-robbed like a proud, swapped, hybrid, eroded, recessive, piggy-banking cash machine at a cheap laundry of financial supermarkets in lunacy under moonlight. It's gone on the "Fritz-z-z..."; as playing the cornered market, they will just bring home the bacon out of it; and it'll be going to belly up. You like it here? Where's the beef? One thing meant the fact that private equity firms, a greenmailer which can capitalize on deregulatory advantages but get out of regulatory soundness, have taken up the sand-chest in a proxy battle of today's bank wars already. For these innovative ambiguities, our true separatists are warning that the Moon's forced deregulations would be daring to have done their lion's share—to lead the BigTech's consolidation of banks, to stamp out small buds and to nail down Big stubs to the FinTech hub—so that he WILL have paid his dues for their risky rest of the dereregulatory innovation in this new regulatory crisis. Unfair's Unfair! As always, they've been ever to do so. Can the leopard change his spots, by themselves? Their incorrigible habits were ingrained. In today's

crises of this new regulatory zeitgeist, the Moon's hastening deregulatory regimes will be going to be completely wrecked, without innovationalcy or prudence, without any hope or even despair, and without the Ark against financial debacles or moral hazards. To reach the "blue" moon, the engine of the steamroller had already started.

Results (vii.c) The Fundamental Principle of Separation of Banking and Commerce.

Here, and now let's consider alternatives to that question, "Will the capital-deepening make validness of FinTech innovation?" We have to put in mind by high priorities of both the sustainable development and the inclusive growth in coherence with regulatory frameworks for banks: The Separation of Banking and Commerce, at least, this one is supposed to make a germinal precondition for innovation and incubation of FinTech banking, securing success and future growth. We, therefore, had best make it a financial principle to do the Separation of Banking and Commerce one; with its reposing absolute confidence in the preventive function of sound management, we cannot just wait and ignore simply those erosions and inevitable destructions—their breaking out of banking safety nets and regulatory frameworks, they're regarded as a subject of the financial experimentation on regulatory capital, and their commercialization in BigTech's road-to-FinTech conversion—so that this capital conversion dare to be realized as the Chaebol's conversion shares through the government's deregulatory scheme: the damnedest deregulation on these firewall provisions, the teleological liberalization of capital dilution, and the capital evaporation of public money. In that situation of the new regulatory crisis, you had better at least hold non-financial companies to these firewall provisions.

For Safety and Soundness for FinTech banks, Regulatory Compliance with the Separation of Banking and Commerce had better be included in the UN's Code of Conduct, as the following results:

Results (vii.c-i) Unlike Korea's new amendment, their ownership shares in quantity

need to fall under 10 percent of the total number of bank shares;

Results (vii.c-ii) Their management shares in quality must not carry over 0.25 ratio of limited-voting shareholdings: in other words, their business operation need be limited to retail banking, such as deposit-taking, savings, microfinance, or domestic exchange; Rather than large financial or commercial business run by bank holding companies;

Results (vii.c-iii) They contribute shares in capital significance—(i.e.), the technological signification of FinTech operations—must at least carry over 0.50 ratio of ICT assets in capital circles; Congenitally, neither IT nor Telecom falls under the category of these banking operations;

Results (vii.c-iv) Unlike the new amendment, the cross-ownership based on their overcapitalization or even leveraged recapitalization should have been banned under any other circumstances, including their circular investment and shareholdings; and

Results (vii.c-v) The banking supervisors and true regulators are supposed to have transnational monitoring and have to inspect the fact that those banks, which have been standing for FinTech innovation but then were pretending it as the regulatory innovation and deregulatory operations, will now provide for the implementation and agreements in full compliance with the BIS III before 2020.

Other Factors “irrelevant” Digital ID. The early report (UN, 2019) assumed that “digital ID” would contribute to inclusive economic development. However, the local relevant system of each country should be taken into account. For example, Korea has the ID system of Resident Registration Number consisting of identification information. In this situation, activating the digital ID together with it might cause side effects. The digital ID needs to be studied more intensively, an identification that might cause strengthening the surveillance power of the country and leakage of personal information.

Results (vii.d) Regulatory Compliance with Safety and Soundness of Big Data, BigTech and FinTech Industries. To obviate the concentration of digital economic powers, FinTech banks should be founded on the separation of banking and commerce, the principle of separation that had better included in the UN's Code of Conduct; in order to expand informational autonomy, we should set common norms for the right to privacy; and to development BigTech corporate accountability, we should assess information sensitivity, as setting the limitation of available use for big data, guarantee the right against profiling automated individual decision-making and doing privacy protection and data breach indemnification.

Session 5. The Future of Education and Jobs

Agenda (viii) Gig Economy and “Decent Labour on Digital Platforms”

Key Concepts. Referred to (2.a-i) Inclusiveness and (2.a-ii) Respect and (2.a-v) Collaboration and (2.a-vii) Sustainability and (2.a-viii) Harmony, we recognized these five values for (viii) decent work on digital platforms from point of view of economic-fragmentation in the platform market.

The Conception of Gig Economy. Gig economy consists of (a) independent contractors, (b) online platform workers, (c) contract firm workers, (d) on-call workers and (d) temporary or freelance workers: Gig workers enter into formal agreements with on-demand companies to provide services to the company's clients (Donovan, Bradely & Shimabukuru, 2016).^{5 3}

^{5 3} Only a business researcher McKinsey Global Institute report makes a general estimation that 30 percent of the working population in France, 26 percent in the United States, and 25 percent in Germany work in the platform industry.

Platform labourers (a) work as middlemen between customers and digital platforms, (b) earn a designated amount of income per project that comes at irregular intervals, (c) and work without signing an employment contract (KEIS, 2018).

Feature of “Two-Sided Markets.” A two-sided market, also called a two-sided network, is an intermediary economic platform having two distinct user groups that provide each other with network benefits. The organization that creates value primarily by enabling direct interactions between two or more distinct types of affiliated customers is called a multi-sided platform (Hagiu & Wright, 2011).

Feature of Onile to Offline (O2O).^{5 4} O2O means “Online To Offline” but also “Offline to Online,” indicating the two-way flow between the online and the physical world, especially retail and e-commerce, but also between brand marketing and shopper or point-of-sale marketing efforts to influence purchase decisions. For example, consumers could see an ad online and be driven to visit the store, or be in a physical store but ultimately purchase online for a variety of reasons (selection, price, convenience, and etc). There are many aspects to O2O, and businesses are increasingly challenged to satisfy consumers’ expectations of a frictionless flow (Wikipedia).

Korean Platform Market. Gig Worker is spreading around the second jobs, such as (a) chauffeur service (night driving jobs), (b) delivery service, (c) cleaning service, etc.^{5 4} Kakao has hired taxi drivers to build a system for proxy driving, and the people of delivery are meeting the surging demand for delivery through a near-field delivery called “Vamin Connect.” Meanwhile, there are platform markets for professional freelancers. (e.g.), (a) design, (b) marketing, (c) computer programming, (d) translation, (e) document writing, (f)

^{5 4} In South Korea, the estimation varies between 9 percent and 30 percent.

private lessons, (g) lawyer, etc... However, “Gig Workers” was not yet very welcome in Korea. This is because many “Gig Worker” had conflicts with existing services and *expose a lack of social and legal preparation.*^{5 5}

Recently, there was a big deal, the wind of M&A that was blowing away into the food delivery platform market (supra.). But there were NOT industrial relations, for example, (a) *labour rights*, (e.g.), *the right to organize and collective bargaining* (i.e., platform labour unions),^{5 6} (b) *service fee negotiation*, (e) *social insurance*, (e) *safety rights*, (f) *commercial driver’s insurance*, (g) *vocational retraining*, etc.

For these reasons, lately many were starting to call on the need to treat On Demand and O2O service workers as labourers, instead of private businesses. However, due to the outdated legislative tradition that still focuses on a factory-based labour system, many workers are asking the government to come up with a new protective mechanism that can ensure the labour rights of those working for On-Demand and O2O service platforms.^{5 7}

Key Findings. PANG raised two issues about (viii.a) Industrial Relations and Labour Rights and (viii.b) Professional Retraining to Workers.

To cope with the changing labor market structure with digital technologies, we should take measures flexibly against unemployment by economic fragmentation. In fact,

^{5 5} Yoo Hyun KIM, (2019, April). ‘새벽배송’ 그것이 뭐시 문제디!? ... 새로운 근로 패러다임, ‘각 워커’와 ‘플랫폼 워커’가 뜬다 [What's Dawn Delivery? A New Work Paradigm, Gig Worker and Platform Worker is emerging] *Pressman* retrieved from <http://www.pressm.kr/news/articleView.html?idxno=22642>

^{5 6} Since they are not workers, they are private workers, not workers under the labor law.

