Conversation 1

Why Innovate?

Technological, Economic and Societal Change from a Japanese Perspective

ABSTRACT

In this conversation, Professor Hiroto Koda investigates the innovation needs of Japanese society. They include embracing digital transformation, addressing the contraction of the population, in particular outside of the Tokyo metropolitan area, and finding solutions for environmental challenges. Against this background, this chapter focuses on five issues: (i) the economic effects of the COVID-19 pandemic, accelerating regional degeneration and the delay in digital transformation, (ii) the development of new business models, (iii) the solution of social issues that arise, (iv) collaboration between industry, government, academia and financial institutions and (v) the strengthening of human resources.

Speaker	Hiroto Koda
Moderator	Mihoko Sumida
Concluding Conversation	Felix Steffek and Mihoko Sumida
Questions for Further Thought	Mihoko Sumida

INTRODUCTION

Sumida: Why does Japan need innovation now? Today, we have Professor Hiroto Koda who steers financial institutions in the midst of capital market reforms and also engages in FinTech and other innovation support. He is going to clarify Japan's place by comparing its position with the rest of the world as well as by discussing the urgent social issues Japan faces. He will then specifically explain the approach to solving social issues. Following Professor Koda's talk, I will speak about why 'legal' innovation is considered necessary and share some perspectives on the relevant issues.

WHY IS THERE A NEED FOR 'LEGAL INNOVATION' NOW?

Sumida: I would first like to talk about the purpose of 'legal innovation'. The term 'legal innovation' might not be familiar to you, but it was coined by Professor Felix Steffek at the University of Cambridge. In 2018, Professor Steffek asked what changes will be brought about by fast-evolving technologies permeating the legal world, and he suggested that those changes could be seen through the lens of 'innovation'.

Luckily, we had an opportunity to launch a collaborative research project titled 'Legal Systems and Artificial Intelligence' with the University of Cambridge and our colleagues at Hitotsubashi University in 2020. I would therefore like to use this chance to let you, who are the next generation and who will be tossed into the midst of the upcoming 'legal innovation', know what transformations are likely to be seen in the legal world. I would like to use this opportunity to help you develop a deeper understanding of the concept of 'legal innovation', especially while the concept is still developing. That is why Professor Steffek and I planned this conversation series.

Our first guest is Professor Hiroto Koda. After graduating from the Faculty of Economics at Hitotsubashi University in 1982, Professor Koda joined the Industrial Bank of Japan. He served as the Deputy President and in other positions at Mizuho Securities Co., and he has been the Representative Director of the Innovation Intelligence Research Institute since July 2018. Professor Koda now independently conducts research and consulting activities, and based on that, he also plays an active role in education and research activities while, at the same time, serving as an external director at the Japan Investment Corporation and elsewhere.

As you can see from his career, Professor Koda has been engaged in system research related to financial system reforms, the financial Big Bang and other capital market reforms as well as FinTech and other innovation support. I would now like to invite Professor Koda to speak to us about Japan's position from his perspective.

Koda: As an introduction to the theme of 'legal innovation', I would like to talk about the perspective from which we should understand the relationship between 'economic and social innovation' and 'legal innovation' in the 2020s as Japan is facing a mountain of social issues.

FIVE ISSUES IN JAPANESE SOCIETY

Koda: With the ongoing COVID-19 situation, it is undeniable that the environment surrounding Japan's economy has become more difficult than previously expected. Given this situation, the issues faced by Japan include an inability to respond to digitalisation; a delay in responding to digital transformation (DX), namely a change in business model in the light of digitalisation; and a contraction of Japan in general due to a decline in its population, especially outside the Tokyo Metropolitan Area. These issues are going to have a significant impact on Japan. In that sense, the question is how Japanese companies will set up and establish new business models. More than ever, companies must act with an awareness of Japan's social agenda and

in a manner that serves globally linked themes such as carbon neutrality. Companies will thus face a major challenge in terms of how they can incorporate innovation. Today, I would like to talk about that awareness of issues in layperson's terms and use that topic to discuss the importance of the relevant legal aspects.

I would therefore like to discuss five issues in Japanese society of which we should be aware. The *first* issue is the increasingly harsh environment surrounding the Japanese economy, especially the prolonged effect of COVID-19, accelerating regional degeneration and a delay in DX. The *second* issue is whether Japanese companies can establish a new business model. The *third* issue is the direction of efforts by concerned parties to solve social issues. The *fourth* issue is how to link collaborations between industry, government, academia and financial institutions (regional financial institutions), which is one of our future directions, with digital solutions. Finally, the *fifth* issue is how to utilise Japanese human resources. I think these are the keys to innovation in future.

THE FUNDAMENTAL PURPOSE OF THE CAPITAL MARKET IS TO INCREASE CORPORATE VALUE

Koda: First, I would like to illustrate how the development of the digital society is interrelated with the capital market. In capital markets, a company is listed and that company's share value is formed through trading by investors. If a company is listed, various investors will participate in transactions that have the legal character of so-called securities in a framework known as an exchange. Notably, it is a matter of course that companies need to increase their value. Figure 1.1 illustrates how to capture the concept of increasing corporate value in terms of the development of the digital society.

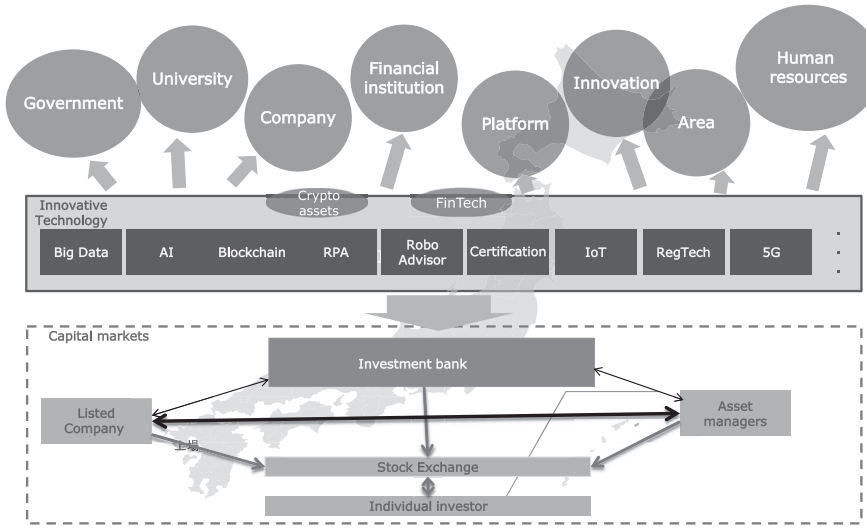


FIGURE 1.1 Digital society and capital markets

Figure 1.1 shows that the elements of innovative technologies in the middle of the figure such as artificial intelligence (AI), Big Data and the Internet of Things (IoT), which are hailed as the fourth industrial revolution, are interrelated through technological changes with companies and financial institutions that are the parties in the capital market as well as regions, workers and universities that are types of stakeholders in those companies. On this point, I would like you to be aware that it is extremely important to understand how to use new technologies in order to increase corporate value.

Elements that materially affect corporate value include changes in industrial structure, changes in management models and technological evolution. Addressing Japan's social issues or global social issues, which is the theme of today's conversation, is directly linked to increasing corporate value. Admittedly, how changes in industrial structure and technological evolution will increase corporate value has always been a debated issue. On this point, I would like to reiterate that linking social issues and corporate value has become a significant element in increasing corporate value.

In the light of this, I will split my lecture into four sections: (i) the post-COVID-19 era and Japan's social issues, (ii) circumstances surrounding Japan's capital markets, (iii) innovation and the venture ecosystem and (iv) digital strategies and innovation. The *first* theme is how to understand Japan's social issues in anticipation of the post-COVID-19 era. The *second* theme is what we should learn from Japan's capital markets in terms of increasing corporate value. The *third* theme is the relationship between innovation and the venture ecosystem from the perspective of innovation. Finally, the *fourth* theme is the need to consider the relationship between digitalisation and innovation, which has become extremely important during the COVID-19 pandemic. I will discuss these themes by starting with general concepts, and then, I will focus on specific issues.

JAPAN'S ECONOMY IS LAGGING BEHIND

Koda: Figure 1.2 summarises the current major themes in Japan in the 2020s. As the global situation rapidly changes and a new industrial revolution and innovations take place, Japan has fallen behind considerably over the past thirty years. Japan, on the whole, is now faced with the question of how to catch up with the rapid advancements in the rest of the world.

As Japan suffers a rapid decline in its population, it is dealing with social and economic structural problems, including a labour market that has not yet been mobilised and an excess concentration of its population and industry in the Tokyo Metropolitan Area. There are also many structural issues on the company side such as a concentration of managerial resources in large companies, a failure to make full use of those resources in order to increase corporate value and continued excessive competition resulting in low profitability.

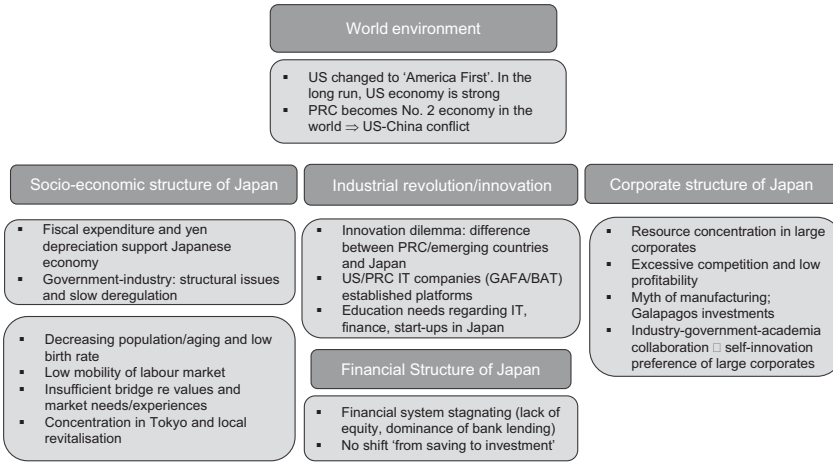


FIGURE 1.2 Major issues in Japan

At the same time, there are structural financial issues. These include a failure to shift from savings to investments based on the indirect finance system, and insufficient investment of equity funds as risk money. Without addressing this range of structural issues, Japan will be left behind by the rest of the world. The question now is whether Japan can take the pandemic as the final opportunity and what measures it can come up with. With this background, I would now like to look at the structural issues in each area while referring to related data.

A FALLING BIRTH RATE AND AN AGEING POPULATION IS NOT AN ISSUE THAT IS UNIQUE TO JAPAN

Koda: As you are all aware, Japan is facing a problem with the ageing of its average population. The number of people aged 65 or older in 2020 was 36.17 million, which accounts for 28.7 per cent of the total population, and this number continues to reach all-time highs.[1] This number is expected to exceed 35 per cent in around 2050. As shown in Figure 1.3, this issue is not unique to Japan and it appears other major countries in the world will also have a very high ratio of elderly people. In such a scenario, the rest of the world will look up to Japan to see how it deals with an increasingly elderly population. In other words, Japan will be a trailblazer and the eyes of the rest of the world will be on it and its attempts to solve this social issue, as Japan's solution might be the solution for the rest of the world.

As a typical example, the population pyramid in Figure 1.4 shows that people aged 65 years or older will account for 38 per cent of the population in 2060. Accordingly,

[1] Ministry of Internal Affairs and Communications (23 September 2020); for details, see Figures 1.3 and 1.4.

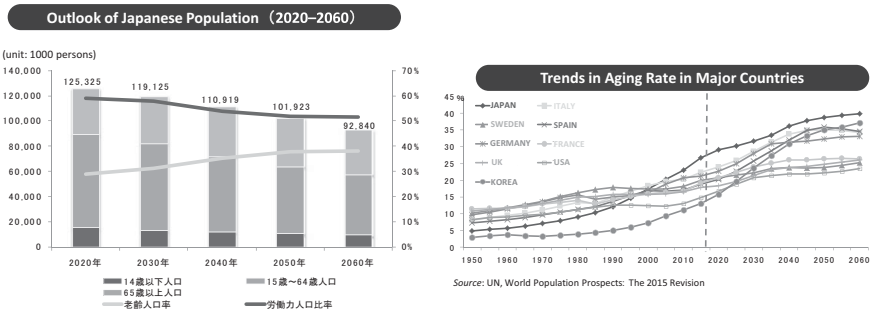


FIGURE 1.3 Declining birth rate and ageing population in Japan

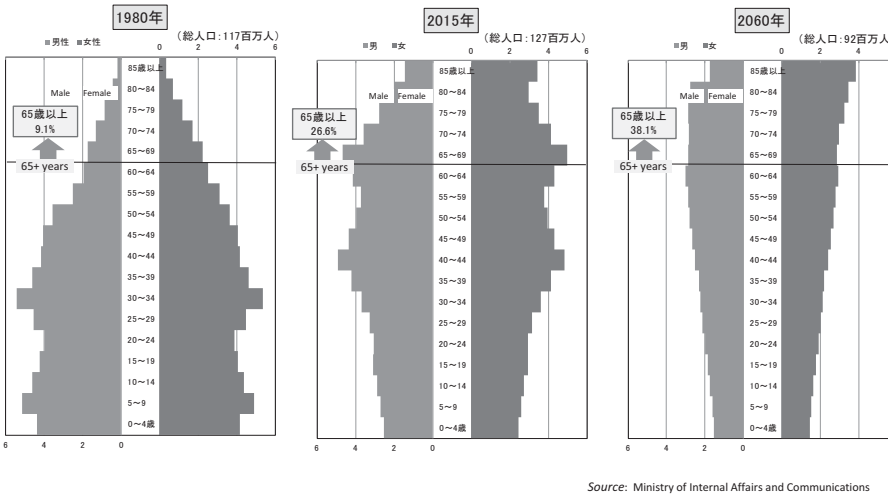


FIGURE 1.4 Population pyramid: rapid ageing in Japan

the initiatives that are taken in awareness of the long-term population pyramid will be closely linked to increasing corporate value. For companies, ageing is associated not only with a decline in domestic demand but also with the issue of the workforce. Specifically, companies must change their marketing approach and methods of reaching individual customers in response to the ageing of the population. It is expected that there will be a significant change in Japan from a growth-based model (a model without population decline) from 1980 to 2015 to a new model until 2060 (a model with population decline), which is a change engendering a need to innovate.

SOCIAL ISSUES TO BE CLASSIFIED BY REGIONAL CHARACTERISTICS

Koda: Gaps between the Tokyo Metropolitan Area, which is overconcentrated, and other regional areas have caused various social issues. Both urban areas and

depopulated areas have challenges of their own. Japan as a whole has issues such as labour shortage and various educational issues. We need to organise and classify them into issues that are to be addressed by the entire nation and those that are to be addressed by each region – taking a sensitive approach to solving them.

Looking at the shift in the productive-age population ratio for each prefecture from 2010 to 2020, Akita Prefecture has the largest rate of decline in its productive age (15–64 years) of over 20 per cent, followed by Hokkaido, Aomori, Yamagata, Fukushima, Yamaguchi, Tokushima, Kochi, Nagasaki, Miyazaki and Kagoshima, which each had a decline of 15–20 per cent. The rate of decline is extremely high in the Tohoku, Kyushu and Shikoku regions, highlighting the seriousness of the situation that has occurred in recent years. It is anticipated that this will continue to worsen, and it is increasingly important to address this issue.

Let us look at what will happen in the Tohoku, Kyushu and Shikoku regions, where the population is shrinking dramatically. It has been noted in discussions at study groups at the Ministry of Internal Affairs and Communications that it would be difficult to take advantage of scale and to maintain the status quo in areas such as education, healthcare, infrastructure and disaster prevention, including in terms of the labour force. This means that the essentials for people living in those areas, including education, disaster prevention and healthcare, will inevitably shrink. It is important to understand the gravity of this social issue. Our current way of life will be jeopardised in other regions too.

REGIONAL SOCIETY ISSUES WILL BECOME WORSE AFTER THE COVID-19 PANDEMIC

Koda: As we look towards the post-COVID-19 era, it is said that there will be changes in lifestyles, corporate models and the paradigms of society, including an orientation towards a dispersed society. It thus begs the question as to what will actually change? These changes are already taking place and are related to various areas across society, including work style and logistics trends such as remote working and rearrangement of supply chains, and structural changes such as those pertaining to healthcare and employment issues. Although some of these changes will have a positive effect, they might, at the same time, intensify the social issues mentioned earlier that Japan is currently facing in the 2020s such as its ageing population and regional disparities. It might be possible to deal with those issues from a political perspective, but I expect there is a good chance that those issues as a whole will exacerbate in times to come.

In that sense, it is necessary to consider the social issues faced by Japan mainly in terms of (i) demography and economy, (ii) economy and industry, (iii) environment and energy, (iv) social systems and inclusion and (v) consumption style. With respect to these five typical social issues, depopulation is particularly serious. Additionally, global warming is an issue in the category of environment and energy that is expected to become more serious and needs to be dealt with. As for

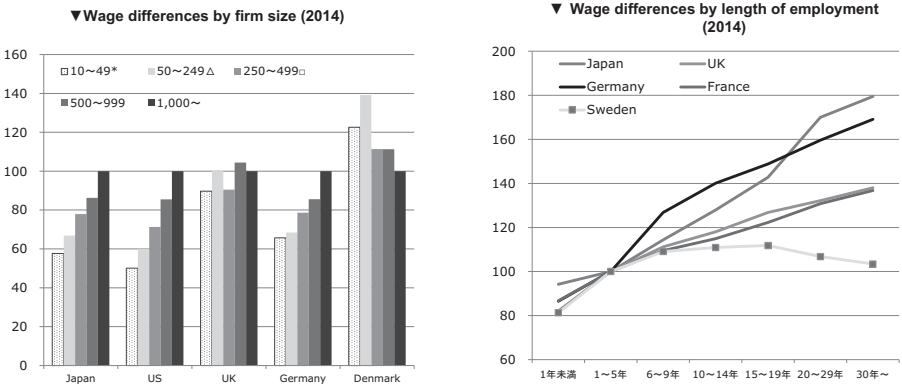
consumption style, a traditional mass-production and mass-consumption model has been replaced by a bidirectional model based on platforms. It will be necessary to use that system based on digitalisation while at the same time solving social issues. This will certainly require a legal response. It is thus necessary to quickly come up with responses and measures to address those issues. The social system based on the idea that 'no one should be left behind' is deeply related to the issues of economic and social disparities, which are also linked to issues such as changes in working styles and employment mobility.

As the workforce in Japan shrinks, there are a myriad of issues that require attention, including how working styles will change and how to structurally improve without delay employment mobility in an era where people live to be 100 years old. In other words, it is necessary to consider how to become aware of, how to respond to and how to solve social issues including all the issues discussed earlier.