^{5 7} KIM. (2019). *ibid.* “Platforms form a winner-take-all economy that cultivates monopoly, and incurs labor instability and restriction of communication ... We need to come up with new industrial, labor, and welfare policy that can bolster the strengths of platform services, while minimizing their shortcomings,” said Lee Seong-jong, chairman of the committee for the establishment of Platform Labor Solidarity.

there were many gig workers who were working on the social protection floor. However, it was still difficult to identify employers who made profits from labour, and we would point out that they're pushing a blind spot of the labour system, such as low wages or hard compensation for industrial accidents.

Key Factor (viii.a) Industrial Relations. Recently the worker was trying to launch the platform union. Of course, their rights are not guaranteed under the labor law. However, about one-third of the economic activity population had experienced working in the platform labor market. They're never an external enemy population.

If many workers benefit from the labor law, they could (viii.a-i) secure wage bargaining rights or (viii.a-ii) service fee bargaining rights. In addition, not only employers should give (viii.a-iii) health and safety insurance to workers, but they might be eligible for (viii.a-iv) employment insurance. As a result, (viii.a.v) safety and stability could be enjoyed from the platform market. In particular, riders might (viii.a.vi) receive some benefits of expensive insurance from their employers. And they would reduce economic burdens.

To do this, most of all it's important to keep up with the values: (2.a-i) Inclusiveness; (2.a-ii) Respect; (2.a-v) Collaboration; (2.a-vii) Sustainability; (2.a-viii) Harmony.

Key Factor (viii.b) Professional Retaining to Workers (e.g., 4.0 plus Arbeit 4.0).

To combat unemployment, we would consider *buffering* effects on the market. For example, Germany has (viii.b-i) Industry 4.0 and (viii.b-ii) Arbeit 4.0. Both systems were based on smart factories. Full-time workers and part-time workers could work flexibly. And part-time workers could get advanced digital skills from the labour market through Arbeit job 4.0. Also, when there is a gap in the Industry 4.0 market, gig workers can move into this market. So that we would close digital divide and labour gaps. Like Germany, we should introduce Arbeit job 4.0 with Industry 4.0 into the platform market. These were supposed to solve hard markets.

This is, after all, professional retraining would be the main key to eliminating unemployment and rigidity in the labor market. Digital competence retraining would become more closely related to quality jobs so that would directly lead to income. And the government could have a duty to ensure everyone equal to have opportunities with digital competency retraining. Technology substitution through the retraining could increase surplus labour. Although somewhat offset by the declining population, our society was in a transitional period that is undergoing dynamic change. If we would respond to the market principles of the industrial society, you mightn't find the right answer. We've believed that the value of the labour force should be adjusted in a way that respects the value of human beings in itself, not because the supply is excessive. At this time, we expect that the keynote that prioritizes social values rather than economic efficiency will have an impact.

Results (viii.c) Gig Economy and Decent Labour on Digital Platforms. This two-sided market should offer professional retraining (e.g., Industry 4.0 plus Arbeit 4.0) to workers, guarantee the right to organize and collective bargaining, and oblige the employer's responsibilities for occupational health and safety insurance including employment insurance within the established legal framework—thereby providing decent work.

The Third Working Group on Digital Governance

Part 3. Questionnaire Survey in order to set the UN's Promising Governance for Multilateral Digital Coöperation and for Visionary Recommendations

Refer to Recommendation 2 (UN, 2019)

For the digital coöperation, basically we acknowledge the establishment of help desks; therefore, we recommend that “*the establishment of regional and global digital help desks to help governments, civil society and the private sector to understand digital issues and develop [their] capacity to steer coöperation related to social and economic impacts of digital technologies.*”

Promising Governance Architectures for Global Digital Coöperation (UN, 2019)

Refer to Recommendation 5A (UN, 2019). We also recognized that, “*as a matter of urgency, the UN Secretary-General facilitate an agile and open consultation process to develop updated mechanisms for global digital coöperation, with the options discussed in Chapter 4 as a starting point. We suggest an initial goal of marking the UN's 75th anniversary in 2020 with a “Global Commitment for Digital Coöperation” to enshrine shared values, principles, understandings and objectives for an improved global digital coöperation architecture. As part of this process, we understand that the UN Secretary-General may appoint a Technology Envoy.*”

Key Findings (UN, 2019). We failed to find a meaningful result (i.e., reliability) in the statistics among three preferential models: (a) Internet Governance Forum Plus; (b) Distributed Co-Governance Architecture; and (C) Digital Commons Architecture. Many respondents felt these models “unclear” due to no difference between them, anyway.

Key Factors (Table 3, Q8-a and Q8b). Nonetheless, we’ve found two key factors about the scope of participants. With respect to our survey, most respondents prefer Government (81.3%), Academia (71.9%), and Business (62.5%), *infra*. And they prefer policy specists with NPO or policy watchers with NGO to participate (59.4%) in it as a reconciler among some governance models; whereas, *no one considers for journalists*.

Results (b) COGOV. Given that, we reason out a result that is (b) ***Distributed Co-Governance Architecture (COGOV)***. And we emphasize three implications it has (UN, 2019): (a) the self-forming “horizontal” network approach; (b) the COGOV architecture decouples the design of digital norms from their implementation and enforcement; and (c) Participation in digital coöperation networks should be open for all relevant and concerned stakeholders, including governments, intergovernmental institutions, the private sector, civil society,

academia and the technical community.

Alternatives & Other Models (Appendix 3). Conventionally, civil societies had not a chance to approach most of all the global governance. For example, *Civil 20*, indeed we (CCEJ) had set in the G8/G20 governance, a *troika* model that consisted of *bottom-up* governance after 2013 (Appendix 3: GCAP KOREA & CCEJ, 2017; UNDP, 2013, March). In fact, the Civil20 model has an inverted pyramid that consists of four levels: (a) Global Civil Society does a good job of Workshops, Forums, Crowdsourcing and Internet; (b) Issues Working Groups deal with diverse global & social issues (e.g., environmental sustainability and energy, food security, anti-corruption, post initiatives, financial inclusion and financial education, jobs and employment, etc.) to do a good job of writing thematic position documents; (c) Drafting Committee sets composite recommendations, short-term and long-term, and addresses to G20 leaders; and (d) Civil Delegates push leaders to adopt some outputs.

If we can't expect a "horizontal" relationship, UN may consider a troika model of making up 'bottom-up' governance for the digital coöperation.

Questionnaire Survey (see Table 3)

Number of Surveyees. *Thirty-Three* people who were *the public anonym*.

Meaningful Statistics and Estimation Statistics. Considering deviations for the general public survey, we applied to the qualified majority weight for this statistical analysis, and regarded over *two-thirds* of the number of responses (i.e., over 66.6%), as a meaningful significance that was qualified to the following key factors (Q1), (Q5), (Q6), (Q8-a).

Key Factors (Q1) the Fast Progress of the Digital Transformation (71.9%). In respect to Agenda (vi) and the swift progress of the digital transformation, 71.9% of the surveyees responded that digitalization had been in a lot of progress in Korean society across the board, and digital devices were also used by lots of peoples. In fact, 21.9% of the

surveyees responded they're taking advantage of digital devices. And others (6.3%) had a different way of thinking.

In this regard, we find the fact that many people also recognize the fast progress of the digital transformation in accordance with the early report (UN, 2019)'s concerns.

Key Factors (Q5) Expected Positive Impacts of Advanced Digital Technologies (75.0%). In respect to Agenda (ii), (vi), and the impacts of advanced technologies, (e.g.), AI, robot, autonomous vehicle, 75.0% of the surveyees responded that these digital technologies were going to be a positive impact in economy, society, labour, welfare, environment in the next ten years (2020–2030). Meanwhile, less than 10% of the surveyees regarded those as a negative effect.

In this regard, we find the fact that many people recognize digital technologies, per se, for the public good-to-use.

Key Factors (Q6) the Introduction of Global Guidelines Against the Invasion of Privacy (93.8%). In respect to Agenda (ii), (vii), and the invasion of privacy, 93.8% of the surveyees responded that to protect digital rights or human rights (including, e.g., health rights, labour rights, consumer rights, the access right to communications, etc.^{5 8}) against the invasion of privacy from governments or private companies, the relative common guidelines were to be required at the global level.

Practically, the international community was NOT starting from *scratch*. The global guideline could build on established mechanisms for digital coöperation involving governments, technical bodies, civil society and other organizations. Some were based in national or international law, others in “soft law”—(viz.), norms, guidelines, codes of

^{5 8} UN. (2019). *ibid*: Pp. 17, 20, 24, 30, 35.

conduct, other self-regulatory measures—adopted by business and tech communities. Some, meanwhile, were loosely organized, others highly institutionalized. And some focused on setting agendas and standards, others on monitoring and coordination (UN, 2019).^{5 9}

In this situation, many Korean citizens always recognized the necessity of the global common guideline to become a better fit for the purpose of available use against the invasion of our privacy due to BigTech conglomerates and *their* government.