TO WHAT EXTENT CAN WE CHANGE THE OLD-FASHIONED STRUCTURE?

Koda: Figure 1.5 shows that Japan remains one of the countries in the world in which wages are proportional to the size of the company and the length of employment. This is because long-term employment at a large company was a considerably positive incentive when Japan had a growing economy. However, this might become a negative factor in future. While Japan's major corporations claim that their seniority-based pay system is being replaced with a performance-based system, in reality, many of them still have a seniority-based system. There is thus a need to make more drastic changes to that structure.

However, if there is a transition from a seniority-based pay system to a system based on professional merit, the social mechanism will be significantly altered, and solving the issues of disparity and building a safety net must take place



Sources: Japan: MHLW; US: Quarterly Census of Employment and Wages; Europe: Structure of Earnings Survey 2014

Note: Wage for 1–5 year employee: 100
Sources: Japan: MHLW; Europe: Structure of Earnings Survey 2014

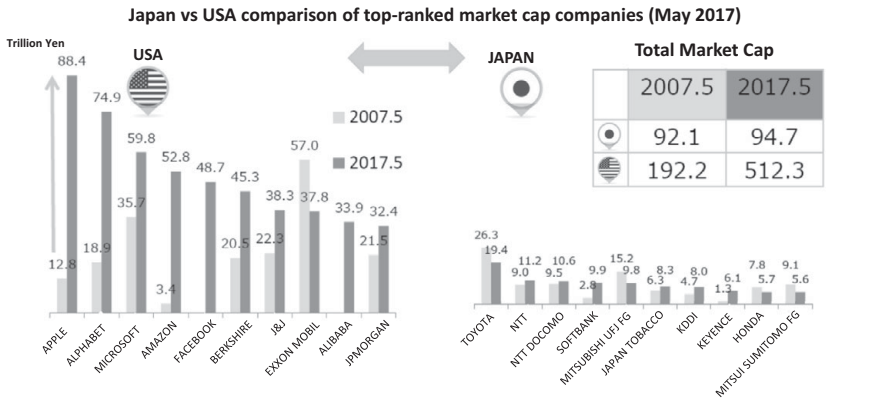
FIGURE 1.5 Wage difference

simultaneously. Additionally, some believe that the declining workforce in Japan might be solved by improved productivity. In general, manufacturing is more productive, while retail and distribution as well as small and medium-sized companies are less productive. It is necessary to start making efforts such as saving labour using platforms or digitalisation as I mentioned earlier and at the same time confronting the accompanying social issues. Small and medium-sized companies are increasingly at risk of closure and discontinuance of business as their management grows older. Succession of business is also becoming an issue. I realise, as somebody in the financial industry, that during the COVID-19 pandemic, a much larger number of people are taking specific measures for business succession. We need to position this as a social issue and take measures accordingly.

CAPITAL MARKETS AND CORPORATE VALUE

Koda: Till now, we have discussed the overall picture of Japan's social issues as well as specific examples pertaining to the same. Now, we will use data to examine the issues in increasing corporate value surrounding capital markets in Japan.

Figure 1.6 shows data comparing the market capitalisation of the top ten companies in the United States and those in Japan in 2007 (before the collapse of Lehman Brothers) and 2017, ten years later. The total market cap of the top ten companies in Japan in 2007 was at a level of 90 trillion yen and showed only a marginal increase in the subsequent ten years. On the other hand, the market cap of the top companies in the United States increased from 192 to 512 trillion yen within a span of ten years between 2007 and 2017. The reason behind this significant increase in the United States is the high growth potential of the tech giants known as GAFAM (Google – now Alphabet, Apple, Facebook, Amazon and Microsoft). As against the position in the United States, Japan's top ten companies are still



Note: Market cap for Japanese companies excludes Japan Post Holdings
Source: Ministry of Economy, Trade and Industry, Research on the Supply of Risk Money in the Fourth Industrial Revolution (2018)

FIGURE 1.6 Japanese corporations today: market cap comparison

1990

World market cap ranking

Rank	Company Name	Market Cap ($ billion)	Country /Region	Rank	Company Name	Market Cap ($ billion)	Country /Region
1	NTT	1,639	Japan	21	Kansai Electric	309	Japan
2	Industrial Bank of Japan	716	Japan	22	Long-Term Credit Bank	309	Japan
3	Sumitomo Bank	696	Japan	23	Tokai Bank	305	Japan
4	Fuji Bank	671	Japan	24	Mitsui Bank	297	Japan
5	Daiichi Kangyo Bank	661	Japan	25	Merck	275	USA
6	IBM	647	Japan	26	Nissan	270	Japan
7	Mitsubishi Bank	593	Japan	27	Mitsubishi Heavy	267	Japan
8	ExxonMobil	549	USA	28	Dupont	261	USA
9	Tokyo Electric	545	Japan	29	GM	253	USA
10	Royal Dutch Shell	544	UK	30	Mitsubishi Trust Bank	247	Japan
11	Toyota	542	Japan	31	BT	243	UK
12	General Electric	494	USA	32	BellSouth	242	USA
13	Sanwa Bank	493	Japan	33	BP	242	UK
14	Nomura Securities	444	Japan	34	Ford	239	USA
15	Nippon Steel	415	Japan	35	Amoco	229	USA
16	AT&T	381	USA	36	Bank of Tokyo	225	Japan
17	Hitachi	358	Japan	37	Chubu Electric	220	Japan
18	Panasonic	357	Japan	38	Sumitomo Trust Bank	219	Japan
19	Philip Morris	321	USA	39	Coca-Cola	215	USA
20	Toshiba	309	Japan	40	Walmart	215	USA

2018

World market cap ranking

Rank	Company Name	Market Cap ($ billion)	Country /Region	Rank	Company Name	Market Cap ($ billion)	Country /Region
1	Apple	9,410	USA	21	UnitedHealth	2,431	USA
2	Amazon	8,801	USA	22	Intel	2,419	USA
3	Google (Alphabet)	8,337	USA	23	Anheuser Busch	2,372	Belgium
4	Microsoft	8,158	USA	24	Chevron	2,337	USA
5	Facebook	6,093	USA	25	Home Depot	2,335	USA
6	Berkshire Hathaway	4,925	USA	26	Pfizer	2,184	USA
7	Alibaba	4,796	China	27	Mastercard	2,166	USA
8	Tencent	4,557	China	28	Verizon	2,092	USA
9	JPMorgan Chase	3,740	USA	29	Boeing	2,044	USA
10	ExxonMobil	3,447	USA	30	Roche	2,015	Swiss
11	Johnson & Johnson	3,376	USA	31	Taiwan Semiconductor	2,013	Taiwan
12	Visa	3,144	USA	32	PetroChina	1,984	China
13	Banc of America	3,017	USA	33	P&G	1,979	USA
14	Royal Dutch Shell	2,900	UK	34	Cisco Systems	1,976	USA
15	ICBC	2,871	China	35	Toyota	1,940	Japan
16	Samsung	2,843	Korea	36	Oracle	1,939	USA
17	Wells Fargo	2,735	USA	37	Coca-Cola	1,925	USA
18	Wallmart	2,599	USA	38	Novartis	1,922	Swiss
19	China Construction Bank	2,503	China	39	AT&T	1,912	USA
20	Nestle	2,455	Swiss	40	HSBC	1,874	UK

Source: Weekly magazine 'Diamond' (August 2018)

FIGURE 1.7 Big change in industry structure after collapse of 'bubble economy'

made up of traditional large companies, and although some new faces such as Keyence and SoftBank have recently emerged, their market cap is still significantly lower than that of the US companies.

Figure 1.7 shows changes in the global top rankings in terms of market cap over thirty years from 1990 to 2018. Most of the top-ranking companies in 1990 were Japanese companies. But this situation altered drastically in 2018, when only one Japanese company, Toyota, appeared in the list, placed at the 35th position. Companies from the United States and China dominate this list with IT companies holding most of the top-ranked positions, and this trend is continuing.

The *Financial Times* published an article titled 'Prospering in the Pandemic: The Top 100 Companies', which listed companies in order of the absolute amount of increase in market cap from the start of 2020, when COVID-19 began to have a global impact, to mid-June.[2] The top five companies listed in this article were Amazon, Microsoft, Apple, Tesla and Tencent. The only three Japanese companies ranked in the top 100 were Chugai Pharmaceutical, Keyence and Daiichi Sankyo. It is therefore clear that Japanese companies are being left behind in terms of growth.

This trend can also be seen in the price-to-book-value ratio (PBR), a number obtained by dividing the stock price by the net asset value per share. The PBR is normally used as an indicator to determine whether a stock price is low or high. If the PBR is 1, the stock price has a value that is appropriate considering the net asset value. Figure 1.8 shows the PBR values for Japanese companies. As can be seen, over 50 per cent of Japanese companies have a PBR below 1. This means that Japanese companies are assessed by the market as having low growth potential. This

[2] 'Prospering in the Pandemic: The Top 100 Companies' (*Financial Times*, 19 June 2020) <www.ft.com/content/844ed28c-8074-4856-bde0-20f3bf4cd8f0> accessed 1 November 2023.

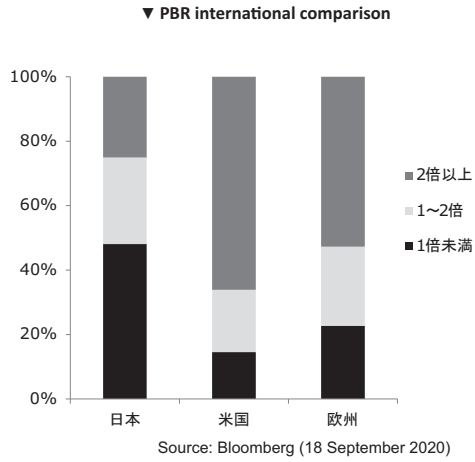


FIGURE 1.8 Price-to-book value ratio comparison: Japanese banks

is in contrast to the United States and Europe, where much fewer companies have received the same assessment.

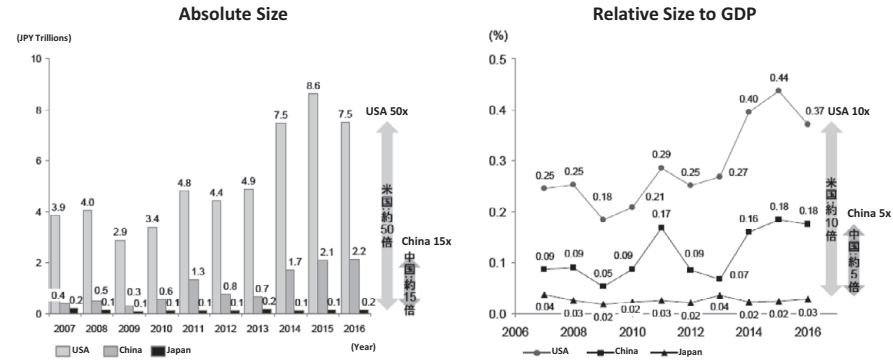
SOLVING SOCIAL ISSUES WILL LEAD TO INCREASED CORPORATE VALUE

Koda: In recent years, in addition to growth potential, the perspective of environment, society and governance (ESG) investment is becoming extremely important. More emphasis is being placed on ESG every year as institutional investors investing in equity give particular consideration to it while deciding on their corporate investments. In other words, increasing corporate value is directly linked to corporate activities aimed at solving social issues. This means that the capital market and social issues are perfectly linked to each other in moving forward towards a sustainable society.

For companies to address these social issues and promote corporate activities, it is essential to incorporate new 'innovation'. In Japan, there has been a gradual increase in investments in venture companies nationwide, and there has been a change in the erstwhile low supply of risk money and equity investments. This means that in terms of social agenda themes such as 'digitalisation and work style reform', 'maturity of society' and 'business succession', Japan must transform through equity investments or by taking risks with risk money and developing businesses. Traditionally, in Japan, risk money has not been circulated due to financial bottlenecks, which inhibited the growth of new companies. This status quo has finally begun to gradually change, and together with fund functions, Japan is undergoing change.

IMPORTANCE OF THE 'VENTURE ECOSYSTEM'

Koda: Figure 1.9 summarises the current situation of risk money supply in Japan in comparison with China and the United States.



Note: Investments by VC only and excludes venture investments by companies
Source: Venture Enterprise Center, Venture White Papers 2017

Source: Ministry of Economy, Trade and Industry, Final Report on the Trend of the Global Economy and the Supply of Risk Money in the Fourth Industrial Revolution (2018)

FIGURE 1.9 Venture capital environment: comparison with China and the United States

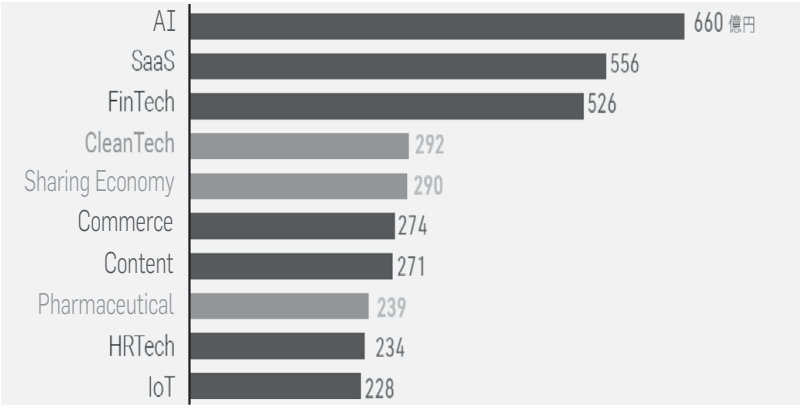
The volume of risk money supply as venture capital (VC) in Japan is as much as around fifty times lower than in other countries. The difference compared to the United States is as much as ten times in relation to the GDP, while China has around fifteen times more risk money based on an absolute amount, which corresponds to five times more than Japan in terms of GDP. Representative countries promoting innovation with risk money include the United States, followed by Israel, India, China and Canada. Japan seems to have insufficient money circulating as risk money, given its economic size.

However, under the growth strategy adopted as per the Abenomics policy since around 2013, investments in these innovation areas have recently increased. The amount raised by venture companies, which was just over 100 billion yen around 2013, is currently around 500 billion yen per year. The fundraising amount did not decrease in 2020 despite the pandemic, remaining at a level of just below 500 billion yen. Accordingly, more money is being raised and is flowing in Japan. Despite this, the gap between Japan and other countries is actually widening because of a lack of speed of fundraising and insufficiency of volume.

Figure 1.10 shows the fundraising amount achieved by Japan's start-ups by sector in 2020. With the AI sector at the top, there are some emerging sectors, including Clean Tech, sharing economy and medicine. This shows that Japan has a wide area of venture investments and that the base of these venture companies advancing their efforts is widening in a variety of business areas.

KEY TO GROWTH OF VENTURE COMPANIES

Koda: In fact, there are some venture companies in Japan that are achieving significant growth such as Preferred Networks, which is frequently mentioned as a



Source: Initial Japan Start-up Finance Report (2020)

FIGURE 1.10 Start-up company fundraising

representative AI company that was valued at 350 billion yen in 2020, and Spiber, which is a spin-out material company of Keio University that artificially synthesises tough and flexible 'spider silk' and has achieved a market cap of 100 billion yen. Although Japan has fewer unicorn companies valued at over 1 billion dollars than the United States and China, we are seeing gradual growth in Japan's venture companies.

In terms of promoting initiatives linked to changes in Japan's social and economic structure, which I highlighted earlier as regards solving social issues, important 'innovation' areas include healthcare, agriculture, regional areas and creation of communities and responses to labour shortages. This means that it is increasingly important to solve social issues using data platforms and digital technologies such as AI and IoT. Solving social issues means using key factors to follow up on solving issues that are detrimental to society. As many venture companies are based in Tokyo, it is also important to expand that base to regions other than Tokyo to promote regional expansion.

This also requires the establishment of a cyclical ecosystem, also known as a 'venture ecosystem'. As shown in Figure 1.11, venture companies need to overcome a variety of bottlenecks as they grow through the stages of seed, start-up, early stage and growth. Ideally, a venture company will grow with support from various professionals. To that end, it is extremely important, inter alia, to build a mechanism of financial support and industry–government–academia cooperation and to obtain support to secure human resources for venture companies.

Great results have been produced out of the 'venture ecosystem' in Silicon Valley, and that has been backed by the prevalence of cooperation between industry, government and academia. In Silicon Valley, academic institutions such as

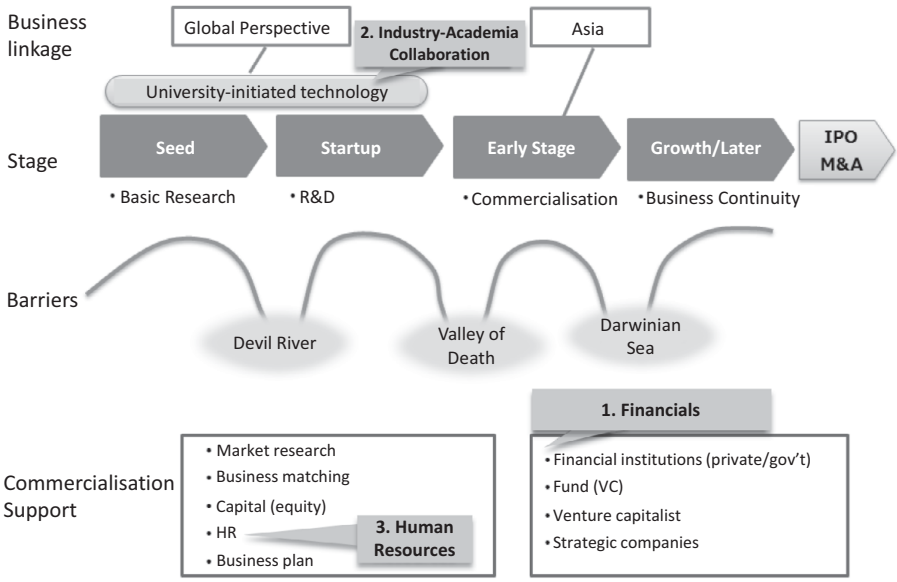


FIGURE 1.11 Building a venture ecosystem to support innovation

Stanford University and the University of California, Berkeley; major companies such as Apple, Amazon and Facebook; and also venture companies, lawyers, designers, accelerators, mentors and other professionals are part of a network that forms a cyclical 'ecosystem'. This is a big difference as compared to the situation in Japan. While Japan has also seen an 'ecosystem' gradually form in the Tokyo area as well as in the manufacturing industry in areas such as Kyoto and Osaka, there is still a large gap between Japan and other countries in this regard.