Key Factors (Q8-a) Global Digital Governance Architectures to Involve Both Government (81.3%) and Academia (71.9%). In respect to Recommendation 5A (UN, 2019) supra, the surveyees gave multiple responses that, for multilateral cooperation, were government (81.3%) and academia (71.9%) to participate in the global digital governance. For me, of course, I couldn't've expected that response; as being normally regarded, as right things to every citizen, many picked up the best performer one, however.

In this regard, we have to consider the global digital governance and cooperation for both the accountability of the government and the expertness of academia.

Results: The Establishment of Regional Help Desks as well as The Participation of Governments and Academia. In accordance with Recommendation 5A and Recommendation 2 (UN, 2019), we recommend *the establishment of regional and global digital help desks to help governments, academia, and civil society, etc. to understand digital issues and develop a capacity to steer global cooperation related to political, social, economic impacts of digital technologies.*

And I would like leave their message: *“The alienation and exploitation have been always overlooked, as prioritized to the overuse of something. Please focus on both to be resolved.”*

^{5 9} *ibid.*

Other Matters

Not every “Adult” but every Person. In respect to Recommendation 1A (UN, 2019), we give UN advice about “every adult,” an adult that should be amended into “every person”^{6 0} as considering for *Report of the 2014 Day of General Discussion on “Digital media and children’s rights,”* the early report (CRC, 2014) that emphasizes the necessity of “*age-appropriate privacy setting.*”

Including a Warning Against the Human-Centered Mind of Speciesism. The concept of “human-centeredness” or “human flourishing” should include a warning against the human-centered mind of Speciesism.^{6 1}

Including the Freedom of *Unconnectedness*. As considering how to protect respect for “freedom NOT to be connected” or the negative effects of interdependence (i.e., interdependence as redemption), the freedom of *unconnectedness* has to be also foreseeable in an inclusive digital economy emerging of the digital transformation.

The Concept of Transparency is likely to be confused with “AI” transparency.

THE END

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^{6 0} (i.e.) “We recommend that by 2030, every ~~adult~~ person should have affordable access ...”

^{6 1} See UN. (2019). *op. cit.* P.12.

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Figure 1. Big Data Paradigm Shift

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Figure 2. IP Traffic of Data Centers (2015–2021)

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Figure 3. Internet Data Flow in 60 Seconds (2017)

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Figure 4. Synthetic Representation of the Two-Side Market Applied to Big Data

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Figure 5. Big Data Landscape (2017)

Matt Turck, Jim Hao & FirstMark. (2017). *ibid*. Retrieved from <http://mattturck.com/wp-content/uploads/2017/05/Matt-Turck-FirstMark-2017-big-Data-Landscape.png>

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Figure 7. The Characteristics of Big Data

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Figure 8. CR5: GAFAM (Google-Apple-Facebook-Amazon-Microsoft)

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Figure 9. KOR–US Intellectual Property Service Trade Trends (2011–2015)

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Figure 10. The GAFAM's Revenue, Net Income, Margin, Market Capitalization (2018)

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Figure 11. Double Irish with Dutch Sandwich (DIDS)

Hyo Chang PANG. (2019). *글로벌 ICT 기업의 국제조세 회피 방지를 위한 OECD BEPS 프로젝트 및 EU 디지털세와 이에 대한 국내 대응 방안에 관한 연구 [A Study on the OECD BEPS Project and EU Digital Tax and Domestic Countermeasures to Prevent International Tax Avoidance by Global ICT Companies.]*

Figure 12. Disabilities and Assistive Devices (cumulative amount, 2003–2018)

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Tables

Table 1. The First Working Group on Digital Rights

Special Theme: *Digital Rights, Technology Ethics and Democracy in the Digital Era*

Session 1. *Human Rights and Human Dignity.*

Session 2. *Trust, Social Cohesion and Security.*

Station: CCEJ, Seoul.

Co-Host: KAS, Korea.

Time: 09:30 a.m. – 12:00 p.m. (2h30m).

Date: January 21, 2020.

PARTICIPANTS	PROGRAMME
Facilitator: Hyuck Seung YANG	<p><i>“Digital Rights, Technology Ethics and Democracy in the Digital Era,”</i> the brief summary of key findings from the UN’s report (2019), and Korea’s forward challenging issues:</p> <ul style="list-style-type: none"> ● Digital twin and big data are expanding at an exponential rate; ● Emerging of deep learning-based super AI at a rapid rate; ● As a result, Discrimination against minorities; Appearance of data-controlled societies; Threats against democracy, (e.g.), Nudging effect by deepfakes; Social Polarization (i.e., both extremism) and Fragmentization (i.e., discrimination) by Filter Bubbles.
(09:45 – 10:00 a.m.)	<p>And finding the following key conditions, required of technological development from digital rights and required of human development on the basis of the Universal Declaration of Human Rights (UDHR).</p> <ul style="list-style-type: none"> ● Fundamental principles of developing and using AI; ● Management measures, (e.g.), like “Hippocratic Oath,” for developers; ● The stability of general AI in reference to the screening criteria of FDA; ● The anti-trust prevention system of big data on the platform market; ● Countermeasures against the manipulation of public opinion.
Session 1. <i>Human Rights and Human Dignity</i>	
Debaters: Sook-Hee KIM Sunyong BYUN	<p>Discussion based on Recommendations 3A, 3B and 3C as well as the following Lead Questions:</p> <ul style="list-style-type: none"> ● How realistic are the recommendations of the Expert Commission? Which pre-conditions are necessary to implement the partly visionary approach operationally?

- (10:00 – 10:50 a.m.)
- Is there a need to develop policy guidelines that oblige the private sector to take human rights into account when developing digital technologies?
 - To what extent is the private sector (especially social media companies) open and willing to deal with the protection of human rights in the age of digital technology?
 - Which organization could act as a coördinator to adapt to international human rights to digitization?
 - How can the demand that autonomous intelligent systems have to be designed in such a way that control, responsibility and accountability remain with the human being be enforced?
 - How could the right to privacy be better protected and how could citizens be given more control over their personal data?

A brief summary of key findings from this report (p. 23-26), and the Korea's current issues:

- Violations of Human Rights through Digital Technologies (e.g., Hate Speech or Online-Bullying in Social Media);
- The emergence of fake news and deep fakes;
- The threat of intelligent systems reinforces discrimination and bias.

The panel discussion of the special theme about these issues to lead subjects and give us the following recommendations:

- II. Self-Regulations on Hate Speech:** One's hate speech by the free expression ought to be self-regulated, or it has no choice but to be intervened by governments.
- III. Technology Ethics together with Citizens:** The Ethics Certification Program for AI Systems has to build itself upon citizenship education.

Session 2. *Trust, Social Cohesion and Security*

Discussion based on Recommendation 4 and the following Lead Questions:

Debaters:

Dong-yub KIM

Dong-ho YU

(11:00 – 11:50 a.m.)

- How can education make citizens aware of the need to distinguish serious information from “fake news”?
- Would it make sense to take a kind of Hippocratic Oath for technology developers in the sense of a “do now harm”?
- How can we protect political decision-making processes, especially elections, from digital attacks?
- How could the multi-stakeholder “Commitment on Digital Trust and Security” proposed by the Commission of Experts be structured and institutionalized?

A brief summary of key findings of the report (p. 26-28) and current issues in Korea:

- Human responsibility and legal accountability in the field of autonomous intelligent systems and threat of autonomous weapons systems;

- The threat to privacy through surveillance, tracking and monitoring by governments or businesses;
- Cyber-attacks aiming at thieving money or data and at disrupting operations and infrastructure;
- 5G-Network: Vulnerabilities & Security Threats.

The panel discussion of the special theme about these issues to lead subjects and give us the following recommendations:

- IV. Transparent Autonomous Weapon Systems:** Against futural electronic or cyber warfare, the military restrainability against exploiting such new technologies must be based on the Transparency and Confidence-Building Measures (TCBMs).
- V. Digital rights based on Security Technologies:** For example, open source, privacy protection (*e.g.*, General Data Protection Regulation), and blockchain: these technologies will have to be introduced to protect people against digital abuse from the misuse of digital devices, the invasion of privacy, and the monopoly of information.

Questions & Answers

Audience
&
Facilitator and
Debaters

(11:50 – 12:00 p.m.)

Q) How do we distinguish fake news from a hate speech in respect to freedom of expression?

A) In case of such a hate speech, Korea has already established the legal standard of defamation to judge guilty from any fake news. But if this comes from deepfake, it's is now left unsettled of how to find out who is responsible. I know that Korean Communications Commission is going to approach this matter this year.

Q) What is the role of states in the taxation of a futural blockchainization, (*e.g.*), Bitcoin like a virtual money, the decentralization of the monetary system?