Figure 1.12 shows the correlation between Japan's entrepreneurial activity rate and VC investment versus GDP. In Japan, the ratio of VC investment to GDP on the horizontal axis and the entrepreneurial activity rate on the vertical axis remain 0.07 per cent and 5 per cent, respectively, which are positioned at the bottom left of the above figure and are lower than the world average. On the other hand, the ratio of VC investment to GDP and the entrepreneurial activity rate in the United States are both high, as depicted on the top right of the figure. Besides the United States, countries such as Canada and South Korea are also emerging, and the gap between them and Japan is widening. To put it differently, it is significant for venture companies to take an approach to solving social issues with agility. Accordingly, in the case of Japan, boosting entrepreneurial activities and the importance of risk money supply have to be highlighted. At the same time, large companies and mature companies are required not only to make efforts towards their own innovation but also to work on present corporate issues in a speedy manner through transformation such as business restructuring, selection and concentration. Initiatives to

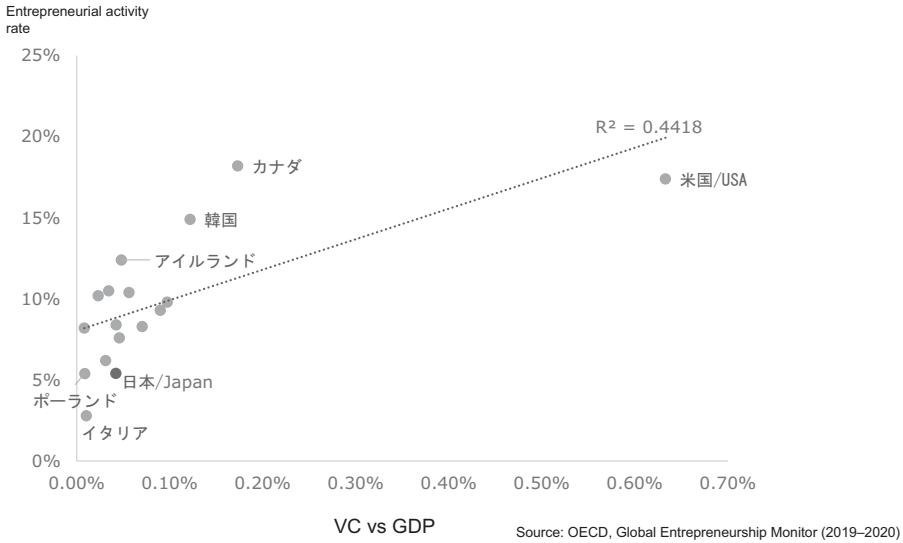


FIGURE 1.12 Venture capital investment and entrepreneurship

increase corporate value sustainably in the medium term, such as the Corporate Governance Code and the Stewardship Code, are rapidly underway, including on the investor side, indicating that large companies have started to change.

DIGITALISATION AND INNOVATION

Koda: Finally, I would like to look at the relationship between innovation and digital strategies. In July 2020, when the COVID-19 pandemic was spreading, the Abe administration in its final phase issued the so-called big-boned policy (Basic Policy on Economic and Fiscal Management and Reform 2020) as a policy on economic and fiscal management in the light of the situation resulting from the pandemic. The aim of the policy was to push through reforms that would normally take ten years, featuring concentrated investment in digitalisation, regional revitalisation and strengthening investment in people and innovation. The contents of that policy are concise and precise, and I believe these initiatives are on the right track. There is no doubt that it is necessary and extremely important to politically push through reforms such as these.

Be that as it may, I am rather sceptical about whether Japan can push through reforms that normally take ten years. It will be imperative to associate such reforms with specifics, namely action plans, and to promote the same in a speedy manner. In that sense, it is essential to create a synergy between the government making efforts towards the digital new deal and the private sector accelerating corporate actions with an awareness of social issues. The government must cooperate with the

private sector, and the private sector must rapidly create model cases. This must be promoted while keeping in mind how the government and the private sector can keep in step with each other, whether that can be advanced expeditiously and whether the private sector can change.

FROM DIGITALISATION TO DIGITAL TRANSFORMATION (DX)

Koda: Speaking of digitalisation, we must take measures such as abolishing seals and dealing with electronic approval processes as a matter of course. This means digitalising such things using IT. The questions Japanese companies are facing now are whether it is possible to create new value using digital technology and create new products and services. Rather than digitalisation simply replacing existing analogue technologies with IT equipment and data, what is important is whether it is possible to shift to a business model that creates new profit and value based on digital data, i.e. DX. This depends on whether it is possible to create new products and services and new business models using digital technologies.

As per the results of a May 2019 questionnaire circulated by the Information-Technology Promotion Agency of Japan (IPA), an industry group, on the dissemination of DX in companies, around one-third of the responding companies used the term DX, and I am sure the term has become even more familiar since the pandemic began. When companies were asked what kind of DX they are currently working on, almost 80 per cent of the answering companies said that they were working to 'increase productivity by streamlining their businesses', which indicates that Japanese companies are good at 'streamlining'. That being said, for most companies, DX is still limited to the confines of just incorporating or replacing IT in their internal systems, and very few companies have used DX to make 'drastic changes to their current business models'. These circumstances make it difficult for Japanese companies to reach 'business creation' (digitalisation), which is the original aim of DX, or to develop 'new business models' or 'create services'. I believe this is the most significant bottleneck to 'digitalisation and work style reform' in Japan.

A major change is also taking place in the relationship between the market and the customers. In recent years, there has been a change to a customer model that is bilateral between customers as consumers and companies supplying products and services. At the same time, this market is also circulative around the axis of information provision and evaluation feedback, known as a platform. It is quite difficult, including in terms of mechanics, to suddenly adapt to a bilateral circulative model from a customer behaviour model in which customers act in line with a series of processes including recognition, selection, evaluation, purchasing and use for which companies provide products and services.

MEASURES FOR A SOCIETY WITH ACCELERATING INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT)

Koda: I believe we have to be more serious than ever about how to use new technologies in addressing social issues. The Report on Roundtable Meetings on ICT Global Strategy for the Digital Transformation Age by the Ministry of Internal Affairs and Communications states, in relation to accelerating the implementation of ICT as regards social issues, that while Japan is experiencing changing values and an acceleration of technical innovation, it is essential for companies, the government, local governments, universities, academia and individuals to continue to undergo fundamental changes such as in their thinking, business approaches, systems and education.[3] The report indicates important directions such as promoting an understanding of ICT by upper management at companies and local government heads, top-down innovation reforms, support for venture companies and an 'agile' development approach to manufacturing, while at the same time constantly adjusting and improving products. This means that Japanese companies need to make adjustments to schemes with respect to which they lack capabilities in order to keep up with the rest of the world. Japanese companies must work to shift from a traditional linear-type 'pipeline business model' from manufacturers to business operators to consumers, to a 'platform business model' that connects manufacturers and consumers and generates value by 'producing' transactions.

CAN JAPAN RESPOND TO PLATFORMERS IN TIME?

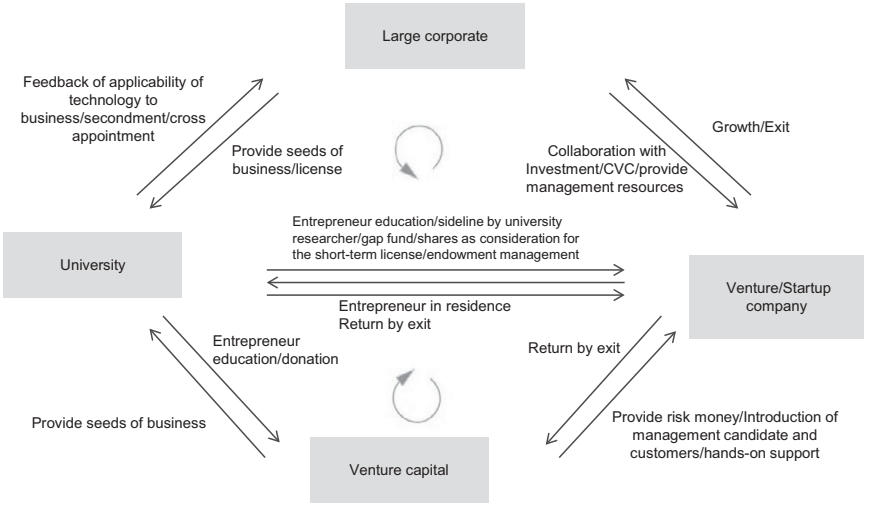
Koda: Japan is seeing platformers such as GAFAM growing rapidly in the digital market. Accordingly, the Ministry of Economy, Trade and Industry, with concern over issues including the competitive advantage and dominant position of these companies, launched the Cross-Sectional Research Group for the Fourth Industrial Revolution in January 2016. This research group examined three cross-sectional systems, 'competition policy', 'data use and protection' and 'intellectual property', conducted interviews with parties such as online business operators and electronic device manufacturers and revealed the actual situation at that time. The report stated that while there is concern that fair competition might be hindered, the question of whether those companies are in violation of the Antimonopoly Act cannot be discussed in general terms. Thereafter, on 18 December 2018, the Study Group on Improvement of the Trading Environment Surrounding Digital Platformers announced basic principles for the development of rules dealing with emerging platformer businesses, which has led to the subsequent development of

[3] Japanese Ministry of Internal Affairs and Communication Affairs, *Publication of ICT Global Strategy* (31 May 2019) <www.soumu.go.jp/main_sosiki/joho_tsusin/eng/pressrelease/2019/5/31_5.html> accessed 1 November 2023.

legal principles. Despite these advances, it is undeniable that Japan's examination and development of rules on digital platformers lag behind those of Western countries. Building a framework when innovators such as platformers emerge is important, and it is extremely important for the legal system to catch up with innovations in the future.

Finally, I would like to look at the importance of preventing regional degeneration as an example of various social issues, and the future sense of direction. For this social issue, it is important to take an extensive approach to regional co-creation. A regional ecosystem can be built by identifying social issues by region and examining how to solve them using regional strengths. One of the keys to creating a virtuous cycle is the role played by local financial institutions. Furthermore, evolving collaborations with universities and major companies will be extremely important to promote initiatives to solve regional issues. From this perspective, Figure 1.13 shows the possibility of these initiatives to leap forward through close cooperation among large companies, universities, start-up companies and VC funds. It shows the importance of an 'ecosystem' with universities serving as a hub. The creation of such a mechanism has become increasingly important.

To wrap up, the post-COVID-19 era will overlap with the introduction of drastic changes to Japan's economic and social structure, which will require new initiatives that are not an extension of Japan's traditional framework. To promote those initiatives, it is necessary to create innovation, use new technologies such as AI and Big Data, address social issues and advance various efforts. This means that not



Source: METI, Report on University Ventures (2018)

FIGURE 1.13 Innovation cycle of industry–academia collaboration

only companies but also the government, local governments and universities must structurally change as a nationwide effort. From the company's perspective, it is necessary to promote an approach to solving social issues using innovation and new technologies in order to enhance corporate value, which depends on whether a new, balanced, society-wide framework can be built. In doing this, various discussions on legal aspects will arise, so the legal side will need to promptly encourage changes in the social and economic structure to support these efforts while consistently working on building a new legal framework.

QUESTIONS AND ANSWERS SESSION

Sumida: Thank you for your excellent presentation, Professor Koda. Does anyone have any questions?

Student A: You mentioned that venture companies are suitable to challenge businesses to address social issues. I think large companies such as trading companies have departments to study new business models, but are there any barriers for a large company to conduct their business in a way to solve social issues?

Koda: Large companies are indeed addressing major social issues head-on such as by producing products that discharge as little plastic waste as possible and by manufacturing electronic vehicles for decarbonisation. Large companies are naturally making an effort to expand their businesses while addressing social issues that affect their success.

Based on this, to answer the question of how large companies can proactively deal with social issues, I must say that it is limited to what they study internally or in their laboratories. In fact, it is also limited by companies engaging in closed innovation whereby they develop solely through internal research and development. Such closed innovation practised by large companies is well known to act as a bottleneck in an increasingly competitive global market.

On the other hand, the companies I mentioned earlier, such as Amazon and Google, engulf various start-ups in Silicon Valley by acquiring them through mergers and acquisitions (M&As). For instance, Google has acquired 200–300 companies through M&As in the past decade. They actively commercialise and incorporate the ideas of those start-ups. In contrast, large companies in Japan are not very good at that, and although they understand that open innovation aimed at intercompany creation is necessary, this actually acts as a bottleneck.

There is no doubt that innovation promoted by large companies to solve social issues and innovation independently promoted by venture companies are inseparable, but the actual situation in Japan is that large companies sticking to the tenet of developing innovations by themselves is acting as a bottleneck.

Sumida: You mentioned an important issue: open innovation versus closed innovation. Could you let us know your thoughts about what is important for a culture of open innovation to take root in Japan?

Koda: When a large company in Japan collaborates with a start-up to promote research that has been undertaken by the start-up, the laboratory side often turns a deaf ear, saying that the collaboration is meaningless because the laboratory did not succeed in that research. However, in recent years, large companies have become aware of the limitations of developing innovations by themselves and they have, for example, started to use the concept of 'Dejima'. Dejima was an island in Nagasaki in the Tokugawa era, and it refers to an approach where a certain area is prepared, funded and allowed to act freely, which is an approach to innovation that more companies are now adopting. If a huge elephant tries to do something by itself, it is difficult because it takes time and costs money and it takes ages to see any change. Companies have therefore started to take the 'Dejima' approach because they have found it to be effective. Nonetheless, whether they can catch up with the world standard by taking that approach at the current pace is a different issue.

Sumida: Isn't it right that Dejima was not open for trading with all countries? The ability to trade might have depended on whether there was a close connection with a certain country. The Dejima approach has a limitation in that sense – is this correct?

Koda: Yes, that is right.

Sumida: I see. Thank you. Does anyone else have a question?

Student B: With respect to the legal development you mentioned in the last part of your talk, the legal development in a digital area might involve matters that cannot be dealt with or that are beyond the knowledge of legal scholars or legal professionals at present. Could you please let us know if there are any agendas or efforts being made to deal with this issue?

Koda: The extent of the changes that need to be made in terms of the legal system will be determined by the progress of innovation and technology. Hence, the approach to be taken is to make preparations to a certain degree by following a 'reality-first' approach. Here, I would like to introduce the sandbox mechanism created in the United Kingdom and Singapore in areas such as FinTech. Sandbox, meaning 'play in the sand', allows an easing of regulations on matters that are difficult to deal with within the current regulatory framework, under certain conditions to find legal bottlenecks, and if that works to a certain extent, measures are taken to adopt the learnings in the legal system.

Japan also started to use this mechanism a few years ago in an attempt to implement deregulation and instantiation industry-wide. However, it seems that Japan has not been able to connect the fundamental need for changing its laws alongside these deregulatory attempts. It is necessary to make more innovative efforts such as broadening the range of attempts and giving an incentive to the private sector. I therefore think that it is worth increasing and promoting mechanisms like regulatory sandboxes.

On another front, amending laws is an issue of jurisprudence. That being said, it is difficult to instantly have more people who can discuss certain reform issues right

away. This is Professor Sumida's area rather than mine, but it is related more to the aspect of how to educate lawyers and foster legal scholars.

Sumida: Thank you. We will have contributors from the Financial Services Agency in a later session, and they will talk about the sandboxes you mentioned earlier with some specific examples.

Now, Professor Koda, I would like to close this session. Thank you very much.

DON'T BE A STRANDED GREAT WHITE SHARK

Sumida: Now I would like to take some time to talk a bit about the next session and then explain why I asked Professor Koda to talk to you today.

At the outset, I will give you the gist of the conversations on legal innovation that started today, and I would like to tell you the ideas that I put into this conversation series when I planned it. You are going to study law and go out into the world, so you should not be a stranded great white shark.[4]

As you are aware, a great white shark is the ultimate predator in the ocean, and it can smell blood from many kilometres away. However, what if the environment changes? Great white sharks are hyper-optimised for the sea, but a shark would just struggle if it were stranded on the beach. In other words, a great white shark, which has made the ultimate effort to be optimised and evolved, would be helpless if the environment changes. I do not want you to be like that. I want you to properly adapt to any new environment you encounter. That was my thinking when I planned this conversation.

Professor Koda gave a gentle but insightful indication on how to change legal scholars, and I was partly ready to receive that message because I actually feel a sense of crisis about that issue myself.

ISSUES POSED BY '*ORE ORE* SWINDLES'

Sumida: In my career, I was initially attracted by consumer laws, and since I decided to be a scholar and entered this field, I have always studied consumer laws. At the end of the previous century, I spent all my time in the field of consumer affairs and provided support in studies and advice on that area.

Around 1995, when I was a postgraduate student, I visited an expert on consumer laws at the National Consumer Affairs Centre of Japan. When we talked about interesting recent issues, the topic of '*ore ore* swindles' – phone scams involving calls from people pretending to be relatives in distress – came up in the conversation. The name '*ore ore* swindles' has a nostalgic feel now, but that was around the time when that scam first appeared, and that was considered a new, strange and troublesome

[4] This is a metaphor from Andrew W. Lo, *Adaptive Markets: Financial Evolution at the Speed of Thought* (Mamoru Mochizuki and Toshio Chiba trs, Toyo Keizai 2020) 13.

problem. Then, the consumer law expert said: '*Ore ore* swindles are a pretty clear scam. What is the problem with that?'

When I heard that, I thought it was bad because even though that person was a hard-bitten consumer law expert with a great reputation, I realised that that person was obsessed with the idea that consumer law is a new, interesting legal issue that still has no clear answer in terms of interpretation and solving consumer problems.

'*Ore ore* swindles' is an easy-to-understand swindle in terms of the study of legal interpretation. The perpetrator tells a lie with the intent to deceive the other party, and the victim falls for the scam and sends money. From a legal perspective, it is evident that it is a fraud. In other words, this is a novel scam that uses psychological knowledge to throw people off the scent, which is beyond the border of a consumer issue that takes advantage of loopholes in terms of legal interpretation.

Of course, as you are aware, '*ore ore* swindles' have more variety now and it remains a serious issue known as 'special fraud'. Despite that, the consumer law expert inadvertently asked what the problem was, because that expert had a stereotyped image of consumer issues and could not appropriately respond to the emergence of a new type of issue. That was the moment when I realised that it is possibly a case not only with that expert but also with many other people in the field of jurisprudence.

This leads to the reason why I asked Professor Koda to give today's first lecture. In other words, I thought that, in order to accurately perceive the changes occurring in the legal field and make a forecast, it is necessary to have an accurate grasp of the changes that are occurring not only in the field of law but also in the economy and the current situation in Japan.