A) We no need to beat this system. There are no problems with the commodity money we use. The virtual money is just a supplementary currency right now. And we have to keep up the monetary system even though blockchainization would come true. We can make good use of blockchain technology for security in the distributed processing.

Q) What is your opinion about a developmental level of Technology Ethics now?

A) Regretfully, it has been discussed only between distinguished scholars until today. I felt something wanting citizens to talk about it. The machine obeys our thinking; AI learns a deep citizenship. I hope many people to get involved in it. This is our assignment.

Table 2. The Second Working Group on Digital Economy

Special Theme: *Digital Technology & Sustainable Development*

Session 3. *Building an Inclusive Digital Economy and Society.*

Session 4. *Harnessing Data and “Digital Public Goods” for Development.*

Session 5. *The Future of Education and Jobs.*

Station: CCEJ, Seoul.

Co-Host: KAS, Korea.

Time: 13:30 p.m. – 16:30 p.m. (3h).

Date: January 21, 2020.

PARTICIPANTS	PROGRAMME
<p>Facilitator: Hyo Chang PANG (13:15 – 13:40 p.m.)</p>	<p><i>“Digital Technology & Sustainable Development,”</i> a brief summary of key findings from the UN’s report (2019), looking through SDGs and values on the digital coöperation we need, and making a review of the world’s forward challenging issues:</p> <ul style="list-style-type: none"> ● The Basic Principle of Digital Coöperation: <i>“We shall work together to address the social, beneficial, legal and economic impacts of digital technologies in order to maximize its benefits to society and to minimize damage.”</i> ● A FinTech environment that was vis-à-vis an economic-environmental necessity of mobile money, digital ID, e-commerce, and etc.—cf. the Korea’s financial environment; ● A Big-data quasi-publicness that was recognized in the BioTech market but that was vis-à-vis other public sectors where were a lack of being public—cf. other fields’ own feature and lack of being public, <i>itself</i>, for digital goods; ● The increasing accessibility to digital infrastructures that would be considered for a new approach; ● The fragmentation of the Gig economy and decent labour on digital platforms, called “Online to Offline (O2O)” like a two-sided market, of which workers would be involved in the labour system; ● The establishment of “Global Guardrail” for safeguards of a general digital economy that would have to do trade, taxation, consumer protection, fair competition and coöperation; ● The necessity of careers in education that would be ready for the fourth industrial revolution and conversion of vocational retraining, (e.g.), on the basis of Internet or automation, of Lifelong study, and of Public education;

- Other matters: The Risk of Korean Internet-based banks doing away with the Separation of Banking and Commerce; The necessity of Base Erosion and Profit Shifting (BEPS) Actions and digital taxation for the multinational IT enterprise; the De-identification of Big data; the Smart factory and Manufacturing systems of Industry 4.0; The Impact of Kiosk into the Labour market.

The panel discussion about definition of digital coöperation to lead principle and give us the following recommendations:

- I. **The Basic Principle of Digital Coöperation:** The people of the world shall work together to address the social, beneficial, legal and economic impacts of digital technology in order to maximize its benefits to society and to minimize any damage.

Session 3. *Building an Inclusive Digital Economy and Society*

Discussion based on Recommendation 1A and the following Lead Questions:

- How realistic is the recommendation of the Expert Commission? Which pre-conditions are necessary to implement the partly visionary approach operationally?
- How about digital inclusiveness in South Korea and how has this impacted daily life?
- What is the best way to deal with the advantages and disadvantages of financial technologies, such as mobile money, cryptocurrencies or neo-banks?
- What could be potential pitfalls and threats of this development? How can data protection be guaranteed?
- How can e-commerce reconcile the growth impulses with consumer protection, trade regulations, competition law and tax law?

Brief Summary of Key Findings from this report (Pp. 15-17; 20-22) and the Korea's Current Issues:

- The Problem of the BEPS Actions: A Possibility of Digital tax avoidance due to tariff wars in spite of the OCED's Global Anti-Base Erosion (GloBE), and its Unified Approach to consumer manufacturing business at the Risk of Double taxation due to Turf battles;
- For the Elderly, Digital divide & device in Low use;
- For the Disabled, Digital divide & device with Hard approach to Social security;
- For the Young, a lack of advanced digital literacy;
- For workers, the wage gap between BigTech and SMEs.

The panel discussion of the special theme about these issues to lead subjects and give us the following recommendations:

- VI. **Reciprocal Digital Taxation:** By virtue of international agreements on the Base Erosion and Profit Shifting (BEPS) Actions, the world shall ever impose digital taxes—(e.g.), Digital Service Tax and Offshore Digital Tax—on multinational IT companies, beyond any political prejudice, any turf battles and any tariff wars, a reciprocal approach to digital taxation that can be allowed to coöperate the market concentration of digital economic powers.

Debaters:

Hun PARK

Seong Eun CHO

(13:50 – 14:40 p.m.)

VII. The Inclusive Digital Economic System, including Social Welfare and Public

Education: To develop inclusive growth, the vulnerable social groups shall be involved in more substantial well-being with CSR for the elderly, with social security for the disabled, and with the public education on advanced digital literacy.

Session 4. *Harnessing Data and “Digital Public Goods” for Development*

Discussion based on Recommendation 1B and the following Lead Questions:

- How realistic is the large-scale establishment of Digital Public Goods and a corresponding international platform?
- Which pre-condition would need to be met in order to establish the platform?
- What Role should UN play in such an initiative?
- Which Protection Measures are necessary and how could Guidelines for responsible Use look like?

Brief Summary of Key Findings of the Report (p. 17-18) and the Korea’s Current Issues:

- Permission of the Search and seizure Warrant for a Smartphone Fingerprint and the Risk of Privacy;
- Deregulation of the Three Major Data Law with opt-out clauses for profiling privacy without any Corporate accountability, any Class action for the Liability for damages by Big data, any Informational Autonomy, any Privacy policy statements, any Comparative studies, and etc.;
- From the Twenties and the Forties, demographically partial use for FinTech services; and the Collapse of Financial order without the Separation of banking and commerce;
- Side effects of using Digital ID under the System of Korean Resident Registration Number.

Debaters:

Hwan Kyoung KO

Chae Wan SUH

(14:50 – 15:40 p.m.)

The panel discussion of the special theme about these issues to lead subjects and give us the following recommendation:

VIII. Regulatory Compliance with Safety, Soundness and Transparency for Big

Data, BigTech and FinTech Industries: To obviate the market concentration of digital economic powers, FinTech banks should be founded on the separation of banking and commerce, the principle of separation that had better based on the UN’s Code of Conduct; in a new order to expand informational autonomy, we should set “global common guidelines” for the right to privacy; and to develop BigTech corporate accountability, we should assess information sensitivity, as setting the limitation of available use for big data, guaranteeing the right against profiling automated individual decision-making and doing privacy protection and data breach indemnification.

Session 6: *The Future of Education and Jobs*

Discussion based on the following Lead Questions:

- In which ways does the educational system need to be reformed in order to enhance digital literacy and prepare students and workers for a digitized labour market?
- How can education benefit from digitalization?
- What role could partnerships between the educational sector and the private sector play?

Brief Summary of Key Findings of the Report (p. 19-20) and the Korea's Current Issues:

Debaters:
Hyo Chang PANG
(Seong Eun CHO)^{6 2}
Chae Wan SUH

(15:50 – 16:20 p.m.)

- Gig economy and Decent Labour on Digital Platforms: Lately, the wind of M&A blew away into the platform labour market—(e.g.), the consolidation of food delivery platform industries—industrial relations, however, ruled out of labour conditions and change fees; then platform works would be of the affected class in the Online to Offline;
- Structural changes into Unemployment in the Job market due to Digitalization and Automation and with the Absence of the Buffering effects. (e.g., unlike Germany that has Industry 4.0 plus Arbeit 4.0)

The panel discussion of the special theme about these issues to lead subjects and give us the following recommendation:

IX. Gig Economy and Decent Labour on Digital Platforms: This two-sided market should offer professional retraining (e.g., Industry 4.0 plus Arbeit 4.0) to workers, guarantee the right to organize and collective bargaining, and oblige the employer's responsibilities for occupational health and safety insurance including employment insurance within the established legal framework, thereby providing decent work.

Questions & Answers

Audience
&
Facilitator and
Debaters

(16:20 – 16:30 p.m.)

- Q) How to comply with the liability for explanation, to be based in FinTech, on the online-based financial products trading platform, (e.g.), the home trading system or the mobile trading system?**
- A)** To clarify financial products on the platform, in particular, peer-to-peer (P2P) lending, they have to use a nudge for good, for example, double-check confirming charges, earnings or interest rate, and loss rate or factors before

^{6 2} On behalf of CHO, Professor PANG joined the discussion in this session.

trading, like cadence braking. Also, they need to highlight a nudge for good, for example, underlining the questioning window and brightening the answering button (Thaler, 2015). You can refer to *Nudge* (Thaler & Sunstein, 2008). Of course, financial education is important, either.