SHOGI WORLD COEXISTENT WITH AI

Sumida: While talking about changes, I would also like to mention what happened in the shogi world. Shogi is a strategy board game for two players. It is now possible to play shogi games online because there is a complete game record database which records, inter alia, the situations of the game played. I heard that highly advanced technologies are now used in shogi software. We often see that AI and humans coexist in the gaming world, which is one step away from the real world, and Yoshiharu Habu, a shogi superstar, describes the recent situation in the shogi world as follows:

> Shogi players of the old times would be very surprised to see the recent shogi world. The changes are like from modern paintings to postmodern paintings. New moves are being created one after another, and popular taste is rapidly changing.[5]

[5] Yoshiharu Habu, *NHK Special Shuzaihan Core of AI* (NHK Publishing Shinsho 511 2017) 95.

Coexistence of AI and humans will be seen in many other areas including the legal world, so I cited Mr Habu's words, which I found very impressive, to give you an idea of the changes that are going to happen.

DIFFICULTY IN DEALING WITH ACTUAL HUMAN BEINGS

Sumida: Getting back to our topic, what are the 'difficulties that are unique to law' and not to the shogi world? Let us think about the difficulties that would be unique to the legal world if what has happened in the shogi world also happens in the 'legal' world, i.e. if similar new digital technologies appear in the 'legal' world.

First, 'laws' actually deal with social and economic issues that involve real people, and they reflect, dissect and give legal solutions to issues that arise using the logic of law, or arrive at solutions if there is a conflict. This is very similar to the shogi world in terms of dissecting by logic, but the challenging part in the legal world is that it involves real people. In other words, a legal solution to a conflict will change real lives, and the more people that are involved, the more complicated the issue becomes.

Now we get back to the topic I mentioned earlier: do not be a stranded great white shark. It is essential that we always adapt to environmental changes; otherwise, it is likely that we will make mistakes when we reflect reality based on the logic of law, and that is the difficulty that lies in the legal world.

AIMING TO USE THE LEGAL SYSTEM LIKE AN IMMUNE SYSTEM

Sumida: The other difficulty is that each judgment related to law is responsible for the operation of the legal system, which serves as the basis of social rules. At the same time, in the shogi world, game records are created from Mr Habu's games, and AI learns those records and creates new moves, which makes shogi players feel as if they are playing a game with the entire logic and thoughts created in the past by a human, and this might be a similarity between the shogi and legal worlds.

That being said, the law is a social norm because it reflects the reality and dissects it with logic. In interpreting and applying the rules of law responsible for the operation of the legal system, it is necessary to maintain consistency in the system and issue guidelines pertaining to the interpretation and application of law. As the term 'stability of the legal system' indicates, it might be necessary for the legal system to maintain consistency, properly reflect the relevant situation and, based on that, make appropriate judgments.

This operation is like that of an immune system, where life forms are always in contact with various external foreign substances but maintain themselves as a uniform system. Come to think of it, the legal system is in a way like a social immune system. It might be a perspective on how to avoid dysfunction of the system, but this is just an idea that has not been fully developed.

Having said that, if the consistency of the legal system is not maintained, social trust in the judiciary might be lost. For this reason, lawyers need to make appropriate judgements and take appropriate measures while dissecting the issues occurring in the rapidly changing world with the logic of law under the constraint of maintaining consistency in the system. To that end, I think we should appropriately use technology, and the awareness of this issue underlies this conversation.

MISTAKES MADE BY VOLKSWAGEN

Sumida: I would like to introduce the case of Volkswagen as an example of the aforementioned legal issues. You might know about the scandal involving the use of fraudulent software at Volkswagen, a world-renowned company.[6] I will explain the events up to the trial using an example case. Plaintiff X bought a diesel-powered vehicle from car manufacturer Y, the defendant (Volkswagen in the real case), for 10 million yen. Y cleared the world's strictest environmental regulations in country A (the United States in the real case) and advertised its technological strength as having realised a reduction of environmental burden, good fuel efficiency, accelerating performance and durability at the same time. As a result, Y earned a great deal of trust in the market. Following this, however, it was discovered that for some time Y had installed in its vehicles a software that activates purification equipment to the fullest capacity during emission tests.

Many of you may know about this case as it was a major scandal. Some of Y's diesel vehicles emitted as much as forty times more pollutants than allowed during driving conditions, but the driving safety of such vehicles was not found to be problematic. However, the revelation that the scandal had occurred resulted in an across-the-board prohibition of activating purification equipment only during emission tests in the country in which X resided, and almost all countries by now. During that period, Y stopped manufacturing diesel vehicles with the problematic equipment, and the diesel-powered vehicle purchased by X is one of the discontinued models.

Following the revelations about this scandal, the representative director of Y announced his view in a press conference as follows:

> We are deeply distressed by the fact that a few engineers were involved in fraud, and we will do our best to restore trust. We are advancing the preparation for relevant customers to download, free of charge, a drastically updated version of the software at issue so that the software can fulfil its original function, and we will send a letter of apology and explanation in a few days.

[6] For literature in Japanese, see Hiroko Aoki, 'Overview of Volkswagen's Emission Gas Fraud Case' (2019) 11 Disclosure & IR 19; for an update, see the website of the law firm Dr. Stoll & Sauer: 'Latest News on the Emission Scandal' <www.dr-stoll-kollegen.de/news-urteile/abgasskandal> accessed 1 November 2023.

Subsequently, Y actually took these measures. Now, if X, who bought and used that diesel-powered vehicle, considers bringing a lawsuit against Y, what arguments do you think X would raise against Y? Would those arguments be accepted? Company Y came up with certain measures and showed their sincerity, but if that is not satisfactory to X, would a claim by X be accepted? What would you think if you were a judge in charge of this case?

WHY DID VOLKSWAGEN RESPOND DIFFERENTLY IN GERMANY AND THE UNITED STATES?

Sumida: I cited this case as an example because Volkswagen adopted different responses in the light of the justice system of the country in which the dispute surrounding its actions arose. This difference in responses became widely known and caused heated discussions.

As you know, Volkswagen is based in Germany and sells vehicles all over the world. I intentionally revealed that country A where Volkswagen cleared environmental regulations is the United States because the United States has a unique justice system in which a class action suit might be filed or punitive damages or legal liability beyond the amount of the damage actually incurred might be imposed in case of a serious offence. However, X filed an action against Volkswagen in Germany, which is where many other Volkswagen users also sued Volkswagen, and this caused trouble later on.

Here is the cause of the problem. Volkswagen, which has an understanding of the characteristics of the US justice system, quickly offered a settlement in the United States as per which it would buy back the diesel-powered vehicles it sold. This was a safety precaution to avoid incurring a large amount of liability as a result of a trial. This precaution was, however, taken by Company Y only in country A, the United States, in the light of its extremely severe environmental regulations and rigorous justice system. On the other hand, the representative director of Company Y offered in Germany, its home country, to 'guarantee a free download of software'. Company Y thought those terms would be acceptable in Germany.

SELLER'S CONTRACT NON-CONFORMITY LIABILITY

Sumida: I am going off track, but the Civil Code of Japan has been modernised recently, and among the amendments to the Civil Code or laws of obligations, which might be familiar to the students of the Faculty of Law, there have been significant changes to the rules concerning remedies available to purchasers under purchase and sale agreements. Contractual liability owed by sellers and determined as the sellers' obligation is now of extreme significance, and sellers are liable for contractual non-conformity. Roughly speaking, Japan has finally incorporated world-standard ideas.

The rules on purchase and sale agreements in Germany are not so different from the rules implemented in Japan in 2020, which, in binding the other party to the agreement through a remedy of specific performance, adopts more flexible terms rather than strongly adhering to the agreed terms of the right to demand performance.

For example, if you buy a book and find that a page is missing in that book, would you argue in court that the book does not conform to the contract and exercise your right to demand performance by asking the seller to give you a proper book? You do not have to. You could take more reasonable measures to deal with the situation. There are many other items that could replace that book, so it would be acceptable if a substitute item was provided or if the missing page was given so that the book conforms to the contract. These alternatives are available to the seller wherein they could take additional reasonable measures to make an arrangement to complete the contractual performance properly.

It is assumed that the view underlying the offer made by the representative director of Company Y was that 'fixing the bug of the defective software' was deemed as an option that would be equivalent to 'providing the missing page' so that it would be deemed that a reasonable agreement has been fully performed. In fact, a certain number of legal professionals in Germany initially regarded that offer in that way. However, in the current information age, it is not possible that the terms of the settlement offered in the United States would remain unknown to users in Germany. The anger of German consumers was, thus, fuelled by the company not providing benefits to the citizens of its place of incorporation.

Against this backdrop, the Federal Court of Justice, which is the Supreme Court of Germany, made an unusual decision that, despite the settlement having already been made, Volkswagen must accept a solution for Germany that is comparable to the one offered in the United States. In fact, up to that point, there had been various measures such as the EU Commission telling Volkswagen to make a decision that is balanced considering the settlement in the United States.

AIMING TO USE THE LEGAL SYSTEM AS A SOCIAL IMMUNE SYSTEM

Sumida: It can be simply concluded that the confusion in the German judicial world over the scandals involving Volkswagen was under the control of political power, but I thought that it was an example in which the legal system worked as a social immune system, as I mentioned earlier.

In this age of information, with globalised economic activities, the justice system is required to play the role of a social immune system that adapts to environmental changes, and if people or society have less confidence in the justice system, it means that the justice system is not functioning properly as an immune system, which is something to be avoided.

In principle, judges can make their own decisions in accordance with their legal conscience as long as such decisions are in compliance with their own legal system and court precedents, without needing to refer to decisions or solutions adopted in other countries. This, however, at times might be a casual approach, and this is the issue that was raised here. The use of AI as a second opinion, as mentioned by Mr Habu in the shogi world, might also become necessary in the world of 'law'. I would like you to imagine what view you would take if you were involved in this kind of dispute.

DIALOGUE WITH THE SPEAKER AFTER THE LECTURE

Koda: Thank you for the very informative introduction of your awareness of the problem. Speaking in broader terms, judicial reform was one of the major subjects promoted in the so-called national governance reforms during the Heisei era. That being said, it might be quite difficult to address legal system reform concerning business aspects. Although systems such as the intellectual property system have been organised to a certain extent, what perspective should be taken for more specialised areas, particularly regarding how to create a legal system as well as the accompanying dispute resolution mechanism?

Sumida: I would like to answer your question along the lines of consumer issues as that is the area I have been involved in. If we compare the manner in which human resources generating ideas as seeds for new rules are cultivated in Europe with the process of generating new ideas in Japan's consumer policies, I find a gap that is equivalent to the large gap found in the example of the 'venture ecosystem' you described.

We might have to give further thought to the vision that justice system reform was aimed at achieving. Although the legal system must cultivate an environment to adapt to and move ahead of those business changes, I am afraid that the cultivation of human resources that can create ideas has been lacking.

It has been common, of course, that young attorneys who have a keen awareness of the issue, throw themselves into policymaking, but at the same time, compared to the diversity of human resources in Europe, based on my observations and the status of studies that are the underlying basis of policymaking, there is quite a large gap. It might sound wild, but while policymakers in Japan are mainly the best and the brightest who have passed the national bar examination as soon as graduating from law school and have gone into the civil service for a certain period in their career, studies for policymaking in Europe are much broader-based and diverse in terms of the people involved. I think this affects factors such as the diversity and novelty of ideas and strategic strength.

Moreover, in terms of methodology for policymaking and studies, and in terms of self-discipline, Japan is clearly two steps behind Europe in that it starts making policy after examining European directives. It is far behind in terms of strategy. We need to

work towards an environment in which we can more carefully nurture strategic moves reflecting the actual condition in Japan.

Koda: Certainly. Although Japan is considered a forerunner in dealing with various social problems such as depopulation and ageing, it has no forum for discussions on the framework of a legal system to solve such issues and to turn signs of change into a certain mechanism. No mechanisms are in place for open communication such as an 'ecosystem' to take integral measures before something happens, rather than reacting after the occurrence of the event, and this might be one of the major problems.

Sumida: That is right. From a desire to create such an environment, I described the students as great white sharks, and I feel sorry for that. But I dared to do that so that you can have an image of the problem.

Professor Koda, in conclusion, can you please give a message to future lawyers?

Koda: Thank you for this opportunity. As Professor Sumida says, this is a challenging issue, but we are now clearly in an era in which we must change or create something with an awareness of social issues. Each of you might take a different approach, but I think you should study while paying attention to how to overcome social issues. I hope you continue to challenge yourself.

Sumida: Professor Koda, thank you very much for your valuable and enjoyable lecture.

CONCLUDING CONVERSATION

Professor Felix Steffek and Professor Mihoko Sumida

Sumida: The most difficult question in planning this conversation series was how to start it. Various state-of-the-art issues will be discussed in the following sessions, but I encourage all the students to not just 'watch' those discussions but view the topics as important issues related to their future and experience dialogues with the guests. I also wanted to develop my thinking of what 'legal innovation' is together with the students rather than defining that at the beginning. To that end, I wanted to start the conversation series by sharing awareness of why legal innovation is necessary. The question, however, was how to substantiate that.

Professor Hiroto Koda used a wealth of statistical data to clearly present social issues Japan is facing and the approaches being explored to solve those issues. What impressed me was his comment that, as the global situation has rapidly changed and a new industrial revolution has taken place over the past thirty years, Japan is now being asked the question as to what measures it can come up with. Japan has a number of structural problems, including rapid depopulation, excessive concentration of population in Tokyo, low employment mobility, a lack of utilisation of managerial resources concentrated in large companies, a failure to move household assets from savings to investments and a low supply of risk money. Professor Koda

repeatedly emphasised that we should find a way to work out business models that will contribute to solving those social issues.

Moreover, Professor Koda even gave us an important homework assignment. He asked us to substantiate legal innovation and not just to use slogans, and to think about the legal environment that is necessary to achieve legal innovation.

Steffek: The United Kingdom is also facing social challenges. Brexit and the aftermath of COVID-19 are examples of the issues that need to be dealt with from a legal aspect. However, the UK judiciary is actually taking those social issues as an opportunity to intensify DX and is advancing reforms. Sir Geoffrey Vos, who is leading those reforms, can be said to be the role model of a legal innovator in the United Kingdom today.

Sumida: Someone who is pursuing an approach to solving social issues in concrete terms in the world of justice! That is great. Can you tell me more about him?

Steffek: Sir Geoffrey Vos is a judge with the second highest rank in England and Wales. He assumed the office of Master of the Rolls, President of the Civil Division of the Court of Appeal, in January 2021, where he is responsible for the deployment and organisation of the duties of judges in the Civil Division and also presides at court in that division, often handling the most complicated cases involving civil and family law issues.

Sir Geoffrey has boundless energy. He is a member of the UK LawTech Delivery Panel and has served as the chief coordinator in the announcement of the panel's legal statement on cryptoassets and smart contracts in November 2019. He also promotes London as a global hub for dispute resolution, leading activities to promote the use of technology in judicial administration and dispute resolution.

Sumida: A leader of judges for justice system reforms! I am boundlessly curious about him. What specific vision does Sir Geoffrey put forth in leading justice system DX?

Steffek: Sir Geoffrey views the civil justice system as a vital part of our economic infrastructure and says, 'Digitisation is essential to modernise the infrastructure, and create a system that allows our businesses and individuals – national and international – to perform economically at their best without impediment and delay to the vindication of their legal rights.'[7]

Sumida: The civil justice system as an economic infrastructure. That is a great angle!

Steffek: I completely agree with you. Sir Geoffrey used the following metaphor: 'If multinational corporations chose not to export their goods to the UK because our ports built in 1745 were too shallow, we would deepen them or build new ones. Lawyers and judges alike sometimes fall into the trap of thinking of the system of

[7] See <www.lawsociety.org.uk/topics/civil-litigation/sir-geoffrey-vos-speech-at-the-launch-of-the cityuk-legal-services-report> accessed 1 November 2023.

justice as something free-standing. It is not. It is an essential part of our economic infrastructure.'

Sumida: So the justice system is like a port.

Steffek: As a specific example, an online settlement system service (Online Civil Money Claims [OCMC][8]) was launched in 2018 that allows people to make monetary claims, which previously were unlikely to be actually collected despite an immense amount of effort and cost, up to a value for £10,000 online, free of charge, without the need for third-party involvement, and the system is expected to bring enforcement online. Sir Geoffrey says that the service was implemented based on the idea that we must try to create an ubiquitous streamlined online civil justice system to ensure that what is properly owed in all areas is paid promptly without the delays that the present systems allow.

He explains the reason for that as follows: small disputes are as important as big ones in economic terms. Big businesses can generally survive if the resolution of their litigation is delayed by the court process. Small businesses often cannot. An efficient digitalised and online civil dispute resolution process will be of huge value to our economy. It will ensure that individuals and small and medium-sized enterprises (SMEs) are paid what they are owed and can continue to trade. It will reduce unnecessary personal and corporate insolvencies and enhance access to justice.

Sumida: What an energetic statement that is enormously persuasive! What are the conceivable types of disputes that a digitalised streamlined online civil dispute resolution process will deal with?

Steffek: The very title of the lecture given by Sir Geoffrey in June 2021 was 'Recovery or Radical Transformation: The Effect of COVID-19 on Justice Systems'.[9] As a radical transformation indicated exactly by the title, reforms of the dispute resolution 'systems' themselves are underway in addition to changes to the justice system operation 'methods' such as remote hearings. Sir Geoffrey's vision is to build online funnels within the coming years. He concluded, 'the vast bulk of civil disputes, and possibly the vast bulk also of employment, tribunal and private family disputes are amenable to a streamlined online dispute resolution process' and that 'the speed of that process – even if there are still face-to-face hearings in the most difficult cases – will allow the parties to spend less time and emotional energy agonising over their disputes, and more time concentrating on their economic or personal lives.'

Sumida: Thank you for wrapping things up by describing the legal innovations that will be realised by using technology.

This was a great start to the lesson on how to be a legal innovator!

[8] See <www.gov.uk/government/case-studies/online-civil-money-claims-service-ocmc-acting-on-feedback> accessed 1 November 2023.

[9] See <www.judiciary.uk/announcements/speech-by-the-master-of-the-rolls-at-the-london-school-of-economics-recovery-or-radical-transformation-the-effect-of-covid-19-on-justice-systems/> accessed 1 November 2023.

QUESTIONS FOR FURTHER THOUGHT

- What will be needed to address and move towards resolution of the structural issues faced by Japan's society and economy, large companies and finance in the 2020s?
- How will Japanese companies be able to establish a new business model?
- Which Japanese companies can realise the efforts to solve social issues, large companies or venture companies?
- Does Japan have an environment in place that is necessary to nurture human resources to make innovation happen?
- What contributions are specifically required from lawyers in the efforts to solve social issues? What skills are necessary for that?
- Assuming that humans and AI are able to coexist in the shogi world, do you think the same will also happen in the legal world? What are the difficulties that are unique to the legal world?
- What is Japanese society expecting from legal innovation?
- What legal innovations do you expect to be working on in ten and twenty years' time?