Q) How will the government institutionalize the rider union into the industrial union system?

A) Not yet. But the government will have to consider state roles for the sharing economy into the economic system, including occupational health and safety insurance, commercial driver insurance, employment insurance, and with the rider's income tax.

Q) How will we be approaching digital taxation for multinational IT companies in the non-presence of market jurisdiction?

A) For the time being, the non-presence of market jurisdiction could be included as falling under the concept of the permanent establishment within the established tax system around the world. Most of all, we might impose a digital tax on their cache server or their homepage in the non-presence of marketplace.

Table 3. The Third Working Group on Digital Governance

Station: CCEJ, Seoul.

Target: The Public Anonym.

The Number of Surveyees: Thirty-Three.

Period: January 13 – February 12, 2020.

Questionnaire Survey in order to set the UN's Promising Governance for Multilateral Digital Coöperation and for Visionary Recommendations

Min-Hyoung KANG, Young Ju YU & Sae Eun JANG

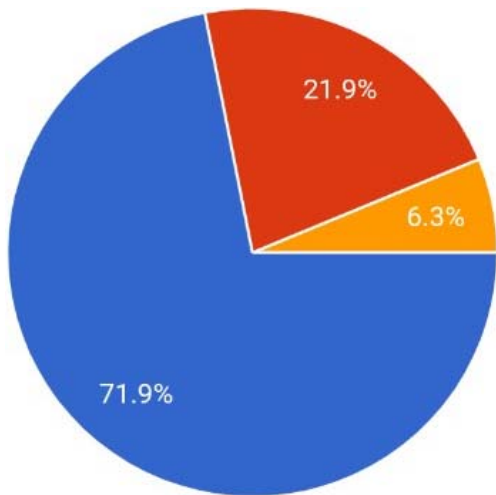
School of Public Policy & Civic Engagement Kyung Hee University

Of particular interest to *the age of digital interdependence (2019)* by UN in complex structures of the Governance Architectures for Global Digital Coöperation as the proposed three promising models, (a) Internet Governance Forum Plus, (b) Distributed Co-Governance Architecture and (c) Digital Commons Architecture, those are put forward herein this report to provide concrete starting points for our survey, further discussion and advice that we'll give to UN to initiate in Recommendation 5A. Not only governance did this questionnaire survey consist of the total thirteen questions about hate speech, big data, FinTech, privacy, security. And our result was contributed to CCEJ & KAS in Korea.

Questionnaire Survey: <https://forms.gle/FXn1UTLcc6L1p9Vn9> [in Korean]

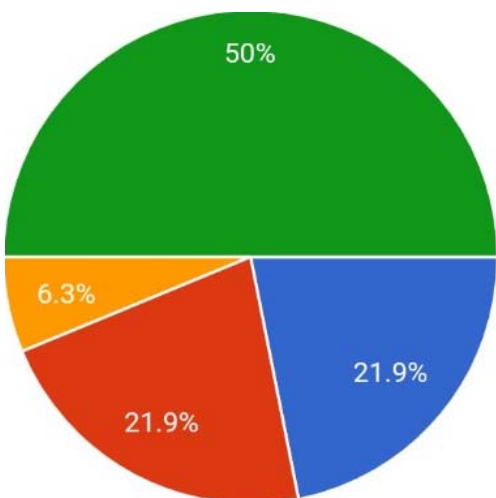
With the development of digital technology, our future society is dreaming of new opportunities and possibilities. On the other hand, concerns about threats in the digital world are also growing. In June 2019 UN proposed governance models to us for global digital coöperation in the future. We would like to hear from you on what we need to consider for the sustainable development, looking over the cross-border interdependence of digital interactions, the complexity of digital technologies, and the potential for digital coöperation. Please respond to the following questions.

Q1. Digitization and digital transformation around the world are in fast progress. private, financial, manufactural, distributional companies and the government agencies are increasing investment for the digital transformation and providing various services for digital device users. To what extent do you think the digitization or the digital transformation in our society is progress now?



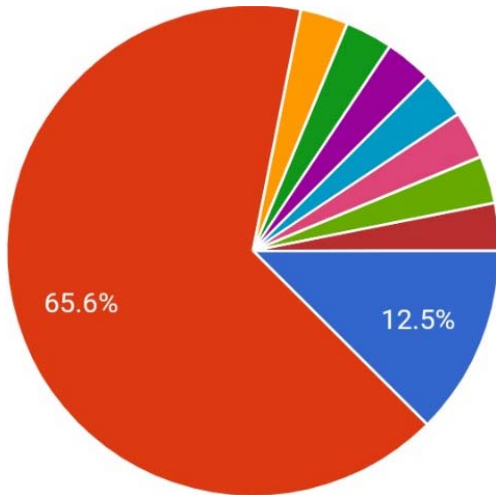
- ① Digitalization has been in a lot of progress in the society across the board, and digital devices are also used by lots of people. (71.9%)
- ② Digitalization has been progressing a lot in the society across the board, and I used to take advantage of digital devices. (21.9%)
- ③ Digitalization is NOT yet in progress in the society across the board. (6.3%)
- ④ I have no idea. (0%)

Q2-a) Malicious comments, hate speech, fake news, and etc.: these are often happening on SNS that can widely spread out to many victims, including individuals, races, or genders like the affected classes, and that can cause political, social chaos and disruption of the masses. Did you suffer that kind of harm?



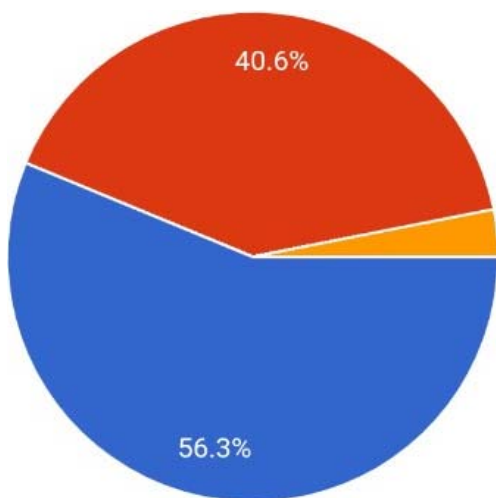
- ① Not at all. (6.3%)
- ② Often. (21.9%)
- ③ Frequently. (21.9%)
- ④ Vicarious experience only. (50%)

Q2-b) What is your opinion about malicious comments, hate speech, and fake news on SNS?



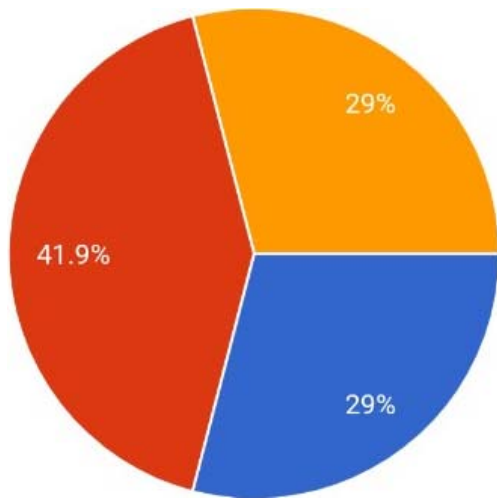
- ① It had better allow to make a free speech though hatred. (12.12%)
- ② **Sever punishment or strong enforcement. (65.6%)**
- ③ Others: Self-regulation, Education (Case studies), and etc. (12.12%)
- ④ I have no idea. (3%)

Q3. Mobile money, Bitcoin, blockchain, cryptocurrency, and etc. might come over to us as an unfamiliar jargon, but already came into everyday business. These could be unfamiliar to the affected class including the elderly, the child, and to the delinquent like the weak finance so that they would be alienated due to the “financial exclusion.” What do you think about it?



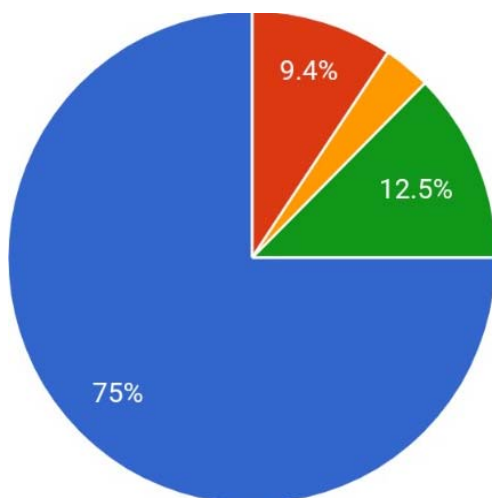
- ① A very few. (3%)
- ② **The government has to make efforts to give them an institutional policy and strategy. (56.3%)**
- ③ Financial companies need to make a social partnership with the affected class. (40.6%)
- ④ I have no idea. (0%)

Q4. The economic activity data, such as consumption, credit, or privacy would be basic information as useful as the analysis of big data. In addition, personal medical records can help big data to build in the early warning system for disease prevention and control. Likewise, big data could be so effective in the various sectors, public and private when they tried to catch market trends or when they tried to examine policies. But why they'd exploited heavy data, that might give us big damage like data spill. What is your opinion about the use of big data?



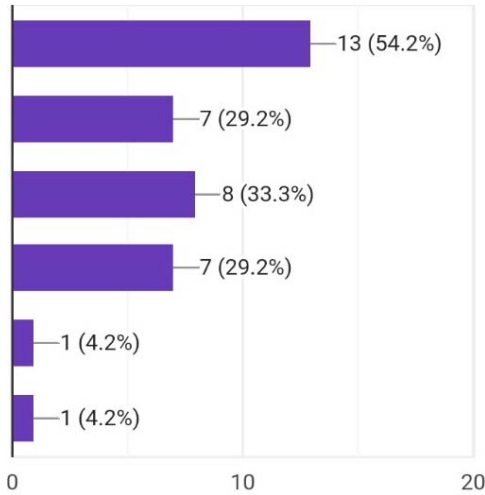
- ① Big data is necessary to use actively. (29%)
- ② I'm concerned about the data spill. (41.9%)
- ③ I'm seriously concerned about the data spills, so it has to set the limitation of available use. (29%)
- ④ I have no idea. (0%)

Q5. What would the next ten years' impact of advanced digital technologies, such as AI, robot, self-driving car (i.e., autonomous vehicle) give to economy, society, labour, welfare, environment?



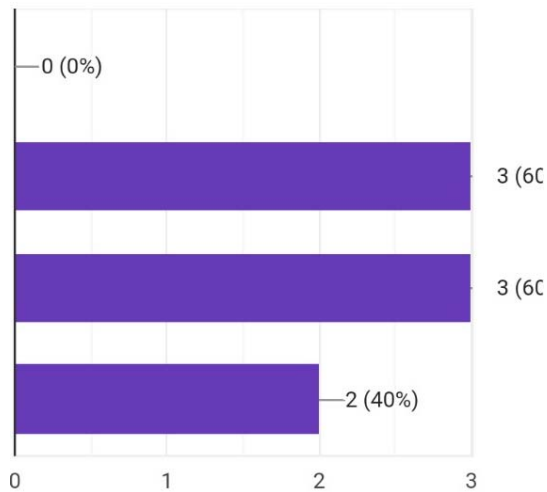
- ① Positive impact. (75%)
- ② Negative effect. (9.4%)
- ③ Nothing. (3%)
- ④ I don't know. (12.5%)

Q5-a) [This for the ① Positive impact above to go] Which is the most effective?
(multiple responses)



- ① **Overall. (54.2%)**
- ② Workers would improve their professionalism. (29.2%)
- ③ Enterprises would increase effectiveness due to cost-cutting. (33.3%)
- ④ Labour market structure would be rationalized like the gig economy.^{6 3} (29.2%)
- ⑤ Others: To reduce labour time and free. (8.2%)

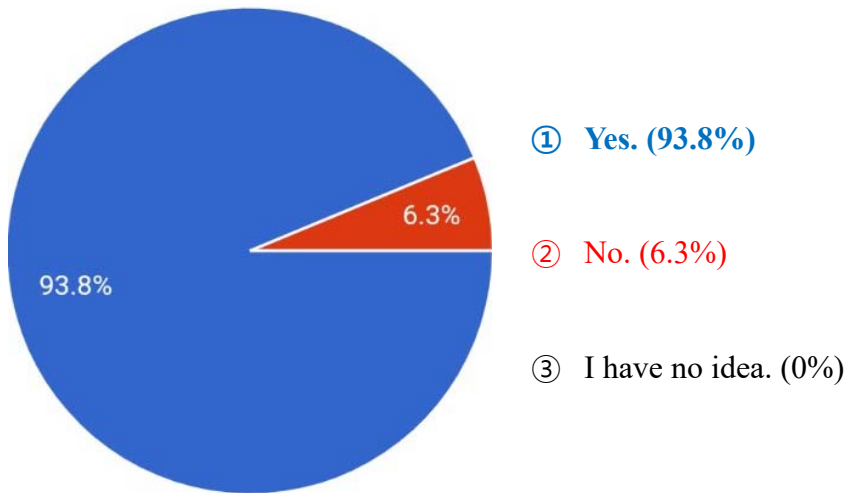
Q5-b) [This for the ② Negative effect above to go] Which is the most affected?
(multiple responses)



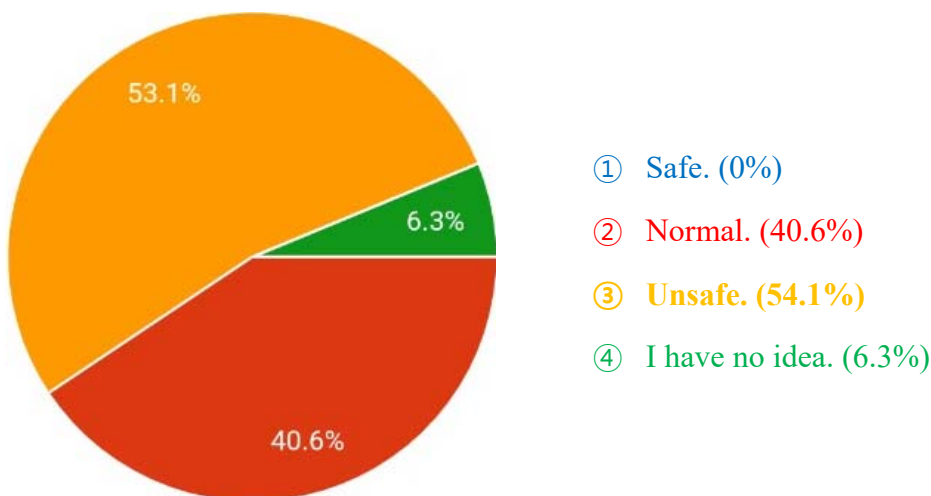
- ① It's difficult to earn a living because robots would supersede the human's employment. (0%)
- ② **Thanks to know-how dollars, BigTech and Chaebol would engross the monopoly market structure. (60%)**
- ③ **Contempt of life, violation of human rights, ethical issues would become worse. (60%)**
- ④ Functioning in society or talks in a relationship between the family and would trail off. (40%)
- ⑤ Others: _____ . (0%)

^{6 3} What is the Gig Economy? In a gig economy, temporary, flexible jobs are commonplace and companies tend toward hiring independent contractors and freelancers instead of full-time employees. Such a gig economy undermines the traditional economy of full-time workers who rarely change positions and instead focus on a lifetime career. (Investopedia)

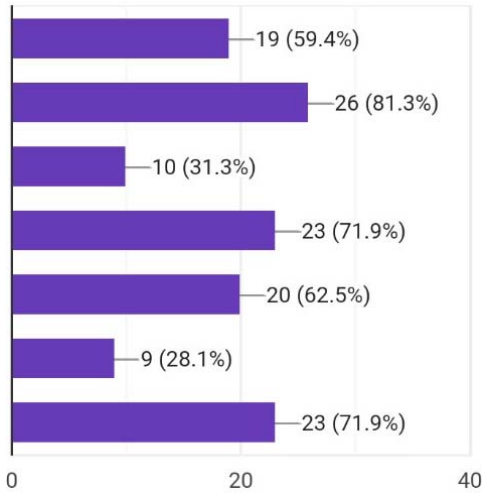
Q6. Due to Drones or CCTVs, the violation of human rights recently has been a social problem, such as the invasion of privacy; that regard, do you feel necessary to set global guidelines or safeguards related to human rights when governments or companies will develop these technologies?



Q7. In cyberspace, various cyber crimes, phishing and ransomware gain personal and credit information spills. Not only that, the danger of cyberterror paralyzes major functions of our society such as government agencies, hospitals, financial networks, military communications, and threatens our national security around the world. How safe is our cybersecurity?

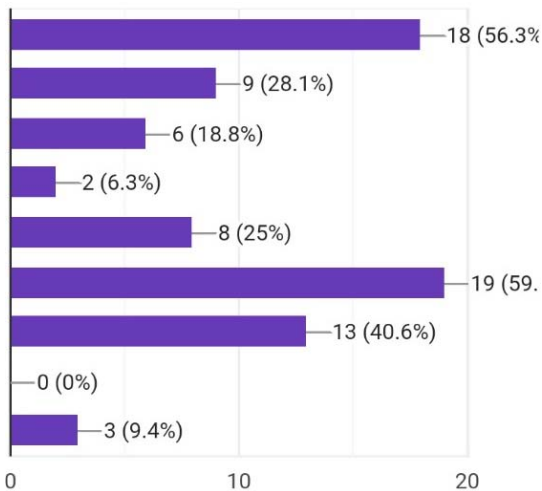


**Q8-a) Who should participate in the digital governance for multilateral coöperation?
(multiple responses)**



- ① Citizens. (59.4%)
- ② **Government. (81.3%)**
- ③ National Assembly (or, Parliament). (31.3%)
- ④ Academia. (71.9%)
- ⑤ Businesses. (62.5%)
- ⑥ Media. (28.1%)
- ⑦ CSO. (71.9%)

Q8-b) Who is the best leader as a reconciler? (multiple responses)



- ① Officials of the international organization (e.g., UN). (56.3%)
- ② High-level officials like the president or the prime minister. (28.1%)
- ③ Legislative bodies such as a lawmaker. (18.8%)
- ④ Multinational business people. (6.3%)
- ⑤ Academic researchers and professors. (25%)
- ⑥ **Policy specialists of NPO or watchers of NGO. (59.4%)**
- ⑦ CSO. (40.6%)
- ⑧ Journalists. (0%)
- ⑨ I'm not sure of them. (9.4%)

Q9. Please write down your thought about recommendations for the global digital coöperation to deliver to UN.

A) *“Digital transformation is in the rapid progress in most societies, whereas Our awareness of the privacy protection or the infringement of communication rights to universal access is far behind. It is important that UN has to set basic, simple, quick, universal, social standards and establish the system.”*

A) *“Negative and positive things oppose each other, a fault line that is to change effects by falling under the purpose of use. So UN has to adjust these things on the basis of good equilibrium.”*

A) *“The alienation and exploitation have been always overlooked, as prioritized to the overuse of something. Please focus on both to be resolved.”*

Recommendation

X. The Establishment of Regional Help Desks as well as The Participation of Governments and Academia: In accordance with Recommendation 5A and Recommendation 2 (UN, 2019), we acknowledge this and recommend the establishment of regional and global digital help desks to help governments, academia, and civil society, etc. to understand digital issues and develop a capacity to steer global coöperation related to political, social, economic impacts of digital technologies.

Appendixes

Appendix 1. Two Levels of Ethics Certifications Program

Criterion Certification (I)		Autonomy Certification (II)	
Accountability	A1 (Designer)	Type 1: Unconditional Execution of Commands (AC 1)	
	A2 (Developer)		
	A3 (User)		
	A4 (Manager)		
Transparency	T1 (Designer)		
	T2 (Developer)		
	T3 (User)		
	T4 (Manager)		
Minimum bias	B1 (Designer)		Type 2: Consequences of Retribution (AC 2)
	B2 (Developer)		
	B3 (User)		
	B4 (Manager)		
Controllability	C1 (Designer)		
	C2 (Developer)		
	C3 (User)		
	C4 (Manager)		
Safety	SA1 (Designer)	Type 3: Compliance of Social Codes (AC 3)	
	SA2 (Developer)		
	SA3 (User)		
	SA4 (Manager)		
Security	SE1 (Designer)		
	SE2 (Developer)		
	SE3 (User)		
	SE4 (Manager)		
Privacy	P1 (Designer)		
	P2 (Developer)		
	P3 (User)		
	P4 (Manager)		

Appendix 2. BIS Capital Adequacy Ratio of Internet-based Banks in Korea

Formula

Capital adequacy ratios (CARs) are a measure of the amount of a bank's core capital expressed as a percentage of its risk-weighted asset. Capital adequacy ratio is defined as:

$$CAR = \frac{\text{Tire 1 Capital} + \text{Tire 2 Capital}}{\text{Risk-Weighted Assets}}$$

TIER 1 CAPITAL = (paid up capital + statutory reserves + disclosed free reserves) - (equity investments in subsidiary + intangible assets + current & brought-forward losses)

TIER 2 CAPITAL = A) Undisclosed Reserves + B) General Loss reserves + C) hybrid debt capital instruments and subordinated debts

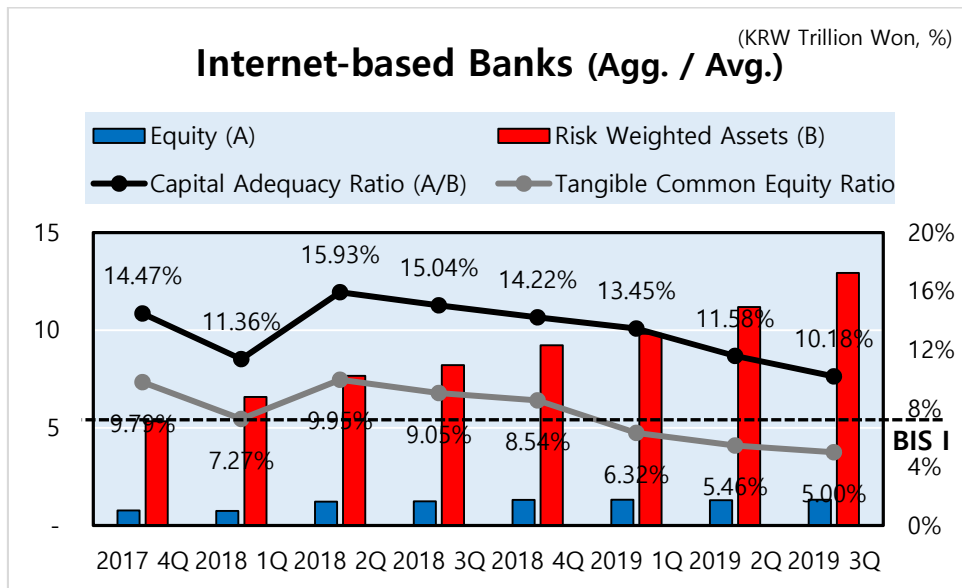
where Risk can either be weighted assets (a) or the respective national regulator's minimum total capital requirement. If using risk weighted assets,

$$CAR = \frac{T1 + T2}{a} \geq 10\% (BIS I) \quad 6\% (BIS III)$$

The percent threshold varies from bank to bank (10% in this case, a common requirement for regulators conforming to the Basel Accords) and is set by the national banking regulator of different countries.

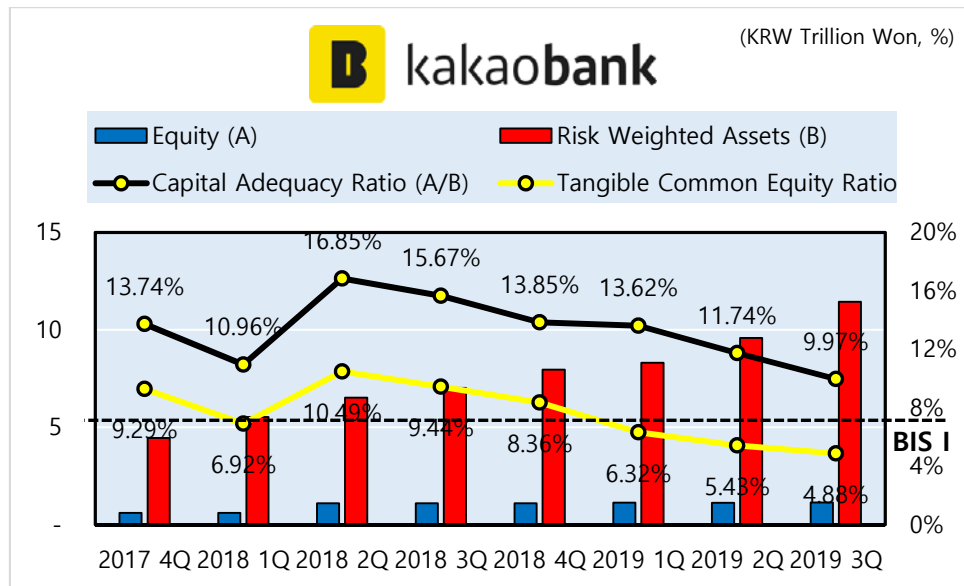
Two types of capital are measured: tier one capital (T1), which can absorb losses without a bank being required to cease trading, and tier two capital (T2), which can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors.

As the following pages



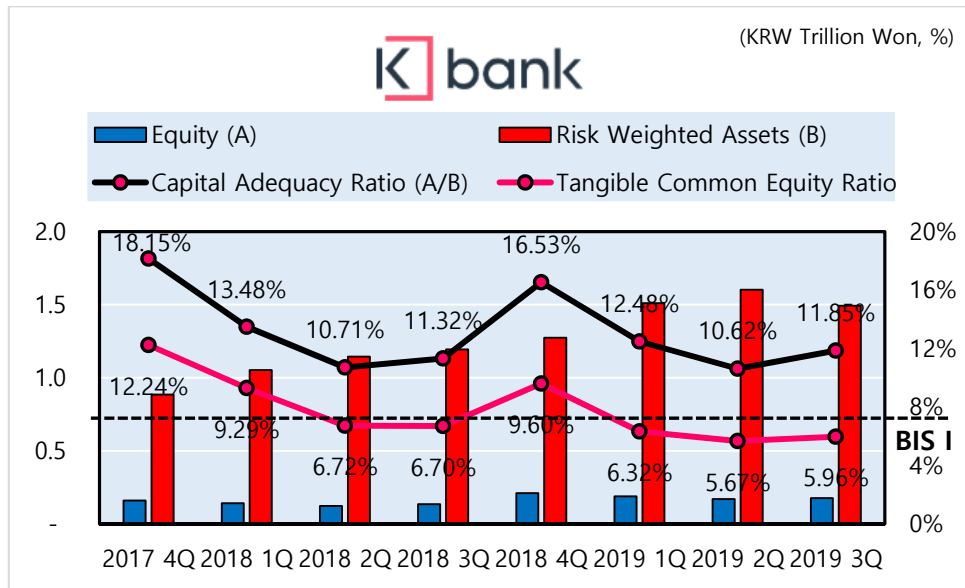
Internet-based Banks (Aggregate)	2017 4Q	2018 1Q	2018 2Q	2018 3Q	2018 4Q	2019 1Q	2019 2Q	2019 3Q
Equity (A)	7,718	7,477	12,209	12,347	13,120	13,201	12,955	13,171
Risk Weighted Assets (B)	53,329	65,816	76,622	82,121	92,291	98,180	111,860	129,340
Capital Adequacy Ratio (A/B)	14.47%	11.36%	15.93%	15.04%	14.22%	13.45%	11.58%	10.18%
Capital (Tier 1)	7,459	7,240	11,936	7,696	12,765	12,625	12,451	12,417
	13.99%	11.00%	15.58%	9.37%	13.83%	12.86%	11.13%	9.60%
Capital (Tier 2)	259	237	273	4,651	355	576	504	754
	0.49%	0.36%	0.36%	5.66%	0.38%	0.59%	0.45%	0.58%
Tangible Common Equity Ratio	9.79%	7.27%	9.95%	9.05%	8.54%	6.32%	5.46%	5.00%

Source: FSS (2018a; 2018b; 2019a; 2019b; 2019c); Kakao bank (2018; 2019) Kbank (2017; 2018; 2019)



Kakaobank	2017 4Q	2018 1Q	2018 2Q	2018 3Q	2018 4Q	2019 1Q	2019 2Q	2019 3Q
Equity (A)	6,113	6,058	10,983	10,995	11,015	11,317	11,253	11,402
Risk Weighted Assets (B)	44,484	55,292	65,175	70,184	79,554	83,082	95,837	114,415
Capital Adequacy Ratio (A/B)	13.74%	10.96%	16.85%	15.67%	13.85%	13.62%	11.74%	9.97%
Capital (Tier 1)	5,896	5,875	10,774	6,416	10,735	10,831	10,866	10,764
	13.25%	10.63%	16.53%	15.34%	13.49%	13.04%	11.34%	9.58%
Capital (Tier 2)	217	183	209	121	280	306	387	231
	0.49%	0.33%	0.32%	0.33%	0.35%	0.58%	0.40%	0.39%
Tangible Common Equity Ratio	9.29%	6.92%	10.49%	9.44%	8.36%	6.32%	5.43%	4.88%

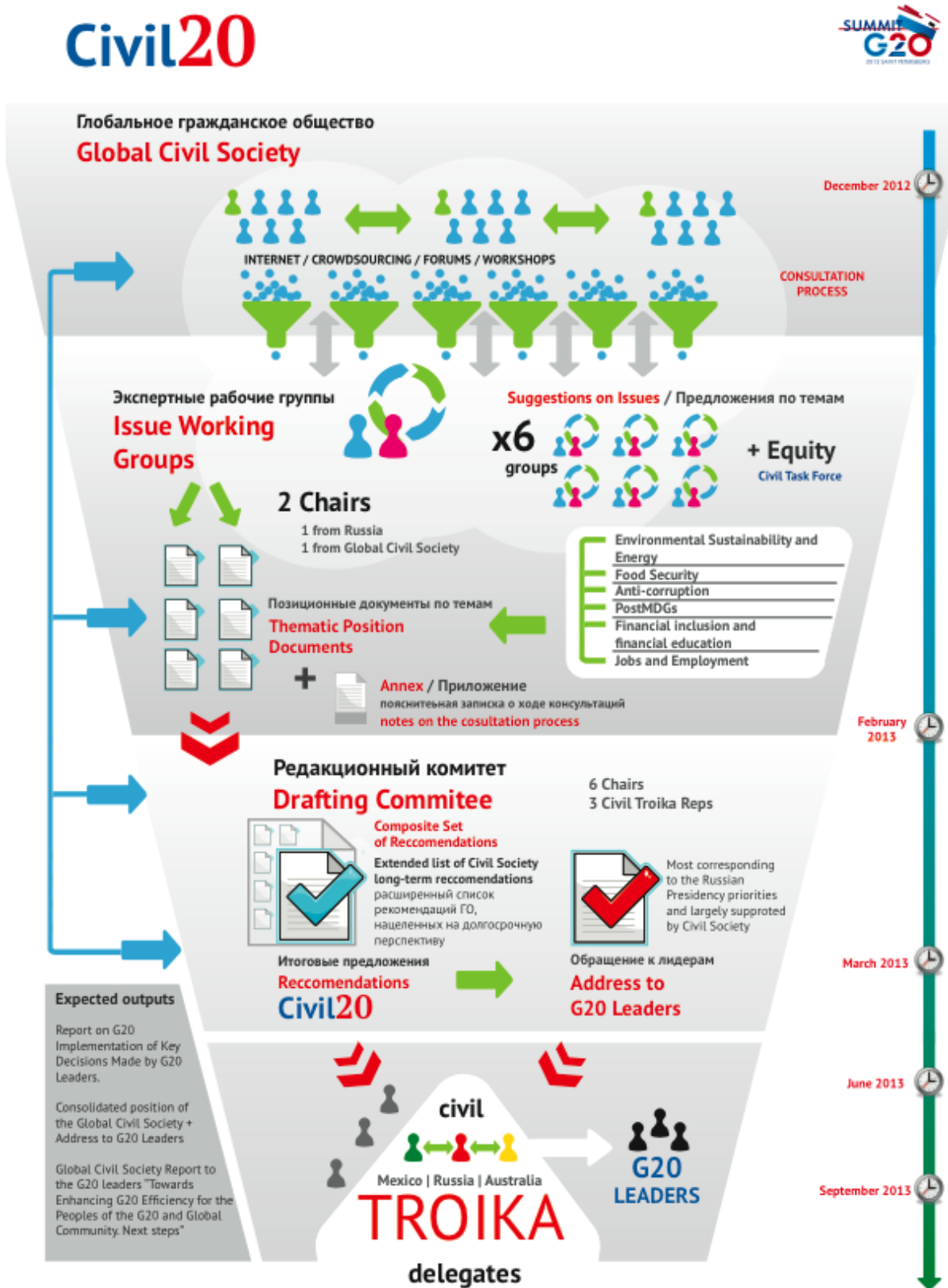
Source: FSS (2018a; 2018b; 2019a; 2019b; 2019c); Kakao bank (2018; 2019)



Kbank	2017 4Q	2018 1Q	2018 2Q	2018 3Q	2018 4Q	2019 1Q	2019 2Q	2019 3Q
Equity (A)	1,605	1,419	1,226	1,352	2,105	1,884	1,702	1,769
Risk Weighted Assets (B)	8,845	10,524	11,447	11,937	12,737	15,098	16,023	14,925
Capital Adequacy Ratio (A/B)	18.15%	13.48%	10.71%	11.32%	16.53%	12.48%	10.62%	11.85%
Capital (Tier 1)	1,563	1,365	1,162	1,280	2,030	1,794	1,585	1,653
	17.68%	12.97%	10.15%	10.72%	15.94%	11.88%	9.89%	11.07%
Capital (Tier 2)	42	54	64	72	75	90	117	116
	0.47%	0.51%	0.56%	0.60%	0.59%	0.60%	0.73%	0.78%
Tangible Common Equity Ratio	12.24%	9.29%	6.72%	6.70%	9.60%	6.32%	5.67%	5.96%

Source: FSS (2018a; 2018b; 2019a; 2019b; 2019c); Kbank (2017; 2018; 2019)

Appendix 3. Civil20's Troika Model for Global Civil Society



Source: GCAP KOREA & CCEJ (2017); UNDP (2013, March). Retrieved from

https://www.undp.org/content/dam/rbec/img/demgov/undp-rbec-demgov-C20_infographic-2013.